REFINITIV

DELTA REPORT

10-K

EFOI - ENERGY FOCUS, INC/DE

10-K - DECEMBER 31, 2023 COMPARED TO 10-K - DECEMBER 31, 2022

The following comparison report has been automatically generated

TOTAL DELTAS	2444
CHANGES	237
DELETIONS	998
ADDITIONS	1209

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022 December 31, 2023

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ___________ to ___________

Commission file number 001-36583

ENERGY FOCUS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**94-3021850**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

32000 Aurora Road, Suite B
Solon, Ohio 44139
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: **440.715.1300**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common stock, par value $0.0001 per share	EFOI	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act of 1933. Yes ¨No þ

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ¨ No þ

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No ¨

Indicate by check mark whether the registrant has submitted electronically every Interactive Date File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes þ No ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	¨	Accelerated filer	☐
Non-accelerated filer	þ	Smaller reporting company	☑
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No þ

The aggregate market value of the Company's common stock held by non-affiliates of the Company was approximately $9.5 million $2.2 million as of June 30, 2022June 30, 2023, the last day of the Company's most recently completed second fiscal quarter, when the last reported sales price was $1.30 $1.81 per share.

Number of the registrant's shares of common stock outstanding as of March 17, 2023 March 18, 2024: 18,133,100. 4,443,130.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement to be filed with the Securities and Exchange Commission relative to the registrant's 2023 Annual Meeting of Stockholders Shareholders are incorporated by reference into Part III of this Report.

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PART I

Forward-Looking Statements

Unless the context otherwise requires, all references to “Energy Focus,” “we,” “us,” “our,” “our company,” or “the Company” refer to Energy Focus, Inc., a Delaware corporation, and its consolidated subsidiary for the applicable periods, considered as a single *enterprise.*

This Annual Report on Form 10-K (this "Annual Report") includes statements that express our opinions, expectations, beliefs, plans, objectives, assumptions or projections regarding future events or future results and therefore are, or may be deemed to be, "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These forward-looking statements can generally be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "anticipates," "expects," "feels," "seeks," "forecasts," "projects," "intends," "plans," "may," "will," "should," "could" or "would" or, in each case, their negative or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this Annual Report and include statements regarding our intentions, beliefs, or current expectations concerning, among other things, our results of operations, financial condition, liquidity, prospects, growth, strategies, capital expenditures, and the industry in which we operate.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Although we base these forward-looking statements on assumptions that we believe are reasonable when made in light of the information currently available to us, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and industry developments may differ materially from statements made in or suggested by the forward-looking statements contained in this Annual Report. In addition, even if our results of operations, financial condition and liquidity, and industry developments are consistent with the forward-looking statements contained in this Annual Report, those results or developments may not be indicative of results or developments in subsequent periods.

We believe that important factors that could cause our actual results to differ materially from forward-looking statements include, but are not limited to, the risks and uncertainties outlined under "Risk Factors" under Item 1A of this Annual Report and other matters described in this Annual Report and our other filings with the Securities and Exchange Commission (the "SEC") generally. Some of these factors include:

- *our need for and ability to obtain additional financing in the near term, on acceptable terms or at all, to continue our operations;*
- *our ability to regain and maintain compliance with the continued listing standards of The Nasdaq Stock Market ("Nasdaq");*
- *our ability to refinance or extend maturing debt on acceptable terms or at all;*
- *our ability to continue as a going concern for a reasonable period of time;*
- *our ability to realize synergies with our strategic investor;*
- *instability in the U.S. and global economies and business interruptions experienced by us, our customers and our suppliers, particularly in light of supply chain constraints and other long-term impacts of the coronavirus ("COVID-19") pandemic;*
- *the competitiveness and market acceptance of our light-emitting diode ("LED") lighting and control technologies and products;*
- *our ability to compete effectively against companies with lower prices or cost structures, greater resources, or more rapid development capabilities, and new competitors in our target markets;*
- *our ability to extend our product portfolio into new applications and end markets, including consumer products; markets;*
- *our ability to increase demand in our targeted markets and to manage sales cycles that are difficult to predict and may span several quarters;*
- *the timing of large customer orders, significant expenses and fluctuations between demand and capacity as we manage inventory and invest in growth opportunities;*
- *our ability to successfully scale our network of sales representatives, agents, distributors and other channel partners to compete with the sales reach of larger, established competitors;*
- *our ability to implement plans to increase sales and control expenses;*
- *our reliance on a limited number of customers for a significant portion of our revenue, and our ability to maintain or grow such sales levels;*
- *our ability to add new customers to reduce customer concentration;*
- *our ability to attract and retain a new chief financial officer;*

- our ability to manage the size of our workforce while continuing to attract, develop and retain qualified personnel, and to do so in a timely manner;

- our ability to diversify our reliance on a limited number of third-party suppliers and development partners, our ability to manage third-party product development and obtain critical components and finished products on acceptable terms and of acceptable quality despite ongoing global supply chain challenges, and the impact of our fluctuating demand on the stability of such suppliers;
- our ability to timely, efficiently and cost-effectively transport products from our third-party suppliers by ocean marine and other logistics channels despite global supply chain and logistics disruptions;
- the impact of any type of legal inquiry, claim or dispute;
- the macro-economic conditions, including rising interest rates and recessionary trends, in the United States and in other markets in which we operate or secure products, which could affect our ability to obtain raw materials, component parts, freight, energy, labor, and sourced finished goods in a timely and cost-effective manner;
- our dependence on military maritime customers and on the levels and timing of government funding available to such customers, as well as the funding resources of our other customers in the public sector and commercial markets;
- business interruptions resulting from geopolitical actions such as war and terrorism, natural disasters, including earthquakes, typhoons, floods and fires, or from health epidemics or pandemics or other contagious outbreaks;
- our ability to respond to new lighting and control technologies and market trends;
- our ability to fulfill our warranty obligations with safe and reliable products;
- any delays we may encounter in making new products available or fulfilling customer specifications;
- any flaws or defects in our products or in the manner in which they are used or installed;
- our ability to protect our intellectual property rights and other confidential information, and manage infringement claims by others;
- our compliance with government contracting laws and regulations, through both direct and indirect sale channels, as well as other laws, such as those relating to the environment and health and safety;
- risks inherent in international markets, such as economic and political uncertainty, changing regulatory and tax requirements and currency fluctuations, including tariffs and other potential barriers to international trade; and
- our ability to maintain effective internal controls and otherwise comply with our obligations as a public company.

In light of the foregoing, we caution you not to place undue reliance on our forward-looking statements. Any forward-looking statement that we make in this Annual Report speaks only as of the date of such statement, and we undertake no obligation to update any forward-looking statement or to publicly announce the results of any revision to any of those statements to reflect future events or developments, except as required by law. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should only be viewed as historical data. Furthermore, new risks and uncertainties arise from time to time, and it is impossible for us to predict those events or how they may affect us.

Energy Focus®, Intellitube®, Redcap RedCap®, and EnFocus™ are our registered trademarks. We may also refer to trademarks of other corporations and organizations in this document.

ITEM 1. BUSINESS

Overview

Energy Focus Inc. engages primarily in the design, development, manufacturing, marketing and sale of energy-efficient lighting systems and controls. We develop, market and sell high quality light-emitting diode (“LED”) lighting and controls products in the commercial market and military maritime market (“MMM”), and expanded our offerings into the consumer market in the fourth quarter of 2021. . Our mission is to enable our customers to run their facilities, offices and homes with greater energy efficiency, productivity, and human health and wellness through advanced LED retrofit solutions. Our goal is to be the human wellness lighting and LED lighting technology and a market leader for the most demanding applications where performance, quality, value, environmental impact and health are considered paramount. We specialize in energy-efficient LED lighting retrofit by product, replacing fluorescent, high-intensity discharge (“HID”) lighting and other types of lamps in institutional buildings for primarily indoor lighting applications with our innovative, high-quality commercial and military-grade tubular LED (“TLED”) products, as well as other LED and lighting control products for commercial and consumer applications. In late 2020, we announced the launch of ultraviolet-C light disinfection (“UVCD”) products. After evaluating market demand and supply chain challenges for our UVCD products, we revised our business strategy to primarily focus on LED lighting and controls products for our MMM and commercial and industrial lighting and control products. We are also evaluating adjacent technologies including Gallium Nitride (“GaN”) based power supplies and opportunities for energy solutions products that support sustainability in our existing channels.

The LED lighting industry has changed dramatically over the past several years due to increasing competition and price erosion. We have been experiencing these industry forces in both our military and commercial business since 2016, when we once commanded significant price premiums for our flicker-free TLEDs with industry leading warranties. In more recent years, we have focused on redesigning our products for lower costs and consolidated our supply chain for stronger purchasing power in an effort to price our products more competitively while not impacting the performance and quality. Despite these efforts, our legacy products continue to face extreme price competition and a convergence of product functionality in the marketplace, and we have shifted to diversifying our supply chain in an effort to increase value and remain competitive. These trends are not unique to Energy Focus as evidenced by the increasing number of industry peers facing challenges, exiting LED lighting, selling assets and even going out of business.

In addition to continuously pursuing cost reductions, our strategy to combat these trends is to innovate both our technology and product offerings with differentiated products and solutions that offer greater, distinct value. Specific examples of these products we have developed include the RedCap®, our patented emergency backup battery integrated TLED, EnFocus™, our unique dimmable/color-tunable lighting and powerline control platform that we launched in 2020, and the second generation of EnFocus™ powerline control switches and circadian lighting system. We are looking forward to continually supporting the growth of our existing EnFocus™ product line which is particularly attractive for its ease of install and ease of use in spaces with transient occupation. The Company have enhanced the performance of our RedCap® product by providing a more user-friendly experience in 2023. We continue to evaluate our sales strategy and believe our go-to-market strategy that focuses more on direct-sales marketing, selectively expanding our channel partner network to cover territories across the country, and listening to the voice of the customer will lead to better and more impactful product development efforts that we believe will eventually translate into larger addressable markets and greater sales growth for us.

Throughout 2023, the Company continued to make significant cost cutting efforts to address operational expenses while maintaining customer satisfaction and delivering goods on-time. Investments into Energy Focus have contributed to the ability of the Company to continue to not only provide quality products and services, but to both expand and rationalize product offerings.

It is our belief that the continued dramatic rightsizing efforts undertaken in 2022 and 2023, along with reorganization of the sales team and ongoing development of innovative, high-value products and an expanded distribution network, will over time result in improved sales and bottom-line performance for the Company.

In 2023, we recommitted to building upon the transformation activities started during 2019 and 2020 that sought to stabilize and regrow our business. These efforts include the following key developments that occurred during 2022: 2023:

- We hired a permanent Chief Executive Officer in September 2022, On June 28, 2023, we accepted the resignation of four members of the Board of Directors (the "Board"): Jennifer Cheng, Brian Lagarto, Jeffery Parker, and Stephen Socolof. Their terms as directors would have otherwise expired at the 2024 annual meeting of Shareholders of the Company. The resignations did not involve any disagreement with the Company. On July 2, 2023, the remaining members of the Board unanimously appointed the following a period four new members to the Board: Kin-Fu Chen, Shou-Jang Lee, Jason Tien-Chia Tsai, and Chiao Chieh (Jay) Huang, each of interim leadership by our Lead Independent Director after the departure new members of our previous Chief Executive Officer in February 2022 and Chief Financial Officer and Chief Operating Officer in May 2022. the Board of Directors is an independent director under the corporate governance standards of the Nasdaq.

- We continued development On August 24, 2023, the Board approved the termination of the second generation Company's chief executive officer and appointed Chiao Chieh (Jay) Huang to serve as the Company's new chief executive officer. In line with this decision, Mr. Huang

  will discontinue his role as Chairman of EnFocus™ powerline control switches the Board and circadian lighting system for commercial markets, which the Board has appointed Kin-Fu Chen as a result the Chairman of supply chain challenges we now plan to launch in 2023. EnFocus™ powerline control enables buildings to have dimmable, color tunable and circadian-ready lighting using existing wiring, without requiring laying additional cables or any wireless communication systems, through a relatively simple upgrade with EnFocus™ switches and EnFocus™ LED lamps. This upgrade offers a simpler, more secure, affordable and environmentally sustainable solution compared with replacing entire luminaire fixtures and incorporating additional wired or wireless communication. the Board.

- In 2023, we carefully researched and analyzed our historical sales data and the current market landscape regarding our pricing position and general sales strategy. We reinvested acknowledged the presence of increased competition in the MMM sales space, both with respect to pricing and the number of competitors. Following our assessment, we made changes that positively affected our position within this space and are directly reflected in our MMM sales channel with a strategic hire in the second quarter of 2022 and are pursuing existing and new sales opportunities, though the sales cycles for what are frequently made-to-order products are longer than commercial offerings. Q4 2023 performance.

- Beginning in July 2022, we reduced our warehouse square footage, and undertook an inventory reduction project throughout 2022 focused on reducing our highly reserved commercial finished good inventory.

- The Company has aggressively re-evaluated operating expenses, and reduced our workforce significantly throughout the year to manage fixed costs.

- We continued to seek additional external funding alternatives and sources to support our growth strategies, plans and initiatives:

  - In April 2022, we entered into a note purchase agreement with Streeterville Capital, LLC ("Streeterville") pursuant to which we sold and issued to Streeterville a promissory note in the principal amount of approximately $2.0 million, with net proceeds of approximately $1.8 million.
  - In June 2022, we completed a private placement (the "June 2022 Private Placement") with certain institutional investors pursuant to which we agreed to issue and sell (i) 1,313,462 shares of our common stock, (ii) pre-funded warrants ("June 2022 Pre-Funded Warrants") to purchase 1,378,848 shares of common stock at an exercise price of $0.0001 per share and (iii) warrants (the "June 2022 Warrants," and collectively with the June 2022 Pre-Funded Warrants, the

"June 2022 Warrants") to purchase up to an aggregate of 2,692,310 shares of common stock at an exercise price of $1.30 per share. Net proceeds from the June 2022 Private Placement were approximately $3.2 million.

◦ From September 2022 to December 2022, we secured short-term unsecured bridge financing of $800 thousand from a member of our board of directors (the "Board of Directors") and an aggregate of $650 thousand of short-term unsecured bridge financing from private parties, all of which was converted into equity in January 2023 at the time of a strategic investment by Sander Electronics.

◦ In October 2022 and December 2022, we repaid a previously outstanding promissory note with Streeterville by exchanging an aggregate of the approximately $330 thousand amount outstanding for common stock priced at-the-market.
◦ During January 2023, we sold an aggregate of $250 thousand of common stock to a member of thoroughly reviewed and adjusted our Board of Directors in private placements at fair market value, and also converted the approximately $809 thousand amount outstanding on previously issued short term promissory notes issued to that director commercial pricing position as discussed above at fair market value.
◦ In January 2023, we sold an aggregate of $2.7 million of common stock to certain purchasers associated with Sander Electronics, Inc., including conversion of the approximately $609 thousand amount outstanding on previously outstanding short-term promissory notes as discussed above, priced at-the-market.
◦ In January 2023, we amended our inventory lending facility with Crossroads Financial Group, LLC (the "Inventory Facility"), reducing the maximum availability to $500 thousand, reducing monthly fees and paying down an aggregate of $1 million in January and February 2023.
◦ In January 2023, we amended the terms of our outstanding promissory note with Streeterville, agreeing to make $750 thousand in payments in 2023 and deferring other payments until 2024.
◦ In February 2023, we agreed to terminate our accounts receivable lending facility with Factors Southwest L.L.C. (d/b/a FSW Funding) (the "Receivables Facility" and, together with the Inventory Facility, the "Credit Facilities"), reducing our monthly borrowing costs.
◦ In February 2023, we sold an aggregate of $400 thousand of common stock to a member of our Board of Directors in a private placement at fair market value.

During 2022, we continued to broaden our product distribution network by engaging with new lighting agencies and energy service companies ("ESCOs"). We also redoubled our efforts from 2020 and 2021 to streamline our operations by closely managing all spending done throughout the Company, while investing in new products and strategies that sought to reenergize sales.

Throughout 2022, due to lingering economic and building occupancy impacts from the COVID-19 pandemic, we experienced continuing weakness in commercial sales well as our customers in strategic relationships and partnerships within the healthcare, education, commercial LED market space. We believe our new pricing position will give us a greater advantage than previously held against the competition and commercial and industrial sectors put lighting retrofit projects on hold or delayed order placements. We continue to monitor the long-term impact of the COVID-19 pandemic on offer a more attractive entry point for our customers, suppliers and logistics providers, and to evaluate governmental pandemic response. Although the significance and duration of the ongoing impact on our customers and us is still uncertain, and the specific timing of business recovery from the impact of the COVID-19 pandemic is still difficult to predict, we remain optimistic that facility capital budgets will start unfreezing, commercial building occupancy will rise, and our growth efforts will further impact our financial performance in a positive way. end customer base.

We will seek to remain agile as an organization to respond to potential or continuing weakness in the macroeconomic environment and in the meantime seek to expand sales channels and enter new markets that we believe will provide additional growth opportunities. We plan to achieve profitability through developing and launching new, innovative products, such as our EnFocus™ powerline control systems, our Redcap® emergency battery backup tubular LEDs, evaluating new growth opportunities such as GaN-based power supply circuitry and other energy solution products, as well as executing on our multi-channel sales strategy that targets key verticals, such as government, healthcare, education and commercial and industrial, complemented by our marketing outreach campaigns and expanding channel partnerships. We also plan to continue to develop advanced lighting and lighting control applications built upon the EnFocus™

platform that aim to serve the commercial markets. In addition, we intend to continue to apply rigorous financial discipline in our organizational structure, decision-making, business processes and policies, strategic sourcing activities and supply chain practices to help accelerate our path towards profitability.

Our Corporate Structure and History

Fiberstars, Inc. was founded in 1985 in California, and reincorporated in Delaware in November 2006. In May 2007, Fiberstars, Inc. merged with Energy Focus, Inc. (the “Company”), also a Delaware corporation, with the Company as the surviving entity after the merger. We established an international branch which we may refer to as our “Taiwan branch” or “Taipei office” in Taipei, Taiwan in 2023.

Our Industry

We develop advanced LED lighting and controls retrofit technologies solutions that enable our customers to run their facilities with greater energy efficiency, productivity and human wellness. We aim to be the human wellness lighting and LED technology market leader by providing high-quality, energy-efficient, “flicker-free,” long-life LED lamps and retrofit products, as well as lighting controls, to replace existing linear fluorescent, incandescent, HID lamps and fixtures.

We believe these applications represent a significant portion of the LED lighting market and energy savings potential for our targeted commercial, industrial and MMM markets.

LED lighting, and particularly LED retrofit of fluorescent and incandescent lights in existing buildings, represents a large and growing market. A 2020 report issued by the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy (“DOE”), entitled “Adoption of Light-Emitting Diodes in Common Lighting Applications,” reports that from 2016 to 2018,

installations of LED products have increased in all applications, increasing LED penetration to 30% of all general illumination lighting. In 2019, Navigant Research published a report that concluded that LED lighting had at least matched conventional lighting technologies on a range of features, including energy efficiency, lifetime, versatility and color quality, while becoming increasingly cost competitive. This same 2019 report forecasts that installed penetration of LED lamps and luminaires will increase dramatically through 2035, reaching about 84%. The increasing demand for LED lighting is being driven by energy and cost savings, environmental considerations and human health.

Energy consumption can be reduced by over 50% by replacing fluorescent tubes with LED tubes and by another 20-30% (70% to 80% in total) by utilizing smart lighting technologies, including dimmable TLEDs with ambient light and occupancy sensors. For this reason, building codes are increasingly requiring not only LEDs, but dimmable LEDs. Governments around the world

are implementing regulations and standards that incentivize the use of LED lighting, both smart and conventional, to reduce energy consumption and, therefore, carbon dioxide emissions. Our new product research and development investments since 2019 have been focusing on advanced and smart lighting technologies to capitalize on these trends, and EnFocus™ represents such a control platform that we aim to expand in terms of functionalities, applications and intelligence, going forward.

There is also a growing awareness of the effects of both visible and non-visible light on human health and well-being. Energy Focus has been a leader in flicker-free technology and one of the first to obtain Underwriters Laboratories (“UL®”) certification at less than 1% optical flicker. Flicker, which is the modulation of the intensity of LED light at the frequency of the power supply, is well known to cause headaches, eye strain, fatigue, mood triggers and other health issues as well as interfering with electronic equipment such as barcode scanners. Energy Focus is continually evaluating additional human wellness lighting and control solutions inspired by emerging health and wellness benefits.

Smart, or connected, lighting is disrupting the LED industry and providing new opportunities for growth. The DOE defines connected lighting as an LED-based lighting system with integrated sensors and controllers that are networked (either wired or wireless), enabling lighting products within the system to communicate with each other and transmit data. In addition to enabling the intensity and correlated color temperature ("CCT") of lights to respond to ambient light, time of day and the activities of building occupants, connectivity enables building automation functions that extend well beyond lighting. The interference of blue light with human circadian rhythms is well known. This can be alleviated by circadian lighting, or controlled lighting that is able to change the intensity or CCT of the LEDs depending on the time of day in order to emulate natural light. Since lighting fixtures are ubiquitous throughout buildings, the lighting infrastructure is an ideal vehicle to retrofit these and other smart or connected lighting capabilities into existing buildings, and also to design these capabilities into new construction.

From the customer feedback we have been receiving, we believe that the overall smart lighting market is still largely underdeveloped due to the cost and complexity for installations of related technologies today in the marketplace, representing significant potential for solutions that could meet customer needs and could also be affordable, easy to install and secure. Much of this interest and demand has been muted from 2020 through 2022 as a result of the COVID-19 pandemic, which we believe has primarily delayed, rather than reduced, our opportunity in the smart lighting marketplace. We believe our EnFocus™ lighting platform could effectively address the unmet needs for circadian and smart lighting, particularly for existing buildings that have limited economical options or IT expertise to implement otherwise complex lighting control systems.

While we believe the LED lighting and smart lighting market is large, growing and under-penetrated, it has also been characterized in recent years by intensifying competition, market leadership changes and aggressive pricing tactics on differentiated products. Our strategy to overcome these challenges is to develop advanced, impactful and customer-centric technologies and products, while also innovating on our core products to increase value and remain competitive. In addition, we focus on executing our multi-channel sales strategy combined with a growing sales representative network to drive effective and frequent communication with customers in order to better understand and serve their needs. By understanding the voice of the customer and by incorporating rapidly evolving technologies surrounding LED and smart lighting, we believe that we will continue to be able to develop solutions that better address customers' needs with unique and novel product offerings, such as EnFocus™, our dimmable and tunable lighting and control platform, that deliver substantial value to our customers and accelerate LED and smart lighting adoptions.

Our Products

We design, develop, manufacture and market a wide variety of LED lighting technologies and solutions to serve our primary end user markets, including the following:

Commercial products to serve our targeted commercial markets:

- RedCap® emergency battery backup TLEDs;
- EnFocus™ powerline lighting control platform including dimming ("DM") and color tuning ("DCT");
- LED retrofit solutions for existing luminaires, including replacement TLEDs for linear fluorescent lamps, downlights, and retrofit kits for low-bay, high-bay and office applications; and
- Industrial grade LED Dock lights.

MMM LED lighting products to serve the U.S. Navy and allied foreign navies:

- Military-grade Intellitube® retrofit TLED and the Invisitube™ ultra-low EMI TLED; and

- Military-grade fixtures, including LED globe lights, berth lights; high-bay fixtures and LED retrofit kits.

Our LED products are more energy-efficient than traditional lighting products, such as fluorescent, incandescent and HID lamps, and we believe they can improve the overall sustainability profile of our customers by providing financial, environmental and human health benefits, including achieving significant long-term energy and maintenance cost savings, reducing carbon emission, substantially reducing retrofit waste and enhancing the health and productivity of building occupants.

The key features of our products are as follows:

- Many of our products make use of proprietary or patented optical and electronics delivery systems that enable high efficiencies with superior lighting qualities, and proven records of extremely high product reliability;
- Our products have exceptionally long life, with the majority of our TLED sales providing a 10-year warranty;
- Our products have extremely low flicker, including our 500D series TLED products, which were the first in the lighting industry to be certified by UL® as “low optical flicker, less than 1%”;
- Most of our products meet the lighting efficiency standards mandated by the Energy Independence and Security Act of 2007; and
- Most of our products qualify for federal and state tax and rebate incentives for commercial consumers available in certain states.

Our product development capabilities, which we believe provide a strategic competitive advantage, include the following:

- A long research, engineering, and market developmental history, with broad and intimate understanding of lighting technologies and LED lighting applications;
- Strong and lean team of experienced, cross-disciplinary engineers;
- Concentration on developing and providing high-quality, price competitive LED lamps and related technologies to replace fluorescent and HID lamps and fixtures for commercial markets;
- Providing high quality and high performing LED lighting products with a proven history of reliability;
- Emphasis on proprietary and patent-pending technologies surrounding LED lighting; and
- A deep understanding of LED lighting product applications in existing MMM, government, commercial and residential building markets.

As we seek to develop new LED lighting solutions, we expect to continue our investments in smart lighting and wellness lighting research and development, as well as channel partnerships. Lighting controls, including dimming, sensor and daylighting technologies, can yield significant energy savings and human health benefits. We believe that the controllability of LED technology and our ability and plan to integrate more occupancy sensing and other controls into our existing products will allow us to further differentiate our LED solutions and provide greater non-energy benefits to our customers.

Sales and Marketing

Our innovative technologies and high-quality performance associated with LED lighting require a continued focus on educating our channel partners as well as end-users regarding the benefits and unique value propositions of our technologies and products. Our primary target customers for our LED lighting and controls systems are enterprise end-users, as well as contractors or ESCOs that could incorporate our products into their projects. We also sell through lighting agencies that represent our products as a complement to our direct sales effort. We have in-house commercial sales personnel and external sales agencies representing Energy Focus products. We aim to continue to expand the coverage of our in-house sales team to eventually cover all geographic regions across the United States. Our MMM sales strategy leverages our brand and past performance and focuses on education about our products as well as ease of procurement.

We focus on industry verticals where the economic and non-economic benefits such as health and safety, as well as technical specifications, of our high-quality lighting product offerings are most compelling. Our LED lighting products fall into two broad market categories, commercial markets, which tend to focus on quality, efficacy, total cost of ownership and return on investment, and MMM which require more rigorous military specifications for durability and dependability. We also entered consumer markets during fiscal year 2021. We expect that our multi-channel sales strategy will continue to evolve and expand in the future.

With the introduction of our military-grade Intellitube® product in 2011, which replaced two-foot fluorescent lamps on U.S. Navy ships, military sales have represented the majority of our overall sales. Since 2019, we have been focusing on improving the design of our MMM products to significantly reduce product costs while maintaining the required performance. These efforts helped offset some of the weakness experienced in our commercial business due to the impact of the COVID-19 pandemic, though sales levels were challenged as the amounts and timing of military funding fluctuated. While we continue to aggressively pursue growth on the commercial side of our business due to its much larger potential and size, the MMM

business does offer us the opportunity to not just maintain our reputable foothold in this space but continue to grow and position ourselves for continued sales, in addition to validating our product quality and strengthening our brand trust in the marketplace. During 2022, we reinvested in our military sales channel with a strategic hire of a U.S. Navy veteran who specializes in government sales. This has allowed us to better engage with the MMM and has presented us with the potential for expansion in military sales beyond the existing product portfolio. an even brighter future within MMM.

We launched our first commercial LED lighting products in 2010. Since then, we have been building and expanding our commercial and industrial market presence where the economic and non-energy benefits and technical specifications of our high-quality lighting product offerings are compelling, particularly for mission-critical facilities in the enterprise verticals such as healthcare, eldercare, education and the commercial and industrial space. For example:

- Given the 24/7 lighting requirements of hospital systems, we believe that our LED solutions offer the proven quality, performance, long lifetime, return on investment and low flicker lightning that is particularly attractive to this target market. Since 2015, we have been the primary LED lighting supplier and partner for a major northeast Ohio hospital system and, as a result of our continued success, we have been able to leverage this relationship to expand into more hospital systems across the country.
- As we advocate for the benefits of low-flicker LED lighting in schools, both in terms of energy-efficiency and in creating a healthy and effective learning environment, we continue to receive orders to retrofit school districts, colleges and universities.
- Low and high bay applications are generally used in commercial and industrial markets to provide light to large open areas like big-box retail stores, warehouses and manufacturing facilities. In the past few years, technological and cost improvements have allowed LED low and high bay applications to be more competitive, and we believe we have attractive product offerings in this space that enable energy and maintenance cost savings.

In addition to our direct and indirect sales force, we have also re-evaluated our own e-commerce websites. At our current scale, we have returned to our core sales channels to commercial and military customers, but will continue to evaluate additional channels from time-to-time. We believe that our renewed and continuing focus on multi-disciplinary technology innovation and engineering designs to both expand product features and benefits, while lowering product costs of ownership, will continue to enhance the overall competitiveness of our LED lighting and provide us with the strategic advantage and flexibility to expand our distribution channels.

Concentration of Sales

In 2023, two customers accounted for 48% of net sales, with sales to our primary distributor and shipbuilder for the U.S. Navy accounting for approximately 35% and sales to a shipbuilder for the U.S. Navy accounting for approximately 13%. When sales to our primary distributor for the U.S. Navy are combined with sales to shipbuilders for the U.S. Navy, total net sales of products for the U.S. Navy comprised approximately 70% of net sales for the same period.

In 2022, two customers accounted for 27% of net sales, with sales to our primary distributor for the U.S. Navy accounting for approximately 13% of net sales, and sales to a regional commercial lighting retrofit company accounting for approximately 14% of net sales. When sales to our primary distributor for the U.S. Navy are combined with sales to shipbuilders for the U.S. Navy, total net sales of products for the U.S. Navy comprised approximately 30% of net sales for the same period.

In 2021, two customers accounted for 43% of net sales, with sales to our primary distributor for the U.S. Navy accounting for approximately 30% of net sales, and sales to a regional commercial lighting retrofit company accounting for approximately 13% of net sales. When sales to our primary distributor for the U.S. Navy are combined with sales to shipbuilders for the U.S. Navy, total net sales of products for the U.S. Navy comprised approximately 38% of net sales for the same period.

Competition

Our LED lighting products compete against a variety of lighting products, including conventional light sources such as compact fluorescent lamps and HID lamps, as well as other TLEDs and integrated LED luminaire products. Our ability to compete depends substantially upon the superior performance, incremental benefits and lower total cost of ownership of our products. Principal competitors in our markets include large lamp manufacturers and lighting fixture companies based in the United States, as well as TLED and LED replacement fixture manufacturers mostly based in Asia, whose financial resources may substantially exceed ours and whose cost structure as a percentage of sales may be well below ours. These competitors may introduce new or improved products that may reduce or eliminate some of the competitive advantage of our products and may have substantially lower pricing. We anticipate that the competition for our products will also come from new technologies that offer increased energy efficiency, lower initial costs, lower maintenance costs, or advanced features. We compete with LED systems produced by large lighting companies such as Signify Lighting, Osram Sylvania and GE Lighting, as well as smaller manufacturers or distributors such as LED Smart, Revolution Lighting Technologies, Orion Energy Systems, and Keystone Technologies. Some of these competitors offer products with performance characteristics similar to those of our products.

Manufacturing and Suppliers

We produce our lighting products and systems through a combination of internal manufacturing and assembly at our Solon, Ohio facility, and sourced finished goods, manufactured to our specifications. Our internal lighting system manufacturing consists primarily of final assembly, testing, and quality control. We have worked with several vendors to design custom components to meet our specific needs. Our quality assurance program provides for testing of all sub-assemblies at key stages in the assembly process, as well as testing of finished products produced both internally and sourced through third parties. Additionally, we are 9001-2015 ISO certified.

Manufacturing costs are managed through the balance of internal production and outsourced production for certain parts and components, as well as finished goods in specific product lines, to a small number of vendors in various locations throughout the world, primarily in the United States, Malaysia, Taiwan, and China. In some cases, we rely upon a single supplier to source certain components, sub-assemblies, or finished goods. We continually attempt to improve our global supply chain practices to satisfy client demands in terms of quality and volumes, while controlling our costs and achieving targeted gross margins, and this includes the evaluation of additional outsourcing or further insourcing of internal production where cost, quality and performance can be maintained or improved. A 2021 DOE report entitled, “2020 LED Manufacturing Supply Chain”, indicated that most of the world’s LED lamp production and a significant portion of LED luminaire manufacturing takes place in China with virtually no LED lamp manufacturing taking place in the United States today.

Our supplier concentration is heavily focused within Asia. As a result of the continued macroeconomic impacts of the COVID-19 pandemic, throughout 2021 2022 and 2022, 2023, we experienced global supply chain and logistics constraints with higher cost comparing to pre-COVID-19 that impacted our inventory purchasing strategy and increased our transportation costs, in continued efforts to manage both shortages of available components and longer lead times in obtaining components.

No offshore supplier accounted for more than 10% of our total expenditures for the twelve months ended December 31, 2023. At December 31, 2023, two offshore suppliers accounted for approximately 16% and 57% (a related party, See Note 13, “Related Party Transactions”) of our trade accounts payable balance, respectively.

One offshore supplier accounted for approximately 16% of our total expenditures for the twelve months ended December 31, 2022. At December 31, 2022, this same offshore supplier accounted for approximately 36% of our trade accounts payable balance.

One offshore supplier accounted for approximately 29% of our total expenditures for the twelve months ended December 31, 2021. At December 31, 2021, this same offshore supplier accounted for approximately 60% of our trade accounts payable balance.

Product Development

Product development has been a key area of operating focus and competitive differentiation for us in designing and developing industry leading LED lighting. Gross product development expenses for the years ended December 31, 2022 December 31, 2023 and 2021 2022 were $1.5 million $0.6 million and $1.9 million $1.5 million, respectively. We believe that our customer-centric product development efforts represent a better leverage on our R&D investments and aim to continue to focus on developmental projects that could produce more impactful and differentiated products and solutions in a more timely timelier manner for faster customer adoption.

Intellectual Property

We have a policy of seeking to protect our intellectual property through patents, license agreements, trademark registrations, confidential disclosure agreements, and trade secrets as management deems appropriate. Certain of our patents are key to our current product lines. Additionally, we have various pending U.S. patent applications, and various pending Patent Cooperation

Treaty patent applications filed with the World Intellectual Property Organization that serve as the basis for national patent filings in countries of interest. Our over 50 issued patents expire at various times through May 2040. Generally, the term of patent protection is twenty years from the earliest effective filing date of the patent application. There can be no assurance; however, that our issued patents are valid or that any patents applied for will be issued, and that our competitors or clients will not copy aspects of our lighting systems or obtain information that we regard as proprietary. There can also be no assurance that others will not independently develop products similar to ours. The laws of some foreign countries in which we manufacture, sell or may sell our products do not protect proprietary rights to products to the same extent as the laws of the United States.

Insurance

All of our properties and equipment are covered by insurance and we believe that such insurance is adequate. In addition, we maintain general liability, product recall and workers’ compensation insurance in amounts we believe to be consistent with our risk of loss and industry practice.

Regulatory Compliance

We derive a significant portion of our revenues from direct and indirect sales to U.S., state, local and foreign governments and their respective agencies. Contracts with government customers are subject to various procurement laws and regulations, business prerequisites to qualify for such contracts, accounting procedures, intellectual property processes, and contract provisions relating to their formation, administration and performance, which may provide for various rights and remedies in favor of the governments that are not typically applicable to or found in commercial contracts.

In addition, although not legally required to do so, we strive to obtain certification for substantially all our products. In the United States, we seek certification on substantially all of our products from UL®, Intertek Testing Services (“ETL®”), or DesignLights Consortium (“DLC™”). Where appropriate in jurisdictions outside the United States, we seek to obtain other similar national or regional certifications for our products. Although we believe that our broad knowledge and experience with electrical codes and safety standards have facilitated certification approvals, we cannot ensure that we will be able to obtain any such certifications for our new products or that, if certification standards are amended, we will be able to maintain such certifications for our existing products.

Human Capital

At December 31, 2022 As of December 31, 2023, we had 20 13 full-time employees and 3 furloughed employees, one part-time employee, all of whom were based in the United States, and no part-time employees. We had one temporary contractor at December 31, 2022 as of December 31, 2023. None of our employees or contractors are subject to collective bargaining agreements and we consider our relationship with our employees to be good. We encourage and support the growth and development of our employees. Continual learning and career development is advanced through ongoing performance and development conversations with employees and reimbursement is available to employees from time to time for seminars, conferences, formal education, and other training events employees attend in connection with their job duties.

Our core values of accountability, trust, extraordinariness, fun, openness, integrity and kindness underscore everything we do and drive our day-to-day interactions. The safety, health and wellness of our employees is a top priority. Through teamwork and the adaptability of our management and staff during the COVID-19 pandemic, we embraced a flexible work environment with some of our corporate office employees effectively working from remote locations and others working both remotely and in the office on a hybrid basis.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our current and future employees. The principal purposes of our annual bonus plan and equity incentive plan are to attract, retain and motivate employees through the granting of long-term incentive compensation awards.

Business Segments

We currently operate in a single business segment that includes the marketing and sale of commercial and MMM lighting products and controls. Please refer to Note 12, “Product and Geographic Information,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K, for additional information.

Available Information

Our principal executive offices are located at 32000 Aurora Road, Suite B, Solon, Ohio 44139. Our telephone number is 440.715.1300. Our website address is www.energyfocus.com. We are providing the address to our website solely for the information of investors. The information on our website is not a part of, nor is it incorporated by reference into this Annual

Report on Form 10-K. Through our website, we make available, free of charge, our annual proxy statement, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section

13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish them to, the Securities and Exchange Commission, or the SEC. The SEC maintains a website that contains these reports at *www.sec.gov*.

ITEM 1A. RISK FACTORS

Risks Associated with Our Business

The long-term impacts caused by the COVID-19 pandemic could continue to have an adverse effect on our business.

The COVID-19 pandemic continues to have an unprecedented, long-term impact on the U.S. economy that continues to create significant business uncertainties. These uncertainties include, but are not limited to, the adverse effect of the pandemic on the economy, our supply chain partners, transportation and logistics providers, our employees and customers. As infection rates oscillate with new variants, widespread outbreaks, stay-at-home recommendations or mandates from federal, state and local authorities may recur, which may continue to affect our supply chain and our customer base. Continued impacts of the pandemic could materially adversely affect our near-term and long-term revenues, earnings, liquidity and cash flows, and may require significant actions in response, including, but not limited to, employee furloughs, workforce reductions, plant or other operational shut-downs, expense reductions or discounting of pricing of our products, all in an effort to mitigate such impacts. The extent of the ongoing impact of the pandemic on our business and financial results will depend largely on future developments, including the duration of the spread of the outbreak within the United States, the timing and success of vaccine programs, the impact on capital and financial markets and the related impact on consumer confidence and spending, all of which are highly uncertain and cannot be predicted.

If we are unable to attract or retain qualified personnel, our business and product development efforts could be harmed.

We are highly dependent on our senior management and other key personnel due to our very lean organizational structure. Our future success will depend on our ability to attract, retain, develop and motivate qualified executive, technical, sales, marketing, operating, financial and management personnel, for whom competition is very intense. As we attempt to sustain and re-grow our business, it could be especially difficult to attract, retain and adequately compensate qualified personnel, especially in light of our lean cost structure and the tightening of the labor market, which has led to increased competition for employees. The loss of, or failure to attract, hire, and retain any such persons could delay product development cycles, disrupt our operations, increase our costs, or otherwise harm our business or results of operations. We also do not maintain "key person" insurance policies on any of our officers or our other employees, nor have employment contracts.

We rely on equity and debt financing to operate our business and will require additional financing in the near term, which we may not be able to raise on favorable terms or at all, and our failure to obtain funding when needed may force us to delay, scale back or eliminate our business plan or even discontinue or curtail our operations.

For the year ended December 31, 2022 December 31, 2023, we reported a net loss of $10.3 million $4.3 million and are dependent upon the availability of financing in order to continue our business.

In 2023 to date, the year ended December 31, 2023, financing activity to sustain ongoing losses has included transactions with a member of our Board of Directors as well as certain purchases associated with Sander Electronics, a strategic investor, converting approximately $1.5 million of outstanding bridge debt into common stock and also (1) selling an aggregate of approximately $2.72 million $6.1 million common stock through several private placement transactions (Please see Note 9 of our financial statements for the year ended December 31, 2023 included in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report.) and (2) converting approximately $1.7 million of outstanding promissory notes into common stock.

In the year ended December 31, 2022, financing activity to sustain ongoing losses included converting approximately $303 thousand of outstanding bridge financing into common stock, the issue and sale of approximately $1.45 million $1.5 million of unsecured bridge financing from October to December 2022, the issue and sale of approximately $3.2 million of common stock and warrants to purchase common stock in June 2022, and the offer and sale of $2.0 million of unsecured bridge debt financing in April 2022.

In August, 2020, we entered into two Credit Facilities secured by our assets and are were subject to customary affirmative and negative operating covenants and events of defaults that restrict indebtedness, liens, corporate transactions, dividends, and affiliate transactions, among others. The Receivables Facility capacity was $2.5 million, and the Inventory Facility capacity was initially $3.0 million and increased to $3.5 million in April 2021. As of December 31, 2022, we had cash of approximately $0.1 million $52 thousand and had debt balances of $1.4 million and $1.0 million under the Inventory Facility and the Receivables Facility, respectively. In January 2023, we amended the Inventory Facility, reducing the maximum availability to $500 thousand, reducing monthly fees and paying down an aggregate of $1 million in January and February 2023. In February 2023, we agreed to terminate the Receivables Facility. In September 2023, we paid down the remaining balance under the Inventory Facility. As a result, our availability under the Credit Facilities has been significantly reduced, and there can be were no assurance that these lending facilities will be renewed or replaced on commercially reasonable terms or at all.

Even with access to borrowings under the Inventory Facility we and Receivables Facility as of December 31, 2023.
We may not generate sufficient cash flows from our operations or be able to borrow sufficient funds to sustain our operations. As such, we will likely need additional external financing during

2023 2024 and will continue to review and pursue external funding sources including, but not limited to, the following:

- obtaining financing from traditional or non-traditional investment capital organizations or individuals;
- obtaining funding from the sale of our common stock or other equity or debt instruments; and
- obtaining debt financing with lending terms that more closely match our business model and capital needs.

There can be no assurance that we will obtain funding on acceptable terms, in a timely fashion, or at all. Obtaining additional financing contains risks, including:

- additional equity financing may not be available to us on satisfactory terms and any equity we are able to issue could lead to dilution for current stockholders and have rights, preferences and privileges senior to our common stock;
- loans or other debt instruments may have terms or conditions, such as interest rates, restrictive covenants and control or revocation provisions, which are not acceptable to management or our Board of Directors; and
- the current environment in the capital markets combined with our capital constraints may prevent us from being able to obtain adequate debt financing.

If we fail to obtain the required additional financing to sustain our business before we are able to produce levels of revenue to meet our financial needs, we will need to delay, scale back or eliminate our business plan and further reduce our operating costs and headcount, each of which would have a material adverse effect on our business, future prospects, and financial condition. A lack of additional financing could also result in our inability to continue as a going concern and force us to sell certain assets or discontinue or curtail our operations and, as a result, investors in the Company could lose their entire investment.

Our independent registered public accounting firm's opinion on our audited financial statements for the fiscal year ended December 31, 2022 December 31, 2023, included in this Annual Report, contains a modification relating to our ability to continue as a going concern.

Our independent registered public accounting firm's opinion on our audited financial statements for the year ended December 31, 2022 December 31, 2023 includes a modification stating that our losses and negative cash flows from operations and uncertainty in generating sufficient cash to meet our obligations and sustain our operations raise substantial doubt about our ability to continue as a going concern. In addition, Note 4 "Restructuring", to our financial statements included in Part II, Item 8 "Financial Statements and Supplementary Data," of this Annual Report includes disclosure describing the existence of conditions that raise substantial doubt about our ability to continue as a going concern for a reasonable period of time.

While we continue to pursue funding sources and transactions that could raise capital, there can be no assurances that we will be successful in these efforts or will be able to resolve our liquidity issues or eliminate our operating losses. If we are unable to generate enough cash or obtain sufficient additional funding, we would need to scale back or significantly adjust our business plan, further reduce our operating costs and headcount, or discontinue or curtail our operations. Accordingly, our business, prospects, financial condition and results of operations could be materially and adversely affected, and we may be unable to continue as a going concern. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our audited consolidated financial statements, and it is likely that investors will lose all or a part of their investment. Our financial statements do not include any adjustments that might result from the outcome of this uncertainty.

We have a history of operating losses and will incur losses in the future as we continue our efforts to grow sales and streamline our operations at a profitable level.

We have incurred substantial losses in the past and reported net losses from operations of $10.3 million $4.3 million and $7.9 million $10.3 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively. As of December 31, 2022 December 31, 2023, we had an accumulated deficit of $153.3 million and cash of approximately $2.0 million, compared to an accumulated deficit of $149.0 million and cash of approximately $0.1 million, compared to an accumulated deficit of $138.7 million and cash of approximately $2.7 million as of December 31, 2021 December 31, 2022.

In order for us to operate our business profitably, we need to grow our sales, maintain cost control discipline while balancing development of our product pipeline and potential long-term revenue growth, continue our efforts to reduce product cost, drive further operating efficiencies and develop and execute a strategic product pipeline for profitable and compelling MMM and LED lighting and control products. There is a risk that our strategy to return to profitability may not be as successful as we envision, or occur as quickly as we expect. We might require additional financing in the near-term and, if our operations do not achieve, or we experience an unanticipated delay in achieving, our intended level and pace of profitability, we will continue to need additional funding, none of which may be available on favorable terms or at all and could require us to sell certain assets or discontinue or curtail our operations.

While we are attempting to diversify our customer base, we have historically derived a significant portion of our revenue from a few customers, and the loss of one of these customers, or a reduction in their demand for our products, could adversely affect our business, financial condition, results of operations, and prospects.

Historically our customer base has been highly concentrated and a few customers have represented a substantial portion of our net sales. In 2023, two customers accounted for 48% of net sales. Total sales to our primary distributor to the U.S. Navy, combined with sales to shipbuilders for the U.S. Navy represented 70% of net sales in 2023. In 2022, two customers accounted for 27% of net sales. Total sales to our primary distributor to the U.S. Navy combined with sales to shipbuilders for the U.S. Navy represented 30% of net sales in 2022. In 2021, two customers accounted for 43% of net sales. Total sales to our primary distributor to the U.S. Navy, and a primary shipbuilder for the U.S. Navy represented 38% of net sales in 2021.

We generally do not have long-term contracts with our customers that commit them to purchase any minimum amount of our products or require them to continue to do business with us. We could lose business from any one of our significant customers for a variety of reasons, many of which are outside of our control, including ongoing long-term impacts of the COVID-19 pandemic, changes in levels of government funding and rebate programs, our inability to comply with government contracting laws and regulations, changes in customers' procurement strategies or their lighting retrofit plans, changes in product specifications, additional competitors entering particular markets, our failure to keep pace with technological advances and cost reductions, and damage to our professional reputation, among others.

We are attempting to expand and diversify our customer base and reduce the dependence on one or a few customers, through the addition of sales representatives and other potential sales channels, but we cannot provide any assurance that our efforts will be successful. We anticipate that a limited number of customers could continue to comprise a substantial portion of our revenue for the foreseeable future. If we continue to do business with our significant customers, our concentration can cause variability in our results because we cannot control the timing or amounts of their purchases. A significant customer could cease to do or drastically reduce its business with us with little or no notice, which could adversely affect our results of operations and cash flows in particular periods.

Historically, we have experienced long sales-cycles, as well as slow ramp-up by new customers to purchase large amounts of LED products from us. Given the fiercely competitive lighting market in which we operate, we are constantly trying to balance pricing with the quality-premium our products command both in brand reputation and performance. As a result, adding new customers could generally be a slow process, and increasing new customers' sales to more significant levels usually takes a long period of time. As we continue to develop more customer-centric new products such as EnFocus™ and GaN-based power supply circuitry, we hope to both add new customers more quickly and have our customers scale their purchasing levels more quickly. However, there is no guarantee of faster customer acceptance or performance of these new products or any other that has been or is being developed.

*If critical components and finished products that we develop with and purchase from a small number of third-party development partners and suppliers become unavailable or increase in price, or if our development partners, suppliers or delivery channels fail to meet our requirements for quality, quantity, and timeliness, our revenue and reputation in the marketplace could be harmed, which would damage our busine*ss.

In an effort to reduce research and development and manufacturing costs, we have outsourced the research, development and production of certain parts and components, as well as finished goods in our product lines, to a small number of vendors in various locations throughout the world, primarily in the United States, Malaysia, Taiwan and China. We generally purchase these sole or limited source items with purchase orders, and we have limited guaranteed supply arrangements with such suppliers. While we believe alternative sources for these components and products are available, we select suppliers based on their expected ability to provide quality products at a cost-effective price, to meet our specifications, and to deliver within scheduled time frames. We do not control the time and resources that these suppliers devote to our business, and we cannot be sure that these suppliers will perform their obligations to us. If our ability to manage third-party product development efforts are unsuccessful or our suppliers fail to perform their obligations in a timely manner or at satisfactory quality levels, we may suffer lost or delayed sales, increased costs of goods sold, reductions in revenue or margin, and damage to our reputation in the market, all of which would adversely affect our business. As demand for our products fluctuates, which fluctuations can be hard to predict, we may not need a sustained level of inventory, which may cause financial hardship for our suppliers or they may need to divert production capacity elsewhere. In the past, we have had to purchase quantities of certain components that are critical to our product manufacturing and were in excess of our estimated near-term requirements as a result of supplier delivery constraints and concerns over component availability, and we may need to do so in the future. As a result, we have had, and may need to continue, to devote additional working capital to support a large amount of component and raw material inventory that may not be used over a reasonable period to produce saleable products, and we may be required to increase our excess and obsolete inventory reserves to provide for these excess quantities, particularly if demand for our products does not meet our expectations.

We may be vulnerable to unanticipated product development delays, price increases and payment term changes. Significant increases in the prices of sourced components and products and shipping costs, could cause our product prices to increase, which may reduce demand for our products or make us more susceptible to competition. Furthermore, in the event that we are unable to pass along increases in operating costs to our customers, margins and profitability may be adversely affected. Accordingly, the loss of all or one of these suppliers could have a material adverse effect on our operations until such time as an alternative supplier could be found.

Additionally, consolidation in the lighting industry could result in one or more current suppliers being acquired by a competitor, rendering us unable to continue purchasing key components and products at competitive prices.

We also may be subject to various import duties and tariffs applicable to materials manufactured in foreign countries and may be affected by various other import and export restrictions, as well as other considerations or developments impacting upon international trade, including economic or political instability, tariffs, shipping delays and product quotas. These international trade factors will, under certain circumstances, have an impact on the cost of components, which will have an impact on the cost to us of the manufactured product and the wholesale and retail prices of our products.

We rely on arrangements with independent shipping companies for the delivery of our products from vendors abroad. The failure or inability of these shipping companies to deliver products or the unavailability of shipping or port services, even

temporarily, could have a material adverse effect on our business. We may also be adversely affected by an increase in freight surcharges due to global logistics capacity constraints, rising fuel costs and added security costs.

If we are unable to implement plans to increase sales and control expenses to manage future growth effectively, our profitability goals and liquidity will be adversely affected.

Our ability to achieve our desired growth depends on the adoption of high quality high-quality LED lighting and controls within the general lighting market and our ability to affect and adapt to these rates of adoption. The pace of continued growth in these markets is uncertain, and in order to grow our sales, we may need to:

- manage organizational complexity and ensure effective and timely communication;
- expand the skills and capabilities of our current management, engineering and sales teams;
- add experienced senior level managers;
- attract, retain and adequately compensate qualified employees;
- adequately maintain and adjust the operational and financial controls that support our business;
- expand research and development, sales and marketing, technical support, distribution capabilities, manufacturing planning or administrative functions and capabilities;
- maintain or establish additional manufacturing facilities and equipment, as well as secure sufficient third-party manufacturing resources, to adequately meet customer demand or lower manufacturing costs; and
- manage an increasingly complex supply chain to maintain a sufficient supply of materials and deliver on time to our manufacturing facilities.

These efforts to grow our business, both in terms of size and in diversity of customer bases served, may put a significant strain on our resources. We have implemented comprehensive cost-saving initiatives to reduce our net loss and mitigate doubt about our ability to continue as a going concern. These initiatives have improved efficiency and streamlined our operations, but we continue to operate at a loss and may need additional funding or further cost-cutting to manage liquidity.

Our possible future growth may exceed our current capacity and require rapid expansion in certain functional areas. We may lack sufficient funding to appropriately expand or incur significant expenses as we attempt to scale our resources and make investments in our business that we believe are necessary to achieve short-term and long-term growth goals. Such investments take time to become fully operational, and we may not be able to expand quickly enough to exploit targeted market opportunities. In addition to our own manufacturing capacity, we are increasingly utilizing contract manufacturers and original design manufacturers (“ODMs”) to produce our products for us. There are also inherent execution risks in expanding product lines and production capacity, whether through our facilities or that of a third-party manufacturer, that could increase costs and reduce our operating results, including design and construction cost overruns, poor production process yields and reduced quality control. If we are unable to fund any necessary expansion or manage our growth effectively, we may not be able to adequately meet demand, our expenses could increase without a proportionate increase in revenue, our margins could decrease, and our business and results of operations could be adversely affected.

Our results of operations, financial condition and business could be harmed if we are unable to balance customer demand and capacity.

As our customer base and customer demand for our products changes and as we launch new products, we must be able to adjust our production capacity to meet demand. We are continually taking steps to address our manufacturing capacity needs for our products. If we are not able to increase or decrease our production capacity at our targeted rate or if there are unforeseen costs associated with adjusting our capacity levels or there are unanticipated interruptions in our global supply chain or logistics from such possibilities as long-term effects of the COVID-19 pandemic, geopolitical tension as the military conflict in Ukraine and the Middle East, shifting workforces, geopolitical tension or energy policies, we may not be able to achieve our financial targets. In addition, as we introduce new products and further refine existing products, we must balance the production and inventory of prior generation products with the production and inventory of new products, whether manufactured by us or our contract manufacturers, to maintain a product mix that will satisfy customer demand and mitigate the risk of incurring cost write-downs on the previous generation products, related raw materials and tooling.

If customer demand does not materialize at the rate forecasted, we may not be able to scale back our manufacturing expenses or overhead costs to correspond to the demand. This could result in lower margins, write-downs of our inventory and adversely impact our business and results of operations. Additionally, if product demand decreases or we fail to forecast demand accurately, our results may be adversely impacted due to higher costs resulting from lower factory utilization, causing higher fixed costs per unit produced. In addition, our efforts to improve quoted delivery lead-time performance may result in corresponding reductions in order backlog. A decline in backlog levels could result in more variability and less predictability in our quarter-to-quarter net sales and operating results.

If we are not able to compete effectively against companies with lower cost structures or greater resources, or new competitors who enter our target markets, our sales will be adversely affected.

The lighting industry is highly competitive. In the high-performance lighting markets in which we sell our advanced lighting systems, our products compete with lighting products utilizing traditional lighting technology provided by many vendors. Our higher quality and value advanced lighting and control systems also face competition from lower quality, commodity lighting products when customers may be overly purchase-price sensitive. For sales of MMM products, we compete with a small number of qualified military lighting lamp and fixture suppliers. In certain commercial applications, we typically compete with LED systems produced by large lighting companies. Our primary competitors include Signify, Osram Sylvania, LED Smart, Revolution Lighting Technologies, Orion Energy Systems, and Keystone Technologies. Some of these competitors offer products with performance characteristics similar to those of our products. Many of our competitors are larger, more established companies with greater resources to devote to research and development, manufacturing and marketing, as well as greater brand recognition. In addition, larger competitors who purchase greater unit volumes from component suppliers may be able to negotiate lower costs, thereby enabling them to offer lower pricing to end customers. Moreover, the relatively low barriers to entry into the lighting industry and the limited proprietary nature of many lighting products also permit new competitors to enter the industry easily and with lower costs.

In each of our markets, we also anticipate the possibility that LED component manufacturers, including those that currently supply us with LEDs, may seek to compete with us. Our competitors' lighting technologies and products may be more readily accepted by customers than our products will be. Moreover, if one or more of our competitors or suppliers were to merge, the change in the competitive landscape could adversely affect our competitive position. Additionally, to the extent that competition in our markets intensifies, we may be required to further reduce our prices in order to remain competitive. If we do not compete effectively, or if we reduce our prices without making commensurate reductions in our costs, our net sales, margins, and profitability and our future prospects for success may be harmed.

We work with independent agents and sales representatives for a portion of our net sales, and the failure to incentivize, retain and manage our relationships with these third parties, or the termination of these relationships, could cause our net sales to decline and harm our business.

In the past, we pursued an agency-driven sales channel strategy in order to expand our market presence throughout the United States. As a result, at that time, we had increased our reliance on independent sales agent channels to market and sell our LED lighting and control products. In addition, these parties provide technical sales support to end-users. The current agreements with our agents are generally non-exclusive on the agents' product portfolio, meaning they can sell our competitors' products. Any such agreements we enter into in the future may be on similar terms. Our agents may not be motivated to or successfully pursue the sales opportunities available to them, or they may prefer to sell or be more familiar with the products of our competitors. If our agents do not achieve our sales objectives or these relationships take significant time to develop, our revenue may decline, fail to grow or not increase as rapidly as we intend in order to achieve profitability and grow our business. During 2022, we refocused We improved and continued to maintain our agency relationships on those that were both mutually beneficial and strategically important. Although

we believe that our agency strategy will increase the role of independent agents and sales representatives over time, direct sales using internal sales personnel still account for a substantial portion of our sales, and our agency plans may take longer to contribute significantly to our operating results.

Furthermore, our agency agreements are generally short-term and can be cancelled by either party without significant financial consequence. The termination of or the inability to negotiate extensions of these contracts on acceptable terms could adversely impact sales of our products. Additionally, we cannot be certain that we or end-users will be satisfied by their performance. If these agents significantly change their terms with us, or change their end-user relationships, there could be an impact on our net sales and profits.

If our LED lighting and control technology products fail to gain widespread market acceptance or we are unable to respond effectively as new technologies and market trends emerge, our competitive position and our ability to generate revenue, and profits may be harmed.

To be successful in our respective markets for LED lighting and control technology products, we depend on continued market acceptance of our existing LED lighting and control technology, including in the consumer and commercial markets. Potential customers may be reluctant to adopt LED lighting products as an alternative to traditional lighting technology because of their higher initial costs or perceived risks relating to their novelty, reliability, usefulness, quality and cost-effectiveness when compared to other established lighting sources available in the market. Changes in economic and market conditions may also make traditional lighting technologies more appealing. For example, declining energy prices in certain regions or countries may favor existing lighting technologies that are less energy-efficient, reducing the rate of adoption for LED lighting products in those areas. Notwithstanding continued performance improvements and cost reductions of LED lighting technologies, limited

customer awareness of the benefits of LED lighting products, lack of widely accepted standards governing LED lighting products and customer unwillingness to adopt LED lighting products could significantly limit the demand for LED lighting products. Even potential customers that are inclined to adopt energy-efficient lighting technology may defer investment as LED lighting products continue to experience rapid technological advances. Any of the foregoing could adversely impact our results of operations and limit our market opportunities.

In addition, we will need to keep pace with rapid changes in LED lighting and control technology, changing customer requirements, new product introductions and cost reductions by competitors and evolving industry standards, any of which could render our existing products obsolete if we fail to respond in a timely manner. The development, introduction, and acceptance of new, re-designed or reduced cost products incorporating advanced technology is a complex process subject to numerous uncertainties, including:

- available funding to sustain adequate development efforts;
- achievement of technology breakthroughs required to make commercially viable devices, and in turn, protecting those breakthroughs through intellectual property;
- the accuracy of our predictions for market requirements;
- our ability to predict, influence, or react to evolving standards;
- acceptance of our new product designs;
- acceptance of new technologies in certain markets;
- the combination of other desired technological advances with lighting products, such as controls;
- the availability of qualified research and development personnel;
- our timely completion of product designs and development;
- our ability to develop repeatable processes to manufacture new products in sufficient quantities, with the desired specifications, and at competitive costs;
- our ability to effectively transfer products and technology from development to manufacturing; and
- market acceptance of our products.

We could experience delays in the introduction of these products. We could also devote substantial resources to the development of new technologies or products that are ultimately not successful.

If effective new sources of light, other than LEDs, are discovered and commercialized, our current products and technologies could become less competitive or obsolete. If others develop innovative proprietary lighting technology that is superior to ours, or if we fail to accurately anticipate technology, pricing and market trends, address market saturation and customer confusion, respond on a timely basis with our own development of new and reliable products and enhancements to existing products, and achieve broad market acceptance of these products and enhancements, our competitive position may be harmed and we may not achieve sufficient growth in our net sales to attain or sustain profitability.

Our operating results may fluctuate due to factors that are difficult to forecast and not within our control.

Our past operating results may not be accurate indicators of future performance, and you should not rely on such results to predict our future performance. Our operating results have fluctuated significantly in the past and could fluctuate in the future. Factors that may contribute to fluctuations include:

- changes in aggregate capital spending, cyclicality and other economic conditions, including inflationary pressures, or domestic and international demand in the industries;
- the timing of large customer orders to which we may have limited visibility and cannot control;
- competition for our products, including the entry of new competitors and significant declines in competitive pricing;
- our ability to effectively manage our working capital;
- our ability to generate increased demand in our current and targeted markets, particularly those in which we have limited experience;
- our ability to satisfy customer demands in a timely and cost-effective manner;

- pricing and availability of labor and materials;
- quality testing and reliability of new products;
- our inability to adjust certain fixed costs and expenses for changes in demand and the timing and significance of expenditures that may be incurred to facilitate our growth;
- macroeconomic, geopolitical and health concerns, including long-term effects of the COVID-19 pandemic;
- seasonal fluctuations in demand and our revenue; and
- disruption in component supply from foreign vendors.

Depressed general economic conditions may adversely affect our operating results and financial condition.

Our business is sensitive to changes in general economic conditions, both inside and outside the United States. Slow growth in the economy or an economic downturn, particularly one affecting construction and building renovation, or that causes end-users to reduce or delay their purchases of lighting products, services, or retrofit activities, would have a material adverse effect on our business, cash flows, financial condition and results of operations. LED lighting retrofit projects, in particular, tend to require a significant capital commitment, which is offset by cost savings achieved over time. As such, a lack of available capital, whether due to economic factors or conditions in the equity or debt markets, could have the effect of reducing demand for our products. A decrease in demand could adversely affect our ability to meet our working capital requirements and growth objectives, or could otherwise adversely affect our business, financial condition, and results of operations.

Customers may be unable to obtain financing to make purchases from us.

Some of our customers require financing in order to purchase our products, and the initial investment is higher than that which is required with traditional lighting products. The potential cost or inability of these customers to access the capital needed to finance purchases of our products and meet their payment obligations to us could adversely impact the appeal of our products relative to those with lower upfront costs and have a negative impact on our financial condition and results of operations. There can be no assurance that third-party finance companies will provide capital to our customers.

A significant portion of our business is dependent upon the existence of government funding, which may not be available into the future and could result in a reduction in sales and harm to our business.

Some of our customers are dependent on governmental funding, including U.S. and foreign allied navies and U.S. military bases. If any of these customers or potential customers abandon, curtail, or delay planned LED lighting retrofit projects as a result of the levels of funding available to them or changes in budget priorities, it would adversely affect our opportunities to generate product sales.

Our products could contain defects, or they may be installed or operated incorrectly, which could reduce sales of those products or result in claims against us.

Despite product testing, defects may be found in our existing or future products. This could result in, among other things, a delay in the recognition or loss of net sales, the write-down or destruction of existing inventory, insurance recoveries that fail to cover the full costs associated with product recalls or other claims, significant warranty, support, and repair costs, diversion of the attention of our engineering personnel from our product development efforts, and damage to our relationships with our customers. The occurrence of these problems could also result in reputational and brand damage or the delay or loss of market acceptance of our lighting products and would likely harm our business. In addition, our customers may specify quality, performance, and reliability standards that we must meet. If our products do not meet these standards, we may be required to replace or rework the products. In some cases, our products may contain undetected defects or flaws that only become evident after shipment. Even if our products meet standard specifications, our customers may attempt to use our products in applications for which they were not designed or in products that were not designed or manufactured properly, resulting in product failures and creating customer satisfaction issues.

Some of our products use line voltages (such as 120 120- or 240 volts 240-volts AC), which involve enhanced risk of electrical shock, injury or death in the event of a short circuit or other malfunction. Defects, integration issues or other performance problems in our lighting products could result in personal injury or financial or other damages to end-users or could damage market acceptance of our products. Our customers and end-users could also seek damages from us for their losses. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend and the adverse publicity generated by such a claim against us or others in our industry could negatively impact our reputation.

We provide warranty periods generally ranging from one to ten years on our LED lighting products. Although we believe our reserves are appropriate, we are making projections about the future reliability of new products and technologies, and we may experience increased variability in warranty claims. Increased warranty claims could result in significant losses due to a rise in warranty expense and costs associated with customer support.

Our industry is characterized by vigorous protection and pursuit of intellectual property rights and positions, which may result in protracted and expensive litigation. We have engaged in litigation in the past and litigation may be necessary in the future to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation may also be necessary to defend against claims of infringement or invalidity by others. Additionally, we could be required to defend against individuals and groups who have been purchasing intellectual property assets for the sole purpose of making claims of infringement and attempting to extract settlements from companies like ours. Litigation could delay development or sales

efforts and an adverse outcome in litigation, or any similar proceedings, could subject us to significant liabilities, require us to license disputed rights from others or require us to cease marketing or using certain products or technologies. We may not be able to obtain any licenses on acceptable terms, if at all, and may attempt to redesign those products that contain allegedly infringing intellectual property, which may not be possible. We also may have to indemnify certain customers if it is determined that we have infringed upon or misappropriated another party's intellectual property. The costs of addressing any intellectual property litigation claim, including legal fees and expenses and the diversion of management resources, regardless of whether the claim is valid, could be significant and could materially harm our business, financial condition, and results of operations.

From time to time, we have been and may in the future be subject to claims or allegations that we infringe upon or have misappropriated the intellectual property of third parties. Defending against such claims is costly and intellectual property litigation often involves complex questions of fact and law, with unpredictable results. We may be forced to acquire rights to such third-party intellectual property on unfavorable terms (if rights are made available at all), pay damages, modify accused products to be non-infringing, or stop selling the applicable product altogether.

*We may be subject to confidential information theft or misuse, which could harm our business and results of operation*s.

We face attempts by others to gain unauthorized access to our information technology systems on which we maintain proprietary and other confidential information. Our security measures may be breached as the result of industrial or other espionage actions of outside parties, employee error, malfeasance or otherwise, and as a result, an unauthorized party may obtain access to our systems. In addition, these same risks to our information technology systems also apply to the third-party service providers' information technology systems utilized by the Company. Additionally, outside parties may attempt to access our confidential information through other means, for example by fraudulently inducing our employees to disclose confidential information. We actively seek to prevent, detect and investigate any unauthorized access, which occasionally occurs despite our best efforts. We might be unaware of any such access or unable to determine its magnitude and effects. The theft, corruption or unauthorized use or publication of our trade secrets and other confidential business information as a result of such an incident could adversely affect our competitive position and the value of our investment in research and development could be reduced. Our business could be subject to significant disruption, widespread negative publicity and a loss of customers, and we could suffer legal liabilities and monetary or other losses.

We have international operations and are subject to risks associated with operating in international markets.

We outsource the production of certain parts and components, as well as finished goods in certain product lines, to a small number of vendors in various locations outside of the United States, including Malaysia, Taiwan and China. Although we do not currently generate significant sales from customers outside the United States, we are targeting foreign allied navies as a potential opportunity to generate additional sales of our MMM products as well as a limited number of foreign geographic markets which we expect to expand over time.

International business operations are subject to inherent risks, including, among others:

- difficulty in enforcing agreements and collecting receivables through foreign legal systems;
- unexpected changes in regulatory requirements, tariffs, and other trade barriers, restrictions or disruptions;
- potentially adverse tax consequences;
- localized impacts of epidemics, pandemics or other contagious outbreaks, such as the COVID-19 pandemic;
- the burdens of compliance with the U.S. Foreign Corrupt Practices Act, similar anti-bribery laws in other countries, and a wide variety of other laws;
- import and export license requirements and restrictions of the United States and each other country in which we operate;
- exposure to different legal standards and reduced protection for intellectual property rights in some countries;
- currency fluctuations and restrictions; and
- political, social, and economic instability, including war and the threat of war, acts of terrorism, pandemics, boycotts, curtailment of trade, or other business restrictions.

If we do not anticipate and effectively manage these risks, these factors may have a material adverse impact on our business operations.

Risks Associated with Legal and Regulatory Matters

We may be subject to legal claims against us or claims by us that could have a significant impact on our resulting financial performance.

At any given time, we may be subject to litigation or claims related to our products, intellectual property, suppliers, customers, employees, stockholders, shareholders, distributors, sales representatives and sales of our assets, among other things, the disposition of which may have an adverse effect upon our business, financial condition, or results of operations. The outcome of litigation is difficult to assess or quantify. Lawsuits can result in the payment of substantial damages by defendants. If we are required to pay substantial damages and expenses as a result of these or other types of lawsuits, our business and results of operations would be adversely affected. Regardless of whether any claims against us are valid or whether we are liable, claims may be expensive to defend and may divert time and money away from our operations. Insurance may not be available at all or in sufficient amounts to cover any liabilities with respect to these or other matters. A judgment or other liability in excess of our insurance coverage for any claims could adversely affect our business and the results of our operations.

Our business may suffer if we fail to comply with government contracting laws and regulations.

We derive a significant portion of our revenues from direct and indirect sales to U.S., state, local and foreign governments and their respective agencies. Contracts with government customers are subject to various procurement laws and regulations, business prerequisites to qualify for such contracts, accounting procedures, intellectual property processes, and contract provisions relating to their formation, administration and performance, which may provide for various rights and remedies in favor of the governments that are not typically applicable to or found in commercial contracts. Failure to comply with these laws, regulations, or provisions in our government contracts could result in litigation, the imposition of various civil and criminal penalties, termination of contracts, forfeiture of profits, suspension of payments, or suspension from future government contracting. If our government contracts are terminated, if we are suspended from government work, or if our ability to compete for new contracts is adversely affected, our business could suffer due to, among other factors, lost sales, the costs of any government action or penalties, damages to our reputation and the inability to recover our investment in developing and marketing products for MMM use.

If we are unable to obtain and adequately protect our intellectual property rights or are subject to claims that our products infringe on the intellectual property rights of others, our ability to commercialize our products could be substantially limited.

We consider our technology and processes proprietary. If we are not able to adequately protect or enforce the proprietary aspects of our technology, competitors may utilize our proprietary technology. As a result, our business, financial condition, and results of operations could be adversely affected. We protect our technology through a combination of patent, copyright, trademark and trade secret laws, employee and third-party nondisclosure agreements, and similar means. Despite our efforts, other parties may attempt to disclose, obtain, or use our technologies. Our competitors may also be able to independently develop products that are substantially equivalent or superior to our products or slightly modify our products. In addition, the laws of some foreign countries do not protect our proprietary rights as fully as do the laws of the United States. As a result, we may not be able to protect our proprietary rights adequately in the United States or abroad. Furthermore, there can be no assurance that we will be issued patents for which we have applied or obtain additional patents, or that we will be able to obtain licenses to patents or other intellectual property rights of third parties that we may need to support our business in the future. The inability to obtain certain patents or rights to third-party patents and other intellectual property rights in the future could have a material adverse effect on our business.

We may be subject to intellectual property infringement claims or other allegations by third parties, which may materially and adversely affect our business, results of operations and prospects.

Our products are largely depending on the application of our technology. From time to time, third parties holding similar technologies and intellectual property rights, including companies, competitors, patent holding companies, customers and/or non-practicing entities, may assert intellectual property claims against us.

Although we believe that our products do not infringe upon the intellectual property rights of third parties, we cannot be certain that our operations do not or will not infringe upon or otherwise violate intellectual property rights or other rights held by third parties, and there may be third-party intellectual property rights or other rights that are infringed by our products without our awareness. We may be from time to time in the future subject to legal proceedings and claims relating to the intellectual property rights or other rights of third parties, some even without merit. If we are forced to defend against any infringement or misappropriation claims, whether they are with or without merit, are settled out of court, or are determined in our favor, we may be required to expend significant time and financial resources on the defense of such claims. Regardless of the merits or eventual outcome, such a claim could adversely impact our brand and business. Any such assertions may require us to enter into

royalty arrangement or result in us being unable to use certain intellectual property. Infringement assertions by third parties may involve patent holding companies or other patent owners who have no relevant product revenue, and therefore our own issued and pending patents may provide little or no deterrence to these patent owners in bringing intellectual property right claims against us. Furthermore, any adverse outcome of a dispute may require us to pay damages, potentially including treble damages and attorney's fees, if are found to have willfully infringed a party's intellectual property; case making, licensing or using our solutions that are alleged to infringe or misappropriate the intellectual property of others; expend additional development resources to redesign our solutions' enter into potentially unfavorable royalty or license agreements in order to obtain the right to use necessary technologies or works; and to indemnify our partners, customers and other third parties. Any of these events could adversely impact our business, results of operations and financial condition.

If we were found to have violated the intellectual property rights of others, we may be subject to liability for our infringement activities or may be prohibited from using such intellectual property or relevant contents, and we may incur licensing or usage fees or be forced to develop alternatives of our own. As a result, our reputation may be harmed and our business and financial performance may be materially and adversely affected.

The ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have significant U.S. net operating loss and tax credit carryforwards (the "Tax Attributes"). Under federal tax laws, we can carry forward and use our Tax Attributes to reduce our future U.S. taxable income and tax liabilities until such Tax Attributes expire in accordance with the Internal Revenue Code of 1986, as amended (the "IRC"). Section 382 and Section 383 of the IRC provide an annual limitation on our ability to utilize our Tax Attributes, as well as certain built-in-losses, against future U.S. taxable income in the event of a change in ownership, as defined under the IRC. Share issuances in connection with our past financing transactions or other future changes in our stock ownership, which may be beyond our control, could result in changes in ownership for purposes of the IRC. Such changes in ownership could further limit our ability to use our Tax Attributes. Accordingly, any such occurrences could adversely affect our financial condition, operating results and cash flows.

The cost of compliance with environmental, health, safety, and other laws and regulations could adversely affect our results of operations or financial condition.

We are subject to a broad range of environmental, health, safety, and other laws and regulations. These laws and regulations impose increasingly stringent environmental, health, and safety protection standards and permit requirements regarding, among other things, air emissions, wastewater storage, treatment, and discharges, the use and handling of hazardous or toxic materials, waste disposal practices, the remediation of environmental contamination, and working conditions for our employees. Some environmental laws, such as the Comprehensive Environmental Response, Compensation and Liability Act of 1980, the Clean Water Act, and comparable laws in U.S. states and other jurisdictions world-wide, impose joint and several liability for the cost of environmental remediation, natural resource damages, third-party claims, and other expenses, without regard to the fault or the legality of the original conduct, on those persons who contributed to the release of a hazardous substance into the environment. We may also be affected by future laws or regulations, including those imposed in response to energy, climate change, geopolitical, or similar concerns. These laws may impact the sourcing of raw materials and the manufacture and distribution of our products and place restrictions and other requirements on the products that we can sell in certain geographical locations.

We may be exposed to certain regulatory and financial risks related to climate change.

Growing concerns about climate change may result in the imposition of additional regulations or restrictions to which we may become subject. A number of governments or governmental bodies have introduced or are contemplating regulatory changes in response to climate change. The outcome of new legislation or regulation in the U.S. and other jurisdictions in which we operate may result in new or additional requirements, fees or restrictions on certain activities. Compliance with these climate change initiatives may also result in additional costs to us, including, among other things, increased production costs, additional taxes, reduced emission allowances or additional restrictions on production or operations. Any adopted future climate change regulations could also negatively impact our ability to compete with companies situated in areas not subject to such limitations. We may not be able to recover the cost of compliance with new or more stringent laws and regulations, which could adversely affect our results of operations, cash flow or financial condition.

Our net sales might be adversely impacted if our lighting systems do not meet certain certification and compliance standards.

We are required to comply with certain legal requirements governing the materials in our products. Although we are not aware of any efforts to amend any existing legal requirements or implement new legal requirements in a manner with which we cannot comply, our net sales might be adversely affected if such an amendment or implementation were to occur.

Moreover, although not legally required to do so, we strive to obtain certification for substantially all our products. In the United States, we seek certification on substantially all of our products from UL®, ETL®, or DLC™. Where appropriate in jurisdictions outside the United States, we seek to obtain other similar national or regional certifications for our products. Although we believe that our broad knowledge and experience with electrical codes and safety standards have facilitated certification approvals, we cannot ensure that we will be able to obtain any such certifications for our new products or that, if certification standards are amended, we will be able to maintain such certifications for our existing products. Moreover, although we are not aware of any effort to amend any existing certification standard or implement a new certification standard in a manner that would render us unable to maintain certification for our existing products or obtain ratification for new products, our net sales might be adversely affected if such an amendment or implementation were to occur.

If we experience a material weakness in our internal control over financial reporting in the future or fail to otherwise maintain effective financial reporting systems and processes, we may be unable to accurately and timely report our financial results or comply with the requirements of being a public company, which could cause the price of our common stock to decline and harm our business.

As a public company reporting to the SEC, we are subject to the reporting requirements of the Exchange Act and the Sarbanes-Oxley Act of 2002, including Section 404(a) that requires that we annually evaluate and report on our systems of internal controls.

We cannot be certain that we will not in the future have material weaknesses in our internal control over financial reporting, or that we will successfully remediate any that we find. In addition, the processes and systems of internal controls we have developed to date may not be adequate. Accordingly, there could be a reasonable possibility that material weaknesses could result in a misstatement of our accounts or disclosures that would result in a material misstatement of our financial statements that would not be prevented or detected on a timely basis, or cause us to fail to meet our obligations to file periodic financial reports on a timely basis. Any of these failures could result in adverse consequences that could materially and adversely affect our business, including an adverse impact on the market price of our common stock, potential action by the SEC against us, possible defaults under our debt agreements, shareholder lawsuits, delisting of our stock, general damage to our reputation and the diversion of significant management and financial resources.

We rely heavily on information technology in our operations and any material failure, weakness, interruption or breach of security could prevent us from effectively operating our business, which could have a material adverse effect on our business, financial condition, and results of operations.

We rely heavily on our information technology systems, including our enterprise resource planning ("ERP") and customer relationship management ("CRM") software, across our operations and corporate functions, including for management of our supply chain, payment of obligations, data warehousing to support analytics, finance systems, accounting systems, and other various processes and procedures, some of which are handled by third parties, as well as lead generation, customer tracking, customer sourcing, etc. We also rely heavily on remote communication tools such as Microsoft Teams and Zoom to accommodate remote work environment and external meetings.

Our ability to efficiently and effectively manage our business depends significantly on the reliability and capacity of these systems. Our business and results of operations may be adversely affected if we experience system usage problems. The failure of these systems to operate effectively, maintenance problems, system conversions, back-up failures, problems or lack of resources for upgrading or transitioning to new platforms or damage or interruption from circumstances beyond our control, including, without limitation, fire, natural disasters, power outages, systems failure, security breaches, cyber-attacks, viruses or human error could result in, among other things, transaction errors, processing inefficiencies, loss of data, inability to generate timely SEC reports, loss of sales and customers and reduced efficiency in our operations. Additionally, we and our customers could suffer financial and reputational harm if customer or Company proprietary information is compromised by such events. Remediation of such problems could result in significant unplanned capital investments and any damage or interruption could have a material adverse effect on our business, financial condition, and results of operations.

Risks Associated with an Investment in Our Common Stock

Our failure to comply with the continued listing requirements of Nasdaq could adversely affect the price of our common stock and its liquidity.

We have a history of failing to comply with the continued listing requirements of Nasdaq, although we have successfully cured all the pre-existed deficiency, we may not be able to cure any deficiency timely in the future. On August 23, 2022, we received a letter from the Nasdaq Listing Qualifications Staff (the “Staff”) notifying us that we are not in compliance with Nasdaq Listing Rule 5550(a)(2) (the “Bid Price Rule”), because the closing bid price for our common stock was below the minimum $1.00 per share for 30 consecutive business days. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided an initial period of 180 calendar days, or until February 20, 2023, to regain compliance with the Bid Price Rule. During the initial compliance period, our common stock continued to trade on the Nasdaq Capital Market, but did not satisfy the Bid Price Rule. On February 21, 2023, we received written notification (the “Notification”) from the Staff stating that we had not regained compliance with the Bid Price Rule and were ineligible to obtain a second 180 calendar day period to regain compliance because we did not meet the Nasdaq Capital Market’s minimum $5 million Stockholders’ Equity initial listing requirement as of September 30, 2022. Pursuant to the Notification, our common stock is subject to delisting from Nasdaq pending our opportunity to request a hearing before the Nasdaq Hearings Panel (the “Panel”). The Company intends to diligently pursue an appeal of the Notification before the Panel and regain compliance with the Bid Price Rule. Under Nasdaq rules, the delisting of our common stock will be stayed during the pendency of the appeal and during such time, our common stock will continue to be listed on Nasdaq. On February 24, 2023, we submitted our request for an appeal before the Panel. There can be no assurance that such appeal will be successful or that we will be able to regain compliance

with the Bid Price Rule or maintain compliance with other Nasdaq listing requirements. If our appeal is denied or if we fail to regain compliance with Nasdaq’s continued listing standards during any period granted by the Panel, our common stock will be subject to delisting from Nasdaq.

On November 16, 2022, we received a letter from the Staff notifying us that we were again no longer in compliance with Nasdaq Listing Rule 5550(b)(1), which requires listed companies to maintain stockholders’ equity of at least $2.5 million if they do not meet the alternative compliance standards relating to the market value of listed securities or net income from continuing operations (the “Minimum Stockholders’ Equity Rule”). Our Form 10-Q for the quarterly period ended September 30, 2022 filed on November 10, 2022 reflected that our stockholders’ equity as of September 30, 2022 was $1.5 million. Based on our timely submission of our plan to regain compliance (the “Plan”), Nasdaq granted us an extension through May 15, 2023 to regain compliance with the Minimum Stockholders’ Equity Rule.

On February 21, 2023, we received written notification (the “Bid Price Notification”) from the Staff stating that we had not regained compliance with the Bid Price Rule and our common stock is subject to delisting from Nasdaq. On February 24, 2023, we submitted a request for a hearing before the Nasdaq Hearings Panel (the “Panel”) to appeal the delisting (the “Appeal”). Under Nasdaq rules, the delisting of the Company’s common stock was stayed during the pendency of the Appeal and, during such time, the Company’s common stock continued to be listed on Nasdaq.

On March 28, 2023, the Company received written notification (the “Additional Staff Determination”) from the Staff stating that (i) following the Bid Price Notification, and in accordance with Listing Rule 5810(c)(2)(A), Nasdaq is no longer permitted to consider the stockholders’ equity compliance plan, (ii) the Additional Staff Determination serves as an additional basis for delisting the Company’s common stock from Nasdaq and (iii) the Panel will consider the Additional Staff Determination in rendering a determination regarding the continued listing of the Company’s common stock on Nasdaq.

On April 6, 2023, the Company participated in the Appeal before the Panel. The Company provided an update to the Panel on the Company's substantial progress made towards the previously submitted Plan during the three months ended March 31, 2023, and requested the Panel grant the Company an exception to (1) re-allow the previously granted exception until May 15, 2023 for the Company to regain compliance with theMinimum Stockholders' Equity Rule and (2) grant an exception allowing the Company up to 180 days following the Bid Price Notification to regain compliance with the Bid Price Rule by effecting a reverse stock split following stockholder approval at the Company's 2023 annual meeting of stockholders. On May 1, 2023, the Panel granted the Company's request (the "Panel Decision") to continue the Company's listing on Nasdaq, subject to the following conditions: (1) on or before May 15, 2023, the Company shall file with the SEC its quarterly report for the three months ended March 31, 2023 demonstrating compliance with the Minimum Stockholders' Equity Rule and (2) on or before July 7, 2023, the Company shall demonstrate compliance with the Bid Price Rule.

On July 27, 2023, the Company received written notification from the Staff stating that the Company has regained compliance with the Bid Price Rule and the Minimum Stockholders' Equity Rule, as required by the Panel Decision. Pursuant to Nasdaq Listing Rule 5815(d)(4)(B), the Company will be subject to a mandatory panel monitor for a period of one year from July 27, 2023 (the "Monitoring Period"). If, we do within the Monitoring Period, the Staff finds the Company again out of compliance with the Minimum Stockholders' Equity Rule, notwithstanding Nasdaq Listing Rule 5810(c)(2), the Company will not be permitted to provide the Staff with a plan of compliance with respect to that deficiency and the Staff will not be permitted to grant additional time for the Company to regain compliance with respect to that deficiency, nor will the Company be afforded an applicable cure or compliance period pursuant to Nasdaq Listing Rule 5810(c)(3). Instead, the Staff will issue a delist determination letter and remain the Company will have an opportunity to request a new hearing with the initial Panel or a newly convened hearings panel if the initial Panel is unavailable. The Company will have the opportunity to respond and present to the Panel as provided by Nasdaq Listing Rule 5815(d)(4)(C). The Company's common stock may be at that time delisted from Nasdaq.

As of the date of this Annual Report, the Company believes it has maintained compliance with the Minimum Stockholders' Equity Rule for continued listing on the Nasdaq Capital Market. To become compliant with the Bid Price Rule, the Company effected a 1-for-7 reverse stock split to increase the per share trading price of the common stock effective on June 16, 2023 (See Note 9, "Stockholders' Equity").

However, there can be no assurance that the Company will be able to maintain compliance with the Minimum Stockholders' Equity Rule, Bid Price Rule, or other Nasdaq listing requirements. If the Company fails to maintain compliance with Nasdaq's continued listing requirements, then we could be delisted from The Nasdaq Capital Market. If we were delisted, it would likely have a negative impact on standards in accordance with the price of our Panel's decision, the Company's common stock and our liquidity. If we are delisted will be subject to delisting from The Nasdaq Capital Market and we are not able to list our common stock on another exchange, our common stock could be quoted on the OTC Bulletin Board or in the "pink sheets." As a result, we could face significant adverse consequences including, among others:

- increased borrowing costs under the terms of outstanding bridge financing;
- a limited availability of market quotations for our securities;
- a determination that our common stock is a "penny stock," which would require broker-dealers trading in our common stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for our securities;
- a limited amount of news and little or no analyst coverage of the Company;
- we would no longer qualify for exemptions from state securities registration requirements, which may require us to comply with applicable state securities laws; and
- a decreased ability to issue additional securities (including pursuant to short-form registration statements on Form S-3) or obtain additional financing in the future.Nasdaq.

As a "thinly-traded" stock with a relatively small public float, the market price of our common stock is highly volatile and may decline regardless of our operating performance.

Our common stock is “thinly-traded” and we have a relatively small public float, which increases volatility in the share price and makes it difficult for investors to buy or sell shares in the public market without materially affecting our share price. Since Throughout the beginning of 2022, fiscal year ended December 31, 2023, our market price has ranged from a low of $0.28 to a high of $4.63 and continues to experience significant volatility. Broad market and industry factors also may adversely affect the market price of our common stock, regardless of our actual operating performance. Factors that could cause wide fluctuations in our stock price may include, among other things:

- actual or anticipated variations in our financial condition and operating results;
- general economic conditions and trends;
- addition or loss of significant customers and the timing of significant customer purchases;
- our ability to effectively implement our growth plans, including new products, and the significance and timing of associated expenses;
- unanticipated impairments and other changes that reduce our earnings;
- overall conditions or trends in our industry;
- the entry or exit of new competitors into our target markets;
- any litigation or legal claims;
- the terms and amount of any additional financing that we may obtain, if any;
- unfavorable publicity;
- additions or departures of key personnel;
- geopolitical changes, global health concerns and macroeconomic changes;
- changes in the estimates of our operating results or changes in recommendations by any securities or industry analysts that elect to follow our common stock;
- market expectations following periods of rapid growth;
- the potential impact of increased volatility due to elevated trading on the price of our stock;
- industry-wide news events that may affect market perceptions of the value of our stock; and
- sales of our common stock by us or our stockholders, including sales by our directors and officers.

Because our common stock is thinly-traded, investors seeking to buy or sell a certain quantity of our shares in the public market may be unable to do so within one or more trading days and it may be difficult for stockholders to sell all of their shares in the market at any given time at prevailing prices. Any attempts to buy or sell a significant quantity of our shares could materially affect our share price. In addition, because our common stock is thinly-traded and we have a relatively small public float, the market price of our shares may be disproportionately affected by any news, commentary or rumors regarding us or our industry, regardless of the source or veracity, which could also result in increased volatility.

In addition, in the past, following periods of volatility in the market price of a company’s securities, securities litigation has often been instituted against these companies. Volatility in the market price of our shares could also increase the likelihood of regulatory scrutiny. Securities litigation, if instituted against us, or any regulatory inquiries or actions that we face could result in substantial costs, diversion of our management’s attention and resources and unfavorable publicity, regardless of the merits of any claims made against us or the ultimate outcome of any such litigation or action.

We could issue additional shares of common stock or preferred stock without stockholder approval, or new securities with terms or rights superior to those of our existing stockholders, shareholders, which may adversely affect the market price of our common stock.

We expect to require additional financing to fund future operations, including our research, development, sales and marketing activities. We are authorized to issue 50,000,000 shares of common stock of which 18,133,100 4,443,130 shares were issued and outstanding as of March 17, 2023 March 18, 2024, and 5,000,000 shares of preferred stock, of which 876,447 were issued and outstanding as of March 17, 2023 March 18, 2024. Our Board of Directors has the authority, without action or vote of our stockholders, shareholders, to issue authorized but unissued shares of common and preferred stock subject to Nasdaq's rules. Additionally, if we raise additional funds by issuing equity securities, the percentage ownership of our current stockholders shareholders will be reduced, and, if the equity securities issued are preferred shares, the holders of the new preferred shares may have rights superior to those of our existing stockholders, shareholders, which could adversely affect rights of our existing stockholders shareholders and the market price of our common stock. In addition, in order to raise additional capital or acquire businesses in the future, we may need to issue securities that are convertible or exchangeable for shares of our common or preferred stock. If we raise additional funds by issuing debt securities, the holders of those debt securities would have some rights senior to those of our existing stockholders, shareholders, and the terms of these debt securities could impose restrictions on operations and create a significant interest expense for us which could have a materially adverse effect on our business. Any such issuances could be made at a price that reflects a discount to the then-current trading price of our common stock. These issuances could be dilutive to our existing stockholders shareholders and cause the market price of our common stock to decline.

The exercise of outstanding warrants to purchase our common stock or the conversion of shares of our Series A Preferred Stock (as defined below) into shares of common stock may dilute the ownership interest of our common stockholders. investors.

In connection with past financing activity, we have issued convertible preferred stock and warrants to purchase our common stock. The exercise of some or all of the outstanding warrants to purchase our common stock or the conversion of some or all of the outstanding Series A Preferred Stock may dilute the ownership interests of our stockholders. shareholders. Any sales of our common stock issuable upon the exercise of the warrants or conversion of the Series A Preferred Stock could adversely affect prevailing market prices of our common stock. In addition, the anticipated exercise of the warrants or conversion of the Series A Preferred Stock could depress the price of our common stock.

As a stock, which in turn may result of these factors, in the value of our common stock could decline declining significantly.

We have never paid dividends on our common stock, and we do not anticipate paying any cash dividends in the foreseeable future.

We have never declared or paid dividends on our common stock, nor do we anticipate paying any cash dividends for the foreseeable future. We currently intend to retain future earnings, if any, to finance the operations and expansion of our business. Any future determination to pay cash dividends will be at the discretion of our Board of Directors and will be dependent upon our earnings, financial condition, operating results, capital requirements, a capital structure strategy and other factors as deemed necessary by our Board of Directors.

The elimination of monetary liability against our directors under Delaware law and the existence of indemnification rights held by our directors and officers may result in substantial expenditures by the Company and may discourage lawsuits against our directors and officers.

Our Certificate of Incorporation eliminates the personal liability of our directors to the Company and our stockholders shareholders for damages for breach of fiduciary duty as a director to the extent permissible under Delaware law. Further, our Bylaws provide that we are obligated to indemnify any of our directors or officers to the fullest extent authorized by Delaware law and, subject to certain conditions, advance the expenses incurred by any director or officer in defending any action, suit or proceeding prior to its final disposition. Those indemnification obligations could result in the Company incurring substantial expenditures to cover the cost of settlement or damage awards against our directors or officers, which we may be unable to recoup. These provisions and resultant costs may also discourage us from bringing a lawsuit against any of our current or former directors or officers for breaches of their fiduciary duties, and may similarly discourage the filing of derivative litigation by our stockholders shareholders against our directors and officers even though such actions, if successful, might otherwise benefit us or our stockholders. shareholders.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Governance

Cybersecurity is an integral part of the Board's risk analysis and discussions with management. At least annually, the full Board is updated on the Company's cybersecurity risks and risk mitigation strategy by our Director of Operations & Information Technology, who is responsible for management of our Information Technology program. The Board also receives ad hoc updates, as needed, about material changes to the Company's cybersecurity program and/or the cybersecurity landscape, including briefings on major legislative and regulatory developments, from our Director of Operations & Information Technology.

Our Director of Operations & Information Technology regularly evaluates the Company's cybersecurity risk profile and leads the development of strategies to mitigate risks and address cybersecurity issues that may arise, in consultation with members of our senior management team. Our Director of Operations & Information Technology has approximately 20 years of experience in his field, and Bachelor of Science in Information Technology Concentration in Information Systems Security and an MBA in Business Analytics.

We have formal policies and procedures that address cybersecurity incident response and disaster recovery from interference with our critical applications. The Cybersecurity Incident Response Plan, designed for our business environment, features the Director of IT and Operations as the incident coordinator. In the event of any suspicious activity or security breach, Energy Focus swiftly conducts an assessment to gauge the severity and scope of the incident, employing thorough investigation techniques to identify the root cause and affected systems. Immediate containment measures are then executed to prevent further unauthorized access or damage. Throughout the incident response process, transparent and timely communication is upheld with internal stakeholders and relevant external parties, ensuring alignment, and understanding of response efforts. Following successful mitigation and restoration of normal operations, Energy Focus conducts a comprehensive post-incident review to glean insights and lessons learned. These findings inform ongoing enhancements to our cybersecurity protocols, further bolstering our resilience against future threats. The incident coordinator oversees the detection, containment, and recovery procedures outlined in the plan. Effective communication protocols ensure timely notification to both internal and external stakeholders. Regular training sessions bolster staff preparedness, while post-incident reviews facilitate continuous improvement. Appendices offer essential contact information and tools necessary for incident response.

Cybersecurity user awareness training is mandatory for all new hires and for existing employees on an annual basis to help protect our employees and the Company against cybersecurity threats. This annual training is customized to address specific cybersecurity challenges and scenarios that we may face within the real estate investment industry. Novel cybersecurity threats to the Company that are identified by our Information Technology team are communicated to all employees by email, as needed, in an effort to promote awareness and protect the Company from cyber-attacks.

Risk Management and Strategy

We maintain an Enterprise Risk Management ("ERM") program to identify and respond to the most critical risks to our business, including cybersecurity risks. Risks and vulnerabilities from our increased reliance on information technology systems are assessed at least annually as part of our ERM program. In response to such assessments, controls are embedded into our processes and technology by our Director of Operations & Information Technology to seek to mitigate risks to our systems and processes from cybersecurity incidents. We continuously evaluate if we have adequate controls in place utilizing a risk-based approach that aligns with the National Institute of Standards and Technology Cybersecurity Framework (NIST).

Our information technology department diligently monitors our daily operations, overseeing the security of our computer networks through implemented systems and processes aimed at safeguarding sensitive data. Utilizing encryption and authentication technologies, we fortify our systems against unauthorized access and data loss. This proactive approach ensures the integrity and confidentiality of our data, mitigating potential risks posed by cyber threats.

In assessing cybersecurity risks, we adopt a risk-based approach, particularly concerning third-party vendors integral to our operations. Vendors meeting specific criteria, including ownership and operation of information technology networks critical to our operations, undergo evaluation across various domains such as data security and operations management. Effective communication channels with these vendors are maintained to enable timely notification of any cybersecurity incidents that could impact our company.

Although risks from cybersecurity threats have to date not materially affected, and we do not believe they are reasonably likely to materially affect, us, our business strategy, results of operations or financial condition, like other companies in our industry, we could, from time to time, experience threats and security incidents related to our and our third-party vendors' information systems. For more information, please see Item 1A. Risk Factors - Increased Information Technology ("IT") security threats and more sophisticated computer crime could pose a risk to our systems, networks, and services.

Our Director of Operations & Information Technology regularly evaluates the Company's cybersecurity risk profile and leads the development of strategies to mitigate risks and address cybersecurity issues that may arise, in consultation with members of our senior management team. Our Director of Operations & Information Technology has approximately 20 years of experience in his field, and our Director of Operations & Information Technology holds certifications in cybersecurity from accredited information technology certification providers.

We have formal policies and procedures that address cybersecurity incident response and disaster recovery from interference with our critical applications. Our Cybersecurity Incident Response Plan provides a documented framework for responding to cybersecurity incidents in coordination across multiple departments. In the event of such an incident, our Cybersecurity Incident Response Team ("CIRT"), which is comprised of our Director of Operations & Information Technology, Director of Risk Management and representatives from Risk Management, Legal and Financial Reporting, would respond to such incident in accordance with our Cybersecurity Incident Response Plan. Any cybersecurity incident that meets certain criteria will be communicated by the CIRT to senior management and the Board in a timely manner, and will be evaluated by our Executive Management Team, comprised of certain executives, to assess the impact of the incident on the Company, considering qualitative and quantitative factors. In conducting this assessment and responding to an incident, the CIRT and Executive Management Team may utilize the services of third-party consultants.

Cybersecurity user awareness training is mandatory for all new hires and for existing employees on an annual basis to help protect our employees and the Company against cybersecurity threats. This annual training is customized to address specific cybersecurity challenges and scenarios that we may face within the real estate investment industry. Novel cybersecurity threats to the Company that are identified by our Information Technology team are communicated to all employees by email, as needed, in an effort to promote awareness and protect the Company from cyber-attacks.

ITEM 2. PROPERTIES

Our principal executive offices and our manufacturing facility are located in an approximately 62,000 square foot facility in Solon, Ohio, under a lease agreement expiring on June 30, 2027. We believe this facility is adequate to support our current operations.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we may be involved in legal proceedings arising from the normal course of business. See Note 16, 15, "Legal Matters," to our financial statements for the year ended December 31, 2022 December 31, 2023 included in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock trades on The Nasdaq Capital Market under the symbol "EFOI."

Stockholders Shareholders

There were approximately 81 90 holders of record of our common stock as of February 20, 2023 March 7, 2024, however, a large number of our stockholders hold their stock in "street name" in brokerage accounts. Therefore, they do not appear on the stockholder list maintained by our transfer agent.

Dividends

We have not declared or paid any cash dividends, and do not anticipate paying cash dividends in the near future.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements ("the financial statements") statements and related notes thereto, included in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report.

Overview

Energy Focus, Inc. engages primarily in the design, development, manufacturing, marketing and sale of energy-efficient lighting systems and controls. We develop, market and sell high quality light-emitting diode ("LED") lighting and controls products in the commercial market and military maritime market ("MMM"), and expanded our offerings into the consumer market in the fourth quarter of 2021.. Our mission is to enable our customers to run their facilities with greater energy efficiency, productivity, and human health and wellness through advanced LED retrofit solutions. Our goal is to be the human wellness lighting and LED technology and a market leader for the most demanding applications where performance, quality, value, environmental impact and health are considered paramount. We specialize in energy efficient LED lighting retrofit by product replacing fluorescent, high-intensity discharge lighting and other types of lamps in institutional buildings for primarily indoor lighting applications with our innovative, high-quality commercial and military-grade tubular LED ("TLED") products, as well as other LED and lighting control products for commercial and consumer applications. In late 2020, we announced the launch of ultraviolet-C light disinfection We are also evaluating adjacent technologies, including Gallium Nitride ("UVCD" GaN") products. After evaluating based power supplies and additional market demand and supply chain challenges opportunities for energy solution products that support sustainability in our UVCD products, we revised our business strategy to primarily focus on our MMM and commercial and industrial lighting and control products. existing channels.

The LED lighting industry has changed dramatically over the past several years due to increasing competition and price erosion. We have been experiencing these industry forces in both our military and commercial business since 2016, where when we once commanded significant price premiums for our flicker-free TLEDs with industry leading warranties. In more recent years, we have focused on redesigning our products for lower costs and consolidated our supply chain for stronger purchasing power in an effort to price our products more competitively while not impacting the performance and quality. Despite these efforts, our legacy products continue to face extreme pricing price competition and a convergence of product functionality in the marketplace, and we have shifted to diversifying our supply chain in an effort to increase value and remain competitive. These trends are not unique to Energy Focus as evidenced by the increasing number of industry peers facing challenges, exiting LED lighting, selling assets and even going out of business.

In addition to continuously pursuing cost reductions, our strategy to combat these trends is to innovate both our technology and product offerings with differentiated products and solutions that offer greater, distinct value. Specific examples of these products we have developed include the RedCap®, our patented emergency backup battery integrated TLED, EnFocus™, our unique dimmable/color-tunable lighting and powerline control platform that we launched in 2020, and the second generation of EnFocus™ powerline control switches and circadian lighting system, system. We are looking forward to the continued support and growth of our existing EnFocus™ product line which as a result is particularly attractive for its ease of supply chain challenges we now plan to launch install and ease of use in 2023. Similarly, our plans to expand and enhance spaces with transient occupation. The Company have enhanced the performance of our RedCap® RedCap® product line are also now expected providing a more user- friendly experience in 2023. We continue to evaluate our sales strategy and believe our go-to-market strategy that focuses more on direct-sales marketing, selectively expanding our channel partner network to cover territories across the country, and listening to the voice of the customer, will lead to better and more impactful product development efforts that we believe will eventually translate into larger addressable markets and greater sales growth for us.

Prior to 2019, Throughout 2023, the Company experienced continued to make significant sales declines, operating losses cost cutting efforts to address operational expenses while maintaining customer satisfaction and increases in its inventory. Beginning in 2019, significant restructuring efforts were undertaken. The Company replaced delivering goods on-time. Investments into Energy Focus have contributed to the entire senior management team, significantly reduced non-critical expenses, minimized the amount ability of inventory the Company was purchasing, dramatically changed the composition of our board of directors (“Board of Directors”) and the executive team, and recruited new departmental leaders across the Company. The initial cost savings efforts to minimize cash usage included the elimination of certain positions, restructuring of the sales organization and incentive plan, flattening of the senior management team, additional operational streamlining, management compensation reductions, and outsourcing of certain functions including certain elements of supply chain and marketing.

During 2021 and 2022, we realized initial cost-savings benefits from these relaunch efforts, but continued to face significant operating losses. Despite these cost-cutting efforts, the company faced a challenging commercial market with continuing impacts from the global pandemic combined with ongoing delays in MMM projects and funding that continued to depress sales through 2021 while the company invested in exploring additional lines of business with UVCD technology that ultimately gained little traction in the market.

At the beginning of 2022, the Board of Directors appointed our lead independent director to serve as interim Chief Executive Officer and replace our previous chief executive officer. During 2022, the company redoubled its cost-reduction efforts, reduced its warehouse square footage, undertook an inventory reduction project, and dramatically reduced head count. During 2022, we also added three experienced executives to our Board of Directors with extensive lighting and consumer products industry experience, and in September 2022, we hired a permanent Chief Executive Officer. We reinvested in our MMM sales channel with a strategic hire in May 2022 and continue to pursue these sales opportunities, though the sales cycles for what are frequently made-to-order not only provide quality products are longer than commercial and services, but to both expand and rationalize product offerings.

It is our belief that the continued dramatic rightsizing efforts undertaken in 2022 and 2023, along with reorganization of the sales team and ongoing development of innovative, high-value products and an expanded sales and distribution network, will over time result in improved sales and bottom-line performance for the Company.

During 2021 2022 and into 2022, 2023, our MMM business continued to face challenges resulting from the delayed availability of government funding and the timing of U.S. Navy awards, with several anticipated projects facing repeated and ongoing delays. This sector also maintains very long sales cycles. The timeline between bid to order can often take at least six months, and many MMM products are built-to-order with resultant lead times before orders become revenue. We continue to pursue opportunities from the U.S. Navy and the government sector to minimize such volatility. Previously in our MMM business, significant efforts undertaken to reduce costs in our product offerings have positioned us to be more competitive along with improved production efficiencies. Such efforts allowed us to continue to win bids and proposals that helped grow our MMM sales pipeline in 2020, offsetting some the second half of the weakness being experienced in our commercial business that year, though new MMM orders dwindled as we entered 2022. In May 2022 we reinvested in our MMM sales channel with a strategic hire to lead our MMM sales effort. 2023. While we continue to aggressively seek to increase sales of our commercial products,

the MMM business offers us continued sales opportunities, in addition to validating our product quality and strengthening our brand trust in the marketplace. However, due During 2023, we thoroughly reviewed and adjusted our commercial pricing position as well as our strategic relationships and partnerships within the commercial LED market space. We believe our new pricing position will give us a greater advantage than previously held against the competition and offer a more attractive entry point for our end customer base. We are pleased to see a growth during the fiscal year ended December 31, 2023 in quotation opportunities in both MMM and commercial product mix impacts resulting from the continued impact of the COVID-19 pandemic on commercial sales, our current financial results are in part driven by, and reflect volatility in, our MMM sales. lines.

Meanwhile, we continue to seek additional external funding alternatives and sources to support our growth strategies, plans and initiatives. The recent strategic investments in 2023 by Sander Electronics, Inc. (“Sander”), a shareholder of the Company, contributed meaningful external capital, as well as presented synergistic opportunities to improve and diversify our supply chain and product offerings. We plan to achieve profitability through developing and launching increasing sales in our innovative products such as EnFocusTM EnFocusTM powerline control technology and further leveraging our unique and proprietary technology such as RedCap® RedCap®, as well as executing on our multi-channel sales strategy that targets key verticals, such as government, healthcare, education and commercial and industrial, complemented by our marketing outreach campaigns and expanding channel partnerships. We also plan to continue to develop advanced lighting and lighting control applications built upon the EnFocusTM EnFocusTM platform that aim to serve both consumer and the commercial markets. market. We are also evaluating adjacent technologies including ruggedized industrial retrofit lighting applications and GaN-based power supplies and other market opportunities in energy solutions products that support sustainability in our existing channels. In addition, we intend to continue to apply rigorous financial discipline in to our organizational structure, business processes and policies, strategic sourcing activities and supply chain practices to help accelerate our path towards profitability.

We launched our patented EnFocus™ platform during the second quarter of 2020 and, despite the ongoing, significant delay and slowdown in our customers’ lighting projects following the impacts of the COVID-19 pandemic, we continue to receive positive feedback from the market. The EnFocus™ platform offers two immediately available product lines: EnFocus™ DM, which provides a dimmable lighting solution, and EnFocus™ DCT, which provides both a dimmable and color tunable lighting solution. EnFocus™ enables buildings to have dimmable, color tunable and circadian-ready lighting using existing wiring, without requiring laying additional data cables or any wireless communication systems, through a relatively simple upgrade with EnFocus™ switches and LED lamps, a far more secure, affordable and environmentally sustainable solution compared with replacing an entire luminaire and incorporating additional wired or wireless communication.

Despite continuing progress on cost reduction throughout 2023 and 2022, the Company’s results reflect the challenges due to long and unpredictable sales cycles, unexpected delays in MMM and commercial customer retrofit budgets and project starts, and supply chain issues, all exacerbated by the lingering effects of the COVID-19 pandemic. issues. There has also been continuing aggressive price competition in the lighting industry. We continued to incur losses and we have a substantial accumulated deficit, which continues to raise substantial doubt about our ability to continue as a going concern at December 31, 2022 December 31, 2023.

On June 28, 2023, the Company received notices of resignation from the following four members of the Board of Directors: Jennifer Cheng, Brian Lagarto, Jeffery Parker, and Stephen Socolof. Their terms as directors would have otherwise expired at the 2024 annual meeting of stockholders of the Company. These resignations did not involve any disagreement with the Company.

On July 2, 2023, the remaining members of the Board of Directors unanimously appointed the following four new members to the Board of Directors: Kin-Fu Chen, Shou-Jang Lee, Jason Tien-Chia Tsai, and Chiao Chieh (Jay) Huang. The COVID-19 pandemic in particular had, Board of Directors affirmatively determined that, at the time of his appointment, each of the new members of the Board of Directors is an independent director under the corporate governance standards of the Nasdaq.

On August 24, 2023, the Board of Directors approved the termination of the Company's chief executive officer and may continue appointed Chiao Chieh (Jay) Huang to have, a significant, long-term economic and business impact on serve as the Company's new chief executive officer. In line with this decision, Mr. Huang discontinued his role as Chairman of the Board. As part of this transition, the Board appointed Kin-Fu Chen as the Chairman of the Board.

Our Business Strategy

Demand-oriented Approach

In order to deepen our company. Throughout 2021 and 2022, following a slowdown in 2020, relationships with customers, we have seen a continuing weakness in commercial sales as customers are in the healthcare, education, process of re-establishing our service model, aiming to provide richer and commercial and industrial sectors continue to delay order placements in reaction to the long-term impacts of the COVID-19 pandemic more targeted customer service. We believe that continue to cause by increasing opportunities for interaction with our customers, we can better understand their needs, thereby enhancing their loyalty to suspend or postpone lighting retrofit projects due our brand.

To ensure that EFOI's products, pricing, and customer service lifecycle are better aligned, we are building a comprehensive value model to budget ensure consistency in the products and occupancy uncertainties. Global supply chain services we provide throughout the customer journey. We have begun an in-depth analysis of our current and logistics challenges have further exacerbated slowdowns in customer projects, as well as impacted our inventory strategies past top 10 customers over the last five years to respond to customer and supplier timelines. identify the core factors that make them

We continue loyal customers. By analyzing this data, we hope to monitor reveal the key elements that enhance customer stickiness, providing them with more reasons and value to stay with us. In particular, we are actively focusing on customers with high loyalty to better meet their needs. This is not only an acknowledgment of our products but also a validation of the quality of our service.

Supply-oriented Approach

EFOI is committed to adopting three main sustainable economy strategies: “Green Supply Chain”, “Green Product”, and “Green Manufacturing”, aiming to promote sustainability throughout the entire value chain. The Company is working closely with its supply chain partners to optimize recycling mechanisms and strengthen packaging design, integrating sustainable economy principles into the core of supply chain management.

Guided by the vision of “transcending traditional corporate social responsibility and creating shared value”, EFOI's team is focusing on stakeholders, aiming to achieve a “dual profit engine” effect by combining financial performance and Environmental, Social, and Governance (ESG) practices. This strategy not only aligns with the Company's responsibility and sustainability goals but is also expected to enhance overall performance and market competitiveness. EFOI's operational team's new strategy focuses on integrating environmental and economic benefits, aiming to create a win-win situation that benefits the company, society, and the environment.

Under the premise of a similar industrial environment and familiar relationships, our professional skills complement those of our supply chain partners. This foundation of cooperation enables us to more easily achieve common goals of cost reduction, profit sharing, and exploring new business opportunities. This not only strengthens our cooperative relationship but also lays a solid foundation for our joint efforts towards a better future.

Financial-oriented Approach

The Company applies strategic financial management in the below perspective.

Control and Monitoring of Assets and Liabilities

- Assets: Regularly evaluate all assets, especially inventory, to ensure they remain in optimal condition in terms of value and performance. Minimize or mitigate the impact of lingering effects inefficient and aging assets, focusing on assets with high efficiency and return.
- Liabilities: Ensure a robust liability structure, optimize the cost of liabilities, and seek lower interest rates and more favorable repayment terms. Regularly review the COVID-19 pandemic liability situation to ensure the company's level of liabilities remains within a safe range.

Structured Profitability

- Revenue Growth: Develop diversified revenue streams, reduce dependency on our customers, suppliers single business or market, continuously optimize products and logistics providers, services, and enhance market competitiveness.
- Cost Control: Strictly control operating costs, seek opportunities to evaluate governmental actions being taken in response reduce costs, and ensure the efficient use of resources to the pandemic. Global supply chain optimize operations.
- Cash Flow Management: Establish a sound accounts receivable and logistics constraints continue payable management system to impact our inventory purchasing strategy, ensure timely collection of receivables and we have previously had reasonable arrangement of payments. Maintain sufficient cash reserves to build up inventory and components in an effort to manage both shortages of available components and longer lead times in obtaining components. Disruptions in global logistics networks are also impacting our lead times and ability to efficiently and cost-effectively transport products from our third-party suppliers to our facility. The significance and duration of the ongoing impact on us is still uncertain. Material adverse effects of lingering effects of the COVID-19 pandemic on market drivers, our customers, suppliers or logistics providers could significantly impact our operating results. We also plan to continue to actively follow, assess and analyze the continued long-term impact of the COVID-19 pandemic and will continue to adjust our organizational structure, strategies, plans and processes to respond. cope with potential funding shortages.

Because the situation continues to evolve, we cannot reasonably estimate the ultimate impact to our business, results of operations, cash flows and financial position that the COVID-19 pandemic will have. Long-term impacts of the COVID-19 pandemic and government actions in response thereto could cause further disruptions to our operations and the operations of our customers, suppliers and logistics partners and could significantly adversely affect our near-term and long-term revenues, earnings, liquidity and cash flows. We will remain agile as an organization to respond to potential or continuing weakness in the macroeconomic environment and in the meantime expand sales channels and continue to evaluate entering new markets that we believe will provide additional growth opportunities.

Results of operations

The following table sets forth the percentage of net sales represented by certain items reflected on our Consolidated Statements of Operations for the following periods:

		2022		2021	
Net sales	**Net sales**	100.0	%	100.0	%
Net sales					
Net sales					
Cost of sales	Cost of sales	105.3		82.8	
Gross (loss) profit		(5.3)		17.2	
Cost of sales					
Cost of sales					
Gross profit (loss)					
Gross profit (loss)					
Gross profit (loss)					
Operating expenses:					
Operating expenses:					
Operating expenses:	**Operating expenses:**				
Product development	Product development	25.0		19.2	
Product development					
Product development					
Selling, general, and administrative					
Selling, general, and administrative					
Selling, general, and administrative	Selling, general, and administrative	119.8		86.5	
Loss on impairment	Loss on impairment	5.6		—	
Loss on impairment					
Loss on impairment					
Restructuring		—		(0.2)	
Total operating expenses	**Total operating expenses**	150.4		105.5	
Total operating expenses					
Total operating expenses					
Loss from operations					
Loss from operations					
Loss from operations	**Loss from operations**	(155.7)		(88.3)	
Other expenses:	**Other expenses:**				
Interest expense		16.0		8.0	
Gain on forgiveness of PPP loan		—		(8.1)	
Other expenses:					
Other expenses:					

Interest income					
Interest income					
Interest income					
Interest expenses					
Interest expenses					
Interest expenses					
Other income					
Other income					
Other income	Other income	(0.5)		(8.9)	
Other expenses, net	Other expenses, net	0.9		0.7	
Other expenses, net					
Other expenses, net					
Net loss before income taxes	**Net loss before income taxes**	(172.1)		(80.0)	
Net loss before income taxes					
Net loss before income taxes					
Benefit from income taxes					
Benefit from income taxes					
Benefit from income taxes	Benefit from income taxes	0.1		—	
Net loss	**Net loss**	(172.2)	%	(80.0)	%
Net loss					
Net loss					

Net sales

A further breakdown of our net sales by product line is as follows (in thousands):

			2022		2021
Commercial products	Commercial products	$	3,746	$	4,682
Commercial products					
Commercial products					
MMM products					
MMM products					
MMM products	MMM products		2,222		5,183
Total net sales	**Total net sales**	$	5,968	$	9,865

Total net sales

Total net sales

Our net sales of $6.0 million $5.7 million in 2022 2023 decreased 39.5% 4.2% compared to 2021, 2022, mainly driven by a decrease an increase of 57.1% 85.6% in MMM sales and a decrease of 20.0% 57.5% in commercial sales. The decrease increase in net MMM product sales in 2022 2023 as compared to 2021 2022 was mainly due to a reduced an increased military sales pipeline at the beginning of during the year increased competition, and the delayed timing of expected orders. our strategic focus on our loyal military customers. Net sales of our commercial products decreased in 2022 2023 due to limited product availability impacts from supply chain constraints, our inventory reduction project, increased competition, and continuing fluctuations in the timing, pace, and size of commercial projects.

International salesGross profit (loss)

We do not generate significant sales from customers outside the United States. International net sales accounted for approximately 0.4% Gross profit was $0.2 million, or 3.9% of net sales, in 2022 and 2% for 2023, compared with gross loss of net sales in 2021. Changes in currency exchange rates did not have an impact on net sales in 2022 or 2021, as our sales, including international sales, are denominated in U.S. dollars.

Gross (loss) profit

Gross loss was $0.3 million, $(0.3) million, or (5.3)% of net sales for 2022, compared with gross profit of $1.7 million, or 17.2% of net sales for 2021. 2022. The year-over-year decrease increase in gross margin resulted from our cost reduction plan related to a cut down of headcounts and was driven primarily by a diminished sales pipeline reduction of scrap, freight in and discounted pricing in connection with our inventory reduction project. Beginning in the third quarter out variances, which were partially offset by an increased cost of material and temporary labor.

In 2022, the warehouse square footage was reduced under the new lease agreement and significant amounts of previously reserved inventories were scrapped over the course of the year in connection with reducing leased square footage. year. Freight and logistics expense was expenses were notably higher at the beginning of 2022 as national imports faced backlogs at the ports. Scrap variance and freight in variance increases over prior year were $548 thousand and $324 thousand, respectively.

Beginning in the fourth second quarter of 2022, second source suppliers were sought to replace larger, key suppliers in an effort to identify more competitive pricing. During the fourth quarter of 2022, 2023, the Company incurred higher short-term supply chain management expense terminated several employees, and the result was a significant reduction in connection with mitigating payroll-related expenses. Due to the transition impact termination of employees, the second sourcing. Additionally, the production operated at excess capacity during the first nine months of 2022, prior to headcount reductions. need for temporary workers was increased.

Operating expenses

Product development

Product development expenses include salaries including stock-based compensation and related benefits, contractor product testing and consulting fees, certain legal fees, related costs, travel, supplies, and materials, as well as overhead items, such as depreciation and facilities costs. Product development costs are expensed as they are incurred. Cost recovery represents the combination of revenues and credits from government contracts.

Total gross and net product development spending, including credits from government contracts, is shown in the following table (in thousands):

	For the year ended December 31,	
	2022	2021
Total gross product development expenses	$ 1,491	$ 1,891

Gross product development expenses were $1.5 million $0.6 million in 2022, 2023, a decrease of 21.2% 60.6%, compared to $1.9 million $1.5 million in 2021. 2022. The $0.4 million $0.9 million decrease primarily resulted from lower payroll-related expenses due to a reduction in headcounts of $0.8 million and lower product development and testing costs, offset by increased salaries cost of $0.1 million. Beginning in the second quarter of 2023, the Company terminated several employees, and related benefits expenses prior to the result was a significant headcount reductions mid-year. Product development costs reduction in 2021 were largely associated with the development and launch of our UVCD products. These UVCD products were fully launched prior to 2022, and no further investments were necessary in 2022.

payroll-related expenses.

Selling, general, and administrative

Selling, general, and administrative expenses were $3.6 million, or 63.1% of net sales, in 2023, compared to $7.1 million, or 119.8% of net sales, in 2022, compared to $8.5 million, or 86.5% of net sales, in 2021. 2022. The year-over-year $1.4 million $3.5 million decrease is comprised of a combination of a $1.5 million $2.1 million decrease from a reduction in headcount for salaries, severance, and salaries, including stock-based compensation commissions, a $0.5 million decrease from trade show, marketing, and related benefits travel expenses, a $0.2 million decrease from a reduction of software costs, a $0.2 million from reduced recruiting and relocation expenses, a $0.2 million decrease from consultant and professional fees, and remaining from a decrease of $0.1 million in all other general expenses, offset by an increase of $0.2 million in sales commissions and consultants. Significant phased headcount reductions began at the end of the second quarter 2022 and continued throughout the end of the year. expenses.

Loss on impairment

No loss on impairment was recorded in 2023. As a result of the Company's impairment analysis, a loss on impairment of $338 thousand was recorded in 2022. In the third quarter of 2022, a loss on impairment of $76 thousand was recorded on the write-off of the UV-Robots. An additional $262 thousand of loss on impairment was recorded in the fourth quarter of 2022, which consisted of tooling, equipment, software, hardware, and construction-in-progress. No such loss on impairment was recorded in 2021.

Restructuring

During 2021, we recorded restructuring credits of approximately $21 thousand, related to the cost and offsetting sub-lease income for the remaining lease obligation for our former New York, New York office which expired in June of 2021.

Please refer to Note 4, "Restructuring," included in Item 8, "Financial Statements and Supplementary Data," of this Annual Report for further information.

Other expenses (income)

Interest expense expenses (income)

We incurred $380 thousand in interest expenses and $57 thousand in interest income in 2023. Interest expenses primarily related to the interest on borrowings and non-cash amortization of fees related to the Credit Facilities and promissory notes in the principal amount of $2.0 million (the "2022 Streeterville Note"), that the Company issued to Streeterville Capital, LLC ("Streeterville") pursuant to separate note purchase agreements. Interest income primarily related to the gain recognized through the pay-off of the Credit Facilities to Crossroads Financial Group, LLC.

In 2022, we incurred $954 thousand in interest expense, in 2022, primarily related to the interest on borrowings and non-cash amortization of fees related to the Credit Facilities, interest on promissory notes in the principal amounts of $1.7 million (the " 2021 Streeterville Note") and $2 million (the "2022 Streeterville Note") the Company sold and issued to Streeterville Capital, LLC ("Streeterville") pursuant to separate note purchase agreements, and interest on the short-term bridge financing in the aggregate principal amount of $1.45 million pursuant to promissory notes sold and issued by us to certain private parties, including one of our directors.

In 2021, we incurred $792 thousand in interest expense primarily related to the Credit Facilities Other income and the 2021 Streeterville Note. expenses

Gain on forgiveness of PPP loan

Forgiveness We recognized other income of $801 $30 thousand related to the Paycheck Protection Program ("PPP") loan taken out during 2020 each in 2023 and forgiven 2022. Other income in 2021 was recognized during the first quarter 2021.

Other expenses, net 2023 and 2022 primarily consisted of tax refunds and miscellaneous adjustments from accounts receivable, respectively.

We recognized other expenses net, of $26 thousand in 2023, compared to other expenses of $56 thousand in 2022, compared to other expenses, net, of $65 thousand in 2021. 2022. Other expenses net, in 2022 2023 and 2021 2022 primarily consisted of bank and collateral management fees.

Income Provision for income taxes

For each of the years ended December 31, 2022 December 31, 2023 and 2021, 2022, our effective tax rate was 0.0%. In 2023, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance as a result of the $6.3 million additional federal net

operating loss we recognized for the year. In 2022, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance as a result of the $9.2 million additional federal net operating loss we recognized for the year. In 2021, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance as a result of the $9.6 million additional federal net operating loss we recognized for the year.

Deferred income tax assets are reduced by a valuation allowance when it is more likely than not that some portion of the deferred income tax assets will not be realized. In considering the need for a valuation allowance, we assess all evidence, both positive and negative, available to determine whether all or some portion of the deferred tax assets will not be realized. Such evidence includes, but is not limited to, recent earnings history, projections of future income or loss, reversal patterns of existing taxable and deductible temporary differences, and tax planning strategies. We have recorded a full valuation allowance against our deferred tax assets at December 31, 2022 December 31, 2023 and 2021, 2022, respectively. We had no net deferred liabilities at December 31, 2022 December 31, 2023 or 2021. 2022. We will continue to evaluate the need for a valuation allowance on a quarterly basis.

At December 31, 2022 December 31, 2023, we had net operating loss carry-forwards of approximately $132.4 million $138.7 million for federal income tax purposes ($77.6 48.0 million for state and local income tax purposes). However, due to changes in our capital structure, approximately $78.0 million $84.30 million of the $132.4 million $138.7 million is available after the application of IRC Section 382 limitations. As a result of the Tax Cuts and Jobs Act of 2017 (the "Tax Act"), net operating loss carry-forwards generated in tax years beginning after December 31, 2017 can only offset 80% of taxable income. These net operating loss carry-forwards can no longer be carried back, but they can be carried forward indefinitely. The $9.2 million $6.3 million and $9.6 million $9.2 million in federal net operating losses generated in December 31, 2022 December 31, 2023 and 2021, 2022, respectively, will be subject to the new limitations under the Tax Act. If not utilized, the carry-forwards generated prior to December 31, 2017 of $35.3 million $0.9 million will begin to expire in 2024 for federal purposes and have begun to expire for state and local purposes. Please refer to Note 11, "Income Taxes," included in Item 8, "Financial Statements and Supplementary Data," of this Annual Report for further information.

Net loss

Net loss was $10.3 million $4.3 million for 2022. 2023. This compares with a net loss was $7.9 million of $10.3 million for 2021, inclusive 2022, mainly driven by reduction of cost of goods sold, product development, selling, general, and administrative expenses as well as interest expenses.

Financial condition

At December 31, 2023, we had $2.0 million in cash and a non-cash, pre-tax gain total of $0.8 million from the forgiveness $1.3 million of the Company's PPP loan debt, net of discounts and $0.9 million in other income recorded relating unamortized debt costs, related to the Employee Retention Tax Credit ("ERTC") ($431 thousand of which was received during the fourth quarter of 2021).

Liquidity andcapitalresources

General

We generated a net loss of $10.3 million in 2022 compared to net loss of $7.9 million in 2021. Streeterville Note outstanding. We have historically incurred substantial losses, in the past, and as of December 31, 2022 December 31, 2023, we had an accumulated deficit of $149.0 million $153.3 million. Additionally, our sales have been concentrated among a few major customers and for the twelve months ended December 31, 2023, two customers accounted for approximately 48% of net sales.

In order for us 2023 and 2022, we recommitted to operate building upon the transformation activities started during 2019 that sought to stabilize and regrow our business profitably, we need to grow our sales, maintain cost control discipline while balancing business. These efforts include the following key developments that occurred during 2023 and 2022:

- We continued development of our new products required the second generation of EnFocus™ powerline control switches and circadian lighting system for long-term competitiveness and revenue growth, continue our efforts to reduce product cost, and drive further operating efficiencies. There is commercial markets, which as a risk that our strategy to return to profitability may not be successful. We will likely require additional financing in the next twelve months to achieve our strategic plan and, if our operations do not achieve, or result of supply chain challenges we experience an unanticipated delay in achieving, our intended level and pace of profitability, we will continue to need additional financing thereafter, none of which may be available on favorable terms or at all and could require us to discontinue or curtail our operations.

Considering both quantitative and qualitative information, we continue to believe that the combination of our now plan to continue reintroduce in 2024. EnFocus™ powerline control enables buildings to ensure appropriate levels of the availability of external financing, current financial position, liquid resources, obligations due have dimmable, color tunable and circadian-ready lighting using existing wiring, without requiring laying additional cables or anticipated within the next year, any wireless communication systems, through a relatively simple upgrade with EnFocus™ switches and implementation of EnFocus™ LED lamps. This upgrade offers a simpler, more secure, affordable and environmentally sustainable solution compared with replacing entire luminaire fixtures and incorporating additional wired or wireless communication.

- We reinvested in our product development and MMM sales channel strategy, if adequately executed, will provide us with an ability to finance and are pursuing existing and new sales opportunities, though the sales cycles for what are frequently made-to-order products are longer than commercial offerings.

- Beginning in July 2022, we reduced our operations through 2023 warehouse square footage, and will mitigate the substantial doubt about our ability to continue as a going concern.

Credit Facilities

On August 11, 2020, we entered into the Credit Facilities. The Credit Facilities consist of the Inventory Facility, undertook an inventory financing facility for up to $3.0 million, which amount was subsequently increased to $3.5 million in April 2021. In January 2023, we amended the Inventory Facility, reducing the maximum availability to $500 thousand, reducing monthly fees and paying down an aggregate of $1 million in January and February 2023. The Receivables Facility, a receivables financing facility for up to $2.5 million, was terminated in February 2023, further reduction project throughout 2022 focused on reducing our monthly borrowing costs. As of December 31, 2022, our cash was approximately $0.1 million and our total outstanding balance was approximately $1.5 million under the Credit Facilities. As of December 31, 2022, our additional availability under the Credit Facilities was $55 thousand. highly reserved commercial finished good inventory.

June 2022 Private Placement

In June 2022, we completed a private placement (the “June 2022 Private Placement”) with certain institutional investors for the sale of 1,313,462 shares of our common stock at a purchase price of $1.30 per share. We also sold to the same institutional investors (i) pre-funded warrants (the “June 2022 Pre-Funded Warrants”) to purchase 1,378,848 shares of common stock at an exercise price of $0.0001 per share and (ii) warrants (collectively with the June 2022 Pre-Funded Warrants, the “June 2022 Warrants”) to purchase up to an aggregate of 2,692,310 shares of common stock at an exercise price of $1.30 per share. In connection with the June 2022 Private Placement, we paid the placement agent commissions of $252 thousand, plus $35 thousand in• The Company has aggressively re-evaluated operating expenses, and we also paid legal, accounting reduced its workforce significantly throughout 2022 and other fees of $47 thousand. Total offering costs of $334 thousand have been presented as a reduction of into 2023 to manage fixed costs.

- We continued to seek additional paid-in capital external funding alternatives and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2022. Net proceeds sources to us from the June 2022 Private Placement were approximately $3.2 million. We determined the exercise price of the June 2022 Pre-Funded Warrants to be nominal support our growth strategies, plans and as such, have considered the 1,378,848 shares underlying them to be outstanding effective June 7, 2022, for purposes of calculating net loss per share.

initiatives. In July 2022, all of the June 2022 Pre-Funded Warrants were exercised. As of December 31, 2022, June 2022 Warrants to purchase an aggregate of 2,692,310 shares remained outstanding, with a weighted average exercise price of $1.30 per share. The exercise of the remaining June 2022 Warrants outstanding could provide us with cash proceeds of up to $3.5 million in the aggregate.

2022 Streeterville Note

On April 21, 2022, September 2023, we entered into a note security purchase agreement, with Streeterville pursuant to which we sold and issued to Streeterville the 2022 Streeterville Note. The 2022 Streeterville Note was issued with an original issue discount raised aggregate gross proceeds of $215 thousand and Streeterville paid a purchase price of approximately $1.8 million for the 2022 Streeterville Note, from which the Company paid $15 thousand to Streeterville for Streeterville’s transaction expenses.

The 2022 Streeterville Note had an original maturity date of April 21, 2024, and accrues interest at 8% per annum, compounded daily, on the outstanding balance. On January 17, 2023, we agreed with Streeterville to restructure and pay down the 2022 Streeterville Note and to extend its maturity date to December 1, 2024. We agreed to make payments to reduce the outstanding amounts of the 2022 Streeterville Note of $500 thousand by January 20, 2023 and $250 thousand by July 14, 2023. The $500 thousand was paid in January 2023. Streeterville agreed to extend the term of the 2022 Streeterville Note through December 1, 2024, and beginning January 1, 2024, we will make twelve monthly repayments of approximately $117 thousand each. We have the right to prepay any of the scheduled repayments at any time or from time to time without additional penalty or fees. Provided we make all payments as scheduled or earlier, the 2022 Streeterville Note will be deemed paid in full and shall automatically be deemed canceled. Please refer to Note 15, "Subsequent Events" 9 included in under Part II, Item 8 "Financial Statements and Supplementary Data," of this Annual Report for further detail.

The total liability for the 2022 Streeterville Note, net of discount and financing fees, was $2.0 million at December 31, 2022.

In the event our common stock is delisted from Nasdaq, the amount outstanding under the 2022 Streeterville Note will automatically increase by 15% as of the date of such delisting.

December 2021 Private Placement

In December 2021, we completed a private placement (the "December 2021 Private Placement") with certain institutional investors for the sale of 1,193,185 shares of our common stock at a purchase price of $3.52 per share. We also sold to the same institutional investors (i) pre-funded warrants ("December 2021 Pre-Funded Warrants") to purchase 85,228 shares of common stock at an exercise price of $0.0001 per share and (ii) warrants (collectively with the December 2021 Pre-Funded Warrants, the "December 2021 Warrants") to purchase up to an aggregate of 1,278,413 shares of common stock at an exercise price of $3.52 per share. We paid the placement agent commission of $360 thousand, plus $42 thousand in expenses, in connection with the December 2021 Private Placement and we also paid legal, accounting and other fees of $97 thousand related to the December 2021 Private Placement. Total offering costs of $499 thousand have been presented as a reduction of additional paid-in-capital and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2022. Net proceeds to us from the December 2021 Private Placement were approximately $4.0 million. We determined the exercise price of the December 2021 Pre-Funded Warrants to be nominal and, as such, considered the 85,228 shares underlying them to be outstanding effective December 16, 2021, for purposes of calculating net loss per share.

In January 2022, all of the December 2021 Pre-Funded Warrants were exercised. As of December 31, 2022, December 2021 Warrants to purchase an aggregate of 1,278,413 shares remained outstanding, with an exercise price of $3.52 per share. The exercise of the remaining December 2021 Warrants outstanding could provide us with cash proceeds of up to $4.5 million in the aggregate.

June 2021 Equity Offering

In June 2021, we completed a registered direct offering of 990,100 shares of our common stock to certain institutional investors, at a purchase price of $5.05 per share (the "June 2021 Equity Offering"). We paid the placement agent commissions of $400 thousand, plus $51 thousand in expenses, in connection with the June 2021 Equity Offering and we also paid legal and other fees of $19 thousand related to the June 2021 Equity Offering. Total offering costs of $469 thousand have been presented as a reduction of additional paid-in capital and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2021. Net proceeds to us from the June 2021 Equity Offering were approximately $4.5 million.

2021 Streeterville Note

On April 27, 2021, we entered into a note purchase agreement with Streeterville, pursuant to which we sold and issued the 2021 Streeterville Note. The 2021 Streeterville Note was issued with an original issue discount of $194 thousand and Streeterville paid a purchase price of $1.5 million for the 2021 Streeterville Note, after deduction of $15 thousand of Streeterville's transaction expenses.

Beginning on November 1, 2021, Streeterville could require the Company to redeem up to $205 thousand of the 2021 Streeterville Note in any calendar month. The Company had the right on three occasions to defer all redemptions that Streeterville could otherwise require the Company to make during any calendar month. Each exercise of this deferral right by the Company increased the amount outstanding under the 2021 Streeterville Note by 1.5%. The Company exercised this right twice during the fourth quarter of 2021, once during the second quarter of 2022 and once during the third quarter of 2022. The Company and Streeterville agreed to exchange common stock, priced at-the-market, for the required redemptions in October 2022 and December 2022, totaling $305 thousand converted to equity. These exchanges satisfied the redemption notices provided by Streeterville, and following the December 2022 exchange, the note was paid in full.

January 2020 Equity Offering

In January 2020, we completed a registered direct offering for the sale of 688,360 shares of our common stock to certain institutional investors, at a purchase price of $3.37 per share. We also sold, to the same institutional investors, warrants to purchase up to 688,360 shares of common stock at an exercise price of $3.37 per share in a concurrent private placement (the “January 2020 Investor Warrants”) for a purchase of $0.625 per warrant. In addition, we issued warrants to the placement agent to purchase up to 48,185 shares of common stock at an exercise price of $4.99 per share (together with the January 2020 Investor Warrants, the “January 2020 Warrants”). Proceeds to us, before expenses, from the January 2020 Equity Offering were approximately $2.8 million.

Convertible Notes

On March 29, 2019, we issued $1.7 million aggregate principal amount of subordinated convertible promissory notes (the “Convertible Notes”) to certain investors in a private placement exempt from the registration requirements of the Securities Act of 1933, as amended. The Convertible Notes had a maturity date of December 31, 2021 and bore interest at a rate of 5% per annum until June 30, 2019 and at a rate of 10% thereafter. Pursuant to their terms, on January 16, 2020, following approval by our stockholders of certain amendments to the Company’s Certificate of Incorporation, the principal amount of all of the Convertible Notes, andthe accumulated interest thereon ($0.1 million), which totaled $1.8 million, were converted at a conversion price of $0.67 per share into an aggregate of 2,709,018 shares of the Company’s Series A Convertible Preferred Stock, par value $0.0001 per share (the “Series A Preferred Stock”), which is convertible on a one-for-five basis into shares of our common stock. During 2021, 1,721,023 shares of Series A Preferred Stock were converted into 344,205 shares of common stock. During 2022, no shares of Series A Preferred Stock was converted into shares of common stock.

Need for Additional Financing

Even with access to outstanding borrowings under the Inventory Facility, which we have further curtailed and agreed to pay down in 2023, we may not generate sufficient cash flows from our operations or be able to borrow sufficient funds to sustain our operations within the next twelve months or in the time periods thereafter. As such, we will likely need additional external financing during 2023 and thereafter and will continue to review and pursue external funding sources including, but not limited to, the following:

- obtaining financing from traditional or non-traditional investment capital organizations or individuals;
- obtaining funding from the sale of our common stock or other equity or debt instruments; and
- obtaining debt financing with lending terms that more closely match our business model and capital needs.

There can be no assurance that we will obtain future funding on acceptable terms, in a timely fashion, or at all. Obtaining additional financing contains risks, including:

- additional equity financing may not be available to us on satisfactory terms, particularly in light of the current price of our common stock, and any equity we are able to issue could lead to substantial dilution for current stockholders and have rights, preferences and privileges senior to our common stock;
- loans or other debt instruments may have terms and/or conditions, such as interest rates, restrictive covenants, conversion features, refinancing demands, and control or revocation provisions, which are not acceptable to management or our Board of Directors; and
- the current environment in the capital markets and volatile interest rates, combined with our capital constraints may prevent us from being able to obtain adequate debt financing. details.

Additionally, if During 2022 and into 2023, we are unable redoubled our cost control efforts to find a permanent Chief Financial Officer, it may be more difficult streamline our operations by closely managing all spending done throughout the Company, while carefully investing in new products and strategies that sought to obtain reenergize sales.

We will seek to remain agile as an organization to respond to potential or continuing weakness in the macroeconomic environment and in the meantime seek to expand sales channels and enter new markets that we believe will provide additional financing on satisfactory terms or at all. If we fail growth opportunities. We plan to obtain additional financing to sustain achieve profitability through developing and launching new, innovative products, such as our business before we are able to produce levels of revenue to meet EnFocusTM powerline control systems, our financial needs, we will need to delay, scale back or eliminate our business plan Redcap® emergency battery backup tubular TLEDs, evaluating new growth opportunities such as GaN-based power supply circuitry and further reduce our operating costs and headcount, each of which would have a material adverse effect other energy solution products, as well as executing on our business, future prospects, multi-channel sales strategy that targets key verticals, such as government, healthcare, education and commercial and industrial, complemented by our marketing outreach campaigns and expanding channel partnerships. We also plan to continue to develop advanced lighting and lighting control applications built upon the EnFocusTM platform that aim to serve the commercial markets. In addition, we intend to continue to apply rigorous financial condition. A lack of additional financing could also result discipline in our inability organizational structure, decision-making, business processes and policies, strategic sourcing activities and supply chain practices to continue as a going concern and force us to sell certain assets or discontinue or curtail help accelerate our operations and, as a result, investors in the Company could lose their entire investment. path towards profitability.

Cash Liquidity and debt capitalresources

Cash

At December 31, 2022 December 31, 2023, our cash balance was $0.1 million $2.0 million, compared to $2.7 million $52 thousand at December 31, 2021 December 31, 2022.

The following is a summary of cash flows from operating, investing, and financing activities, as reflected in the Consolidated Statements of Cash Flows (in thousands):

	2022	2021
Net cash used in operating activities	$ (6,713)	$ (9,765)
Net cash used in investing activities	$ (16)	$ (443)
Proceeds from the issuance of common stock and warrants	$ 3,500	$ 9,500
Proceeds from the exercise of warrants	—	801
Offering costs paid on the issuance of common stock and warrants	(334)	(969)
Principal payments under finance lease obligations	(1)	(3)
Proceeds from exercise of stock options and purchases through employee stock purchase plan	6	80
Common stock withheld in lieu of income tax withholding on vesting of restricted stock units	—	(1)
Payments for deferred financing costs	(114)	(30)
Payments on the 2021 Streeterville Note	(1,640)	—
Proceeds from the 2021 Streeterville Note	—	1,515
Proceeds from the 2022 Streeterville Note	2,000	—
Proceeds from related party promissory notes payable	800	—
Proceeds from promissory notes payable	650	—
Net payments on credit line borrowings - Credit Facilities	(768)	(181)
Net cash provided by financing activities	$ 4,099	$ 10,712

Cash

	2023	2022
Net cash used in operating activities	$ (2,439)	$ (6,713)
Net cash used in investing activities	$ (69)	$ (16)
Proceeds from the issuance of common stock and warrants	$ 6,079	$ 3,500
Costs related to reverse stock-split	(16)	—
Offering costs paid on the issuance of common stock and warrants	—	(334)
Principal payments under finance lease obligations	—	(1)
Proceeds from exercise of stock options and purchases through employee stock purchase plan	—	6
Payments on the 2022 Streeterville Note	(625)	—
Payments for deferred financing costs	—	(114)
Payments on the 2021 Streeterville Note	—	(1,640)
Proceeds from the 2022 Streeterville Note	—	2,000
Proceeds from related party promissory notes payable	—	800
Proceeds from promissory notes payable	—	650
Net payments on credit line borrowings - Credit Facilities	(1,402)	(768)
Advanced capital contribution	450	—
Net cash provided by financing activities	$ 4,486	$ 4,099

Net cash used in operating activities

Net cash used in operating activities of $2.4 million in 2023 resulted primarily from the net loss incurred of $4.3 million, adjusted for non-cash items, including: depreciation and amortization of $0.3 million, stock-based compensation, net of $44 thousand, non-favorable provisions from inventory of $25 thousand and from accounts receivable of $6 thousand, and favorable provisions from warranty of $33 thousand and gain from paid-off of Credit Facilities of $40 thousand. We used $1.1 million through the timing of collection of accounts receivable, $0.2 million for prepayments to vendors, and $47 thousand through a decrease of other accrued liabilities. We generated $0.6 million in cash for an increase in accounts payable due to the timing of inventory receipts and payments, $0.5 million from the change in prepaid and other current assets, and $1.0 million in inventory as we sold off a substantial portion of the stock on hand.

Net cash used in operating activities of $6.7 million in 2022 resulted primarily from the net loss incurred of $10.3 million, adjusted for non-cash items, including: depreciation and amortization of $0.5 million, stock-based compensation, net of $0.1 million, and non-favorable provisions from inventory of $32 thousand and favorable provisions from warranty of $0.1 million, as well as a loss on impairment of property and equipment of $0.3 million. $0.3 million, and favorable provisions from warranty of $0.1 million. We used $0.6 million through a decrease of other accrued liabilities and $0.3 million from changes in deferred revenue. We generated $0.8 million through the timing of collection of accounts receivable, $0.2 million from the change in prepaid and other current assets, $0.1 million for short-term deposits, and $2.4 million in inventory as we sold off a substantial portion of the stock on hand. We used $0.3 million from changes in deferred revenue, $1 thousand in cash for a decrease in accounts payable due to the timing of inventory receipts and payments, and $0.6 million through a decrease of other accrued liabilities.

Net cash used in operating activities of $9.8 million in 2021 resulted primarily from the net loss incurred of $7.9 million, adjusted for non-cash items, including: depreciation and amortization of $0.2 million, stock-based compensation, net of $0.4 million, gain on forgiveness of the PPP loan of $0.8 million, other income related to the ERTC of $0.9 million, and unfavorable provisions from inventory and warranty of $0.2 million and $0.1 million, respectively, as well as accounts receivable and working capital changes. We generated $0.8 million through the timing of collection of accounts receivable, $0.7 million from the change in prepaid and other current assets (primarily the receipt of ERTC funds), $0.3 million for short-term deposits related to the timing of inventory receipts with our contract manufacturers for our nUVo™ and EnFocus™ products, and $0.2 million from changes in deferred revenue. We used $2.4 million from a net increase in inventories primarily due to the timing of inventory receipts, $0.4 million in cash for a decrease in accounts payable due to the timing of inventory receipts and payments, and $0.4 million through a decrease of other accrued liabilities, primarily related to accrued payroll and benefits and commissions.

Cash used in investing activities

Net cash used in investing activities was $69 thousand in 2023, primarily from the acquisition of property and equipment.

Net cash used in investing activities was $16 thousand in 2022, primarily from the acquisition of property and equipment.

Net cash used equipment and partially offset by investing activities was $0.4 million in 2021, and resulted primarily the proceeds from the addition sale of software property and tooling to support production operations as well as the development of an e-commerce platform. equipment.

Cash provided by financing activities

Net cash provided by financing activities for the year ended December 31, 2023 of $4.5 million primarily resulted from the proceeds from the issuance of common stock and warrants of $6.1 million and advanced capital contribution of $0.5 million. The increases in cash were partially offset by payments on the 2022 Streeterville Note of $0.6 million and Credit Facilities of $1.4 million.

Net cash provided by financing activities for the year ended December 31, 2022 of $4.1 million primarily resulted from the proceeds from the issuance of common stock and warrants of $3.5 million and , proceeds from promissory notes payable of $0.7 million and , related party promissory notes payable of $0.8 million. Additionally, , and the issuance of the 2022 Streeterville Note provided net proceeds of $2.0 million. The increases in cash were partially offset by payments on the 2021 Streeterville Note of $1.6 million.

Net cash provided by financing activities for the year ended December 31, 2021 of $10.7 million primarily resulted from $4.0 million and $4.5 million in net proceeds received from the December 2021 Private Placement and the June 2021 Equity Offering, respectively, $1.5 million of net proceeds from the 2021 Streeterville Note, and $0.8 million of proceeds from the exercise of 237,892 January 2020 Warrants. These increases in cash were offset by net payments made against borrowings under the Inventory Facility and the Receivables Facility of $150 thousand and $31 thousand, respectively.

Credit Facilities

On August 11, 2020, we entered into the Credit Facilities consisting of two debt financing arrangements. The Credit Facilities consist of the Inventory Facility, a two-year inventory financing facility for up to $3.0 million, which amount was subsequently increased to $3.5 million $0.8 million, and the Receivables Facility, a two-year receivables deferred financing facility for up to $2.5 million. On January 18, 2023, the Company and the Inventory Lender entered into an amendment to restructure and pay down the Inventory Facility during 2023, which amendment reduced the overall availability to $500 thousand. On February 7, 2023, the Company and Receivable Lender terminated the Receivables Facility.

Net borrowings under the Inventory Facility at December 31, 2022 and 2021 were $1.4 million and $1.2 million, respectively. Net borrowings under the Receivables Facility at December 31, 2022 and December 31, 2021 were $0.1 million and $1.0 million, respectively. These facilities are recorded in the Consolidated Balance Sheets as cost of December 31, 2022 and 2021 as a current liability under the caption “Credit line borrowings, net of origination fees.” Outstanding balances include unamortized net issuance costs totaling $47 thousand and $84 thousand, respectively, for the Inventory Facility and $15 thousand and $24 thousand, respectively, for the Receivables Facility as of December 31, 2022 and 2021.

For more information, see Note 8, “Debt,” and Note 15, “Subsequent Events,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report. $0.1 million.

Off-balancesheetarrangements

We had no off-balance sheet arrangements at December 31, 2022 or 2021. during the years ended December 31, 2023 and 2022.

Contractual and other obligations

As of December 31, 2023, we had approximately $0.5 million in outstanding purchase commitments for inventory, of which the majority is expected to ship in the first quarter of 2024. We have 49% of the outstanding purchase commitments with a related party.

There have been no other material changes to our contractual and other obligations as compared to those included in our 2022 Annual Report.

Critical accounting policies and estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingencies, and the reported amounts of net sales and expenses in the financial statements. Material differences may result in

the amount and timing of net sales and expenses if different judgments or different estimates were utilized. Critical accounting policies, judgments, and estimates that we believe have the most significant impact on our financial statements are set forth below:

- revenue recognition,
- allowances for doubtful accounts, returns and discounts,
- impairment of long-lived assets,
- valuation of inventories,
- accounting for income taxes,
- share-based compensation, and
- leases.

Revenuerecognition

Net sales include revenues from sales Recently adopted accounting guidance

For information on recently adopted accounting guidance, please refer to Note 2, “Basis of products Presentation and shipping and handling charges, net Summary of estimates for product returns. Revenue is measured at the amount of consideration we expect to receive in exchange for the transferred products. We recognize revenue at the point in time when we transfer the promised products to the customer and the customer obtains control over the products. Distributors’ obligations to us are not contingent upon the resale of our products. We recognize revenue for shipping and handling charges at the time the goods are shipped to the customer, and the costs of outbound freight are included in cost of sales. We provide for product returns based on historical return rates. While we incur costs for sales commissions to our sales employees and outside agents, we recognize commission costs concurrent with the related revenue, as the amortization period is less than one year. We do not incur any other incremental costs to obtain contracts with our customers. Our

product warranties are assurance-type warranties, which promise the customer that the products are as specified in the contract. therefore, the product warranties are not a separate performance obligation and are accounted for as described below. Sales taxes assessed by governmental authorities are accounted for on a net basis and are excluded from net sales.
A disaggregation of product net sales is presented in Note 12, “Product and Geographic Information, Significant Accounting Policies,” included in under Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report.

Accounts Receivable

Our trade accounts receivable consists of amounts billed to and currently due from customers. Our customers are concentrated in the United States. In the normal course of business, we extend unsecured credit to our customers related to the sale of our products. Credit is extended to customers based on an evaluation of the customer’s financial condition and the amounts due are stated at their estimated net realizable value. From time to time, we have utilized a third-party account receivable insurance program with a very high credit worthy insurance company where we have the large majority of the accounts receivable insured with a portion of self-retention. This third party also provided credit-worthiness ratings and metrics that significantly assisted us in evaluating the credit worthiness of both existing and new customers. We maintain allowances for sales returns and doubtful accounts receivable to provide for the estimated number of account receivables that will not be collected. The allowance is based on an assessment of customer creditworthiness and historical payment experience, the age of outstanding receivables, and performance guarantees to the extent applicable. Past due amounts are written off when our internal collection efforts have been unsuccessful, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts. We do not generally require collateral from our customers.

Our standard payment terms with customers are net 30 days from the date of shipment, and we do not generally offer extended payment terms to our customers, but exceptions are made in some cases to major customers or with particular orders. Accordingly, we do not adjust trade accounts receivable for the effects of financing, as we expect the period between the transfer of product to the customer and the receipt of payment from the customer to be in line with our standard payment terms.

Allowances fordoubtfulaccounts,returns,anddiscounts

We establish allowances for doubtful accounts and returns for probable losses based on the customers’ loss history with us, the financial condition of the customer, the condition of the general economy and the industry as a whole, and the contractual terms established with the customer. The specific components are as follows:

- allowance for doubtful accounts for accounts receivable, and
- allowance for sales returns and discounts.

In 2022 and 2021, the total allowance was $26 thousand and $14 thousand, respectively, which was all related to sales returns. We review these allowance accounts periodically and adjust them accordingly for current conditions.

Long-livedassets

Property and equipment are stated at cost and include expenditures for additions and major improvements. Expenditures for repairs and maintenance are charged to operations as incurred. We use the straight-line method of depreciation over the estimated useful lives of the related assets (generally two to fifteen years) for financial reporting purposes. Accelerated methods of depreciation are used for federal income tax purposes. When assets are sold or otherwise disposed of, the cost and accumulated depreciation are removed from the accounts and any gain or loss is reflected in the Consolidated Statement of Operations. Refer to Note 6, “Property and Equipment,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report for additional information.

Long-lived assets are reviewed for impairment whenever events or circumstances indicate the carrying amount may not be recoverable. Events or circumstances that would result in an impairment review primarily include operations reporting losses, a significant change in the use of an asset, or the planned disposal or sale of the asset. The asset would be considered impaired when the future net undiscounted cash flows generated by the asset are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value of the asset exceeds its fair value, as determined by quoted market prices (if available) or the present value of expected future cash flows. In 2022, a loss on impairment of $338 thousand was recorded. Refer to Note 6, “Property and Equipment,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report for additional information.

Valuation ofinventories

We state inventories at the lower of standard cost (which approximates actual cost determined using the first-in-first-out method) or net realizable value. We establish provisions for excess and obsolete inventories after evaluation of historical sales, market prices, current economic trends, forecasted sales, product lifecycles, and current inventory levels. Throughout 2022, we faced supply chain constraints and also undertook an inventory reduction project in connection with reducing our warehouse square footage, which impacted our inventory purchasing strategy and resulted in a decrease in our gross inventory levels of $2.9 million and excess inventory reserves of $0.5 million compared to 2021. During 2021, we experienced global supply chain and logistics constraints, which impacted our inventory purchasing strategy, leading to a buildup of inventory and inventory components in an effort to manage both shortages of available components and longer lead times in obtaining components, which resulted in an increase in our gross inventory levels of $2.4 million and excess inventory reserves of $0.2 million compared to 2020. Adjustments to our estimates, such as forecasted sales and expected product lifecycles, could harm our operating results and financial position. Refer to Note 5, “Inventories,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report for additional information.

Accounting forincometaxes

As part of the process of preparing the Consolidated Financial Statements, we are required to estimate our income tax liability in each of the jurisdictions in which we do business. This process involves estimating our actual current tax expense together with assessing temporary differences resulting from differing treatment of items, such as deferred revenues, for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in our Consolidated Balance Sheets. We then assess the likelihood of the deferred tax assets being recovered from future taxable income and, to the extent we believe it is more likely than not that the deferred tax assets will not be recovered, or is unknown, we establish a valuation allowance.

Significant management judgment is required in determining our provision for income taxes, deferred tax assets and liabilities, and any valuation allowance recorded against our deferred tax assets. At December 31, 2022 and 2021, we have recorded a full valuation allowance against our deferred tax assets due to uncertainties related to our ability to utilize our deferred tax assets, primarily consisting of certain net operating losses carried forward. The valuation allowance is based upon our estimates of taxable income by jurisdiction and the period over which our deferred tax assets will be recoverable. In considering the need for a valuation allowance, we assess all evidence, both positive and negative, available to determine whether all or some portion of the deferred tax assets will not be realized. Such evidence includes, but is not limited to, recent earnings history, projections of future income or loss, reversal patterns of existing taxable and deductible temporary differences, and tax planning strategies. We continue to evaluate the need for a valuation allowance on a quarterly basis.

At December 31, 2022, we had net operating loss carry-forwards of approximately $132.4 million for federal income tax purposes ($77.6 million for state and local income tax purposes). However, due to changes in our capital structure, approximately $78.0 million of the $132.4 million is available to offset future taxable income after the application of IRC Section 382 limitations. As a result of the Tax Act, net operating loss carry-forwards generated in tax years beginning after December 31, 2017 can only offset 80% of taxable income. These net operating loss carry-forwards can no longer be carried back, but they can be carried forward indefinitely. The $9.2 million and $9.6 million in federal net operating losses generated in

2022 and 2021, respectively, will be subject to the new limitations under the Tax Act. If not utilized, the carry-forwards generated prior to December 31, 2017 of $37.5 million will begin to expire in 2024 for federal purposes and have begun to expire for state and local purposes. Please refer to Note 11, “Income Taxes,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report for further information.

Share-based payments

The cost of employee and director stock options and restricted stock units, as well as other share-based compensation arrangements, is reflected in the Consolidated Financial Statements based on the estimated grant date fair value method under the authoritative guidance. Management applies the Black-Scholes option pricing model to options issued to employees and directors to determine the fair value of stock options and apply judgment in estimating key assumptions that are important elements of the model in expense recognition. These elements include the expected life of the option, the expected stock-price volatility, and expected forfeiture rates. The assumptions used in calculating the fair value of share-based awards under Black-Scholes represent our best estimates, but these estimates involve inherent uncertainties and the application of management judgment. Although we believe the assumptions and estimates we have made are reasonable and appropriate, changes in assumptions could materially impact our reported financial results. Restricted stock units and stock options issued to non-employees are valued based upon the intrinsic value of the award. See Note 10, “Stockholders’ Equity,” included in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report for additional information.

Leases

The Company leases certain equipment, manufacturing, warehouse and office space under non-cancellable operating leases expiring through 2027 under which it is responsible for related maintenance, taxes and insurance. The Company had one finance lease on a forklift containing a bargain purchase option which was exercised in July 2022. The lease term consists of the non-cancellable period of the lease, periods covered by options to extend the lease if the Company is reasonably certain to exercise the option, and periods covered by an option to terminate the lease if the Company is reasonably certain not to exercise the option.

Additionally, as of March 25, 2022, the terms of our expiring headquarters real estate operating lease for manufacturing, warehouse and office space have been modified beginning July 1, 2022 to reflect a smaller footprint at reduced costs through 2027. In accordance with Accounting Standards Codification 842, Leases (“Topic 842”), as a result of the extension, the related lease liability was remeasured and the right-of-use asset was adjusted for the modification in March 2022. The present value of the lease obligation for this lease was calculated using an incremental borrowing rate of 16.96%, which was the Company’s blended borrowing rates (including interest, annual facility fees, collateral management fees, bank fees and other miscellaneous lender fees) on its revolving lines of credit. The weighted average remaining lease term for the operating leases is 4.7 years.

The Company had one restructured lease with a sub-lease component for the New York, New York office that was closed in 2017. The lease expired in June 2021. As part of the lease agreement, there was $0.3 million in restricted cash in prepaid and other current assets on the accompanying Consolidated Balance Sheets as of December 31, 2020 which represented collateral against the related letter of credit issued as part of the lease agreement. Per the terms of the lease agreement, the restrictions on the cash were lifted in September 2021 and the cash was returned to the Company.

Recently issued accounting pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which significantly changes the accounting for credit losses on instruments within its scope. The new guidance introduces an approach based on expected losses to estimate credit losses on certain financial instruments, including trade receivables, and requires an entity to recognize an allowance based on its estimate of expected credit losses rather than incurred losses. This standard is effective for interim and annual periods starting after December 15, 2022 and will generally requires adoption on a modified retrospective basis. We are in the process of evaluating the impact of the standard.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a “smaller reporting company” as defined by Item 10 of Regulation S-K, 17 CFR § 229.10(f)(1), the Company is not required to provide this information.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Stockholders and Board of Directors
Energy Focus, Inc.
Solon, Ohio

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Energy Focus, Inc. (the "Company" "Company") as of December 31, 2022 December 31, 2023 and 2021, 2022, the related consolidated statements of operations, comprehensive loss, stockholders' stockholders' equity (deficit) equity, , and cash flows for the years then ended, and the related notes and Schedule II (collectively referred to as the "consolidated "consolidated financial statements" statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 December 31, 2023 and 2021, 2022, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Continuation as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 4 the notes to the consolidated financial statements, the Company has experienced recurring losses from operations and negative cash flows from operations that raise substantial doubt about its ability to continue as a going concern. Management's Management's plans in regard to these matters are also described in Note 4. the notes. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's Company's management. Our responsibility is to express an opinion on the Company's Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB" ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Reserves for Excess, Obsolete and Slow-Moving Inventories

Description of the Matter

As described in Notes 2 and 5 4 to the consolidated financial statements, the Company assesses the valuation of inventories each reporting period based on the lower of cost or net realizable value. The Company establishes reserves for excess, obsolete and slow-moving inventories after evaluation of historical sales, current economic trends, forecasted sales, product lifecycles and current inventory levels. The assessment is both quantitative and qualitative. As of December 31, 2022 December 31, 2023, the Company had inventories of $5.5 million $4.4 million, net of reserves for excess, obsolete and slow-moving inventories.

Auditing management's estimates for excess, obsolete and slow-moving inventories required subjective auditor judgment and evaluation of the reasonableness of significant assumptions used in developing the reserves as detailed above, as well as the inputs and related calculations related to historical sales and on-hand inventories.

How We Addressed the Matter in Our Audit

We obtained an understanding and evaluated the design of internal controls over the Company's reserves for excess, obsolete and slow-moving inventories, including management's assessment of the assumptions and data underlying the reserve calculation.

Our substantive audit procedures included, among others, testing the logic and integrity of calculations within management’s management's analysis; testing the completeness and accuracy of underlying data used, including inventory quantities, carrying costs and the estimate of net realizable value by product; and evaluating the reasonableness of management’s management's assumptions related to demand forecasts, estimated reserve percentages and qualitative considerations involving, among others, the implications of new or revised operational strategies. Evaluating the reasonableness of management’s management's assumptions involved (i) comparing historical sales by product, used as a basis for future demand, to audited sales subledgers on a sample basis, (ii) holding discussions with senior management to determine whether strategic or operational changes in the business were consistent with the projections of future demand that were utilized as the basis for the reserves recorded, and (iii) corroborating management’s management's qualitative considerations of future demand through review of unfulfilled customer purchase orders as of year-end on a sample basis.

/s/ GBQ Partners, LLC

We have served as the Company's auditor since 2019.

Columbus, Ohio
March 23, 2023 22, 2024

ENERGY FOCUS, INC.
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31,
(amounts in thousands except share data)

		2022	2021		2023	2022
ASSETS	**ASSETS**			**ASSETS**		
Current assets:	**Current assets:**			**Current assets:**		
Cash	Cash	$ 52	$ 2,682			
Trade accounts receivable, less allowances of $26 and $14, respectively		445	1,240			
Trade accounts receivable, less allowances of $20 and $26, respectively						
Trade accounts receivable - related party						
Inventories, net	Inventories, net	5,476	7,866			
Short-term deposits		592	712			

Prepayments to vendors				
Prepaid and other current assets	Prepaid and other current assets	232	479	
Receivable for claimed ERTC		445	445	
Receivable for claimed Employee Retention Tax Credit				
Receivable for claimed Employee Retention Tax Credit				
Receivable for claimed Employee Retention Tax Credit				
Total current assets	**Total current assets**	7,242	13,424	
Property and equipment, net	Property and equipment, net	76	675	
Operating lease, right-of-use asset	Operating lease, right-of-use asset	1,180	292	
Total assets	**Total assets**	$8,498	$14,391	
Total assets				
Total assets				
LIABILITIES	**LIABILITIES**			**LIABILITIES**
Current liabilities:	**Current liabilities:**			**Current liabilities:**
Accounts payable	Accounts payable	$2,204	$ 2,235	
Accounts payable - related party				
Accrued liabilities	Accrued liabilities	145	265	
Accrued legal and professional fees	Accrued legal and professional fees	—	104	

Accrued payroll and related benefits	Accrued payroll and related benefits	261	718
Accrued sales commissions	Accrued sales commissions	76	57
Accrued warranty reserve	Accrued warranty reserve	183	295
Deferred revenue		—	268
Accrued warranty reserve			
Accrued warranty reserve			
Operating lease liabilities			
Operating lease liabilities			
Operating lease liabilities	Operating lease liabilities	198	325
Finance lease liabilities		—	1
Promissory notes payable, net of discounts and loan origination fees	Promissory notes payable, net of discounts and loan origination fees	2,618	1,719
Promissory notes payable, net of discounts and loan origination fees			
Promissory notes payable, net of discounts and loan origination fees			
Advanced capital contribution			
Related party promissory notes payable	Related party promissory notes payable	814	—

Credit line borrowings, net of loan origination fees	Credit line borrowings, net of loan origination fees	1,447	2,169
Total current liabilities	**Total current liabilities**	7,946	8,156

(continued on the following page)

The accompanying notes are an integral part of these consolidated financial statements.

ENERGY FOCUS, INC.
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31,
(amounts in thousands except share data)

		2022	2021	2023	2022
Operating lease liabilities, net of current portion					
Operating lease liabilities, net of current portion					
Operating lease liabilities, net of current portion	Operating lease liabilities, net of current portion	1,029	26		
Total liabilities	**Total liabilities**	8,975	8,182		
STOCKHOLDERS' (DEFICIT) EQUITY					
Total liabilities					
Total liabilities					
STOCKHOLDERS' EQUITY (DEFICIT)					
STOCKHOLDERS' EQUITY (DEFICIT)					
STOCKHOLDERS' EQUITY (DEFICIT)					
Preferred stock, par value $0.0001 per share:	***Preferred stock, par value $0.0001 per share:***				

Authorized: 5,000,000 shares (3,300,000 shares designated as Series A Convertible Preferred Stock) at December 31, 2022 and December 31, 2021		
Issued and outstanding: 876,447 shares at December 31, 2022 and December 31, 2021	—	—
Preferred stock, par value $0.0001 per share:		
Preferred stock, par value $0.0001 per share:		
Authorized: 5,000,000 shares (3,300,000 shares designated as Series A Convertible Preferred Stock) at December 31, 2023 and December 31, 2022		
Authorized: 5,000,000 shares (3,300,000 shares designated as Series A Convertible Preferred Stock) at December 31, 2023 and December 31, 2022		
Authorized: 5,000,000 shares (3,300,000 shares designated as Series A Convertible Preferred Stock) at December 31, 2023 and December 31, 2022		
Issued and outstanding: 876,447 shares at December 31, 2023 and December 31, 2022		
Issued and outstanding: 876,447 shares at December 31, 2023 and December 31, 2022		
Issued and outstanding: 876,447 shares at December 31, 2023 and December 31, 2022		
Common stock, par value $0.0001 per share:	***Common stock, par value $0.0001 per share:***	
Authorized: 50,000,000 shares at December 31, 2022 and December 31, 2021		
Issued and outstanding: 9,848,438 shares at December 31, 2022 and 6,368,549 shares at December 31, 2021	1	—

Authorized: 50,000,000 shares at December 31, 2023 and December 31, 2022			
Authorized: 50,000,000 shares at December 31, 2023 and December 31, 2022			
Authorized: 50,000,000 shares at December 31, 2023 and December 31, 2022			
Issued and outstanding: 4,348,690 shares at December 31, 2023 and 1,406,920* shares at December 31, 2022			
Issued and outstanding: 4,348,690 shares at December 31, 2023 and 1,406,920* shares at December 31, 2022			
Issued and outstanding: 4,348,690 shares at December 31, 2023 and 1,406,920* shares at December 31, 2022			
Additional paid-in capital	Additional paid-in capital	148,545	144,953
Accumulated other comprehensive loss	Accumulated other comprehensive loss	(3)	(3)
Accumulated deficit	Accumulated deficit	(149,020)	(138,741)
Total stockholders' (deficit) equity		(477)	6,209
Total liabilities and stockholders' (deficit) equity		$ 8,498	$ 14,391
Total stockholders' equity (deficit)			
Total liabilities and stockholders' equity (deficit)			

*Shares outstanding for prior periods have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

*Shares outstanding for prior periods have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

The accompanying notes are an integral part of these consolidated financial statements.

ENERGY FOCUS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31,
(amounts in thousands except per share data)

		2022		2021	
Net sales	**Net sales**	$	5,968	$	9,865
Net sales					
Net sales					
Cost of sales	Cost of sales		6,286		8,167
Gross (loss) profit			(318)		1,698
Cost of sales					
Cost of sales					
Gross profit (loss)					
Gross profit (loss)					
Gross profit (loss)					
Operating expenses:					
Operating expenses:					
Operating expenses:	**Operating expenses:**				
Product development	Product development		1,491		1,891
Product development					
Product development					
Selling, general, and administrative					
Selling, general, and administrative					
Selling, general, and administrative	Selling, general, and administrative		7,148		8,535
Loss on impairment	Loss on impairment		338		—
Restructuring			—		(21)
Loss on impairment					
Loss on impairment					

Total operating expenses					
Total operating expenses					
Total operating expenses	**Total operating expenses**		8,977		10,405
Loss from operations	**Loss from operations**		(9,295)		(8,707)
Loss from operations					
Loss from operations					
Other expenses:					
Other expenses (income):					
Other expenses (income):					
Other expenses (income):					
Interest income					
Interest income					
Interest income					
Interest expense	Interest expense		954		792
Gain on forgiveness of PPP loan			—		(801)
Interest expense					
Interest expense					
Other income					
Other income					
Other income	Other income		(30)		(876)
Other expenses	Other expenses		56		65
Other expenses					
Other expenses					
Loss from operations before income taxes	**Loss from operations before income taxes**		(10,275)		(7,887)
Provision for (benefit from) income taxes			4		(1)
Loss from operations before income taxes					
Loss from operations before income taxes					
Provision for income taxes					
Provision for income taxes					
Provision for income taxes					
Net loss	**Net loss**	$	(10,279)	$	(7,886)
Net loss per common share - basic and diluted:					
Net loss	**Net loss**	$	(1.27)	$	(1.73)
Weighted average shares of common shares outstanding:					

Basic and diluted	8,110	4,561
Net loss		
Net loss per common stock basic and diluted:		
Net loss per common stock basic and diluted:		
Net loss per common stock basic and diluted:		
Net loss		
Net loss		
Net loss		
Weighted average shares of common stock outstanding:		
Weighted average shares of common stock outstanding:		
Weighted average shares of common stock outstanding:		
Basic and diluted*		
Basic and diluted*		
Basic and diluted*		

* Shares outstanding for prior periods have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

The accompanying notes are an integral part of these consolidated financial statements.

ENERGY FOCUS, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
FOR THE YEARS ENDED DECEMBER 31,
(amounts in thousands)

		2022	2021
Net loss	**Net loss**	$ (10,279)	$ (7,886)
Net loss			
Net loss			
Other comprehensive loss:			
Other comprehensive loss:			
Other comprehensive loss:	**Other comprehensive loss:**		
Foreign currency translation adjustments	Foreign currency translation adjustments	—	—
Foreign currency translation adjustments			
Foreign currency translation adjustments			
Comprehensive loss	**Comprehensive loss**	$ (10,279)	$ (7,886)

Comprehensive loss

Comprehensive loss

The accompanying notes are an integral part of these consolidated financial statements.

ENERGY FOCUS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS’ EQUITY (DEFICIT) EQUITY

FOR THE YEARS ENDED DECEMBER 31, 2022 2023 AND 2021 2022

(amounts in thousands)

					Additional Paid-in Capital	Additional Paid-in Capital	Additional Paid-in Capital	
	Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	
	Shares	Amount	Shares	Amount				
Balance at December 31, 2020	2,597	$ —	3,525	$ —	$ 135,113	$ (3)	$ (130,855)	$ 4,255
Issuance of common stock under employee stock option and stock purchase plans	—	—	79	—	80	—	—	80
Common stock withheld in lieu of income tax withholding on vesting of restricted stock units	—	—	—	—	(1)	—	—	(1)
Issuance of common stock and warrants	—	—	2,183	—	9,500	—	—	9,500
Offering costs on issuance of common stock and warrants	—	—	—	—	(969)	—	—	(969)
Issuance of common stock upon the exercise of warrants	—	—	237	—	801	—	—	801
Issuance of common stock upon the conversion from preferred stock	(1,721)	—	344	—	—	—	—	—
Stock-based compensation	—	—	—	—	429	—	—	429
Net loss	—	—	—	—	—	—	(7,886)	(7,886)

Balance at December 31, 2021	**Balance at December 31, 2021**	876	$ —	6,368	$ —	$ 144,953	$ (3)	$ (138,741)	$ 6,209
Balance at December 31, 2021									
Balance at December 31, 2021									
Issuance of common stock under employee stock option and stock purchase plans									
Issuance of common stock under employee stock option and stock purchase plans									
Issuance of common stock under employee stock option and stock purchase plans	Issuance of common stock under employee stock option and stock purchase plans	—	—	46	—	6	—	—	6
Issuance of common stock and warrants	Issuance of common stock and warrants	—	—	1,313	1	3,499	—	—	3,500
Issuance of common stock and warrants									
Issuance of common stock and warrants									
Offering costs on issuance of common stock and warrants	Offering costs on issuance of common stock and warrants	—	—	—	—	(334)	—	—	(334)
Offering costs on issuance of common stock and warrants									
Offering costs on issuance of common stock and warrants									

Issuance of common stock upon the exercise of warrants

Issuance of common stock upon the exercise of warrants

Issuance of common stock upon the exercise of warrants	Issuance of common stock upon the exercise of warrants	—	—	1,465	—	—	—	—	—
Stock-based compensation	Stock-based compensation	—	—	—	—	117	—	—	117

Stock-based compensation

Stock-based compensation

Stock issued in exchange transactions

Stock issued in exchange transactions

Stock issued in exchange transactions	Stock issued in exchange transactions	—	—	657	—	304	—	—	304
Net loss	Net loss	—	—	—	—	—	—	(10,279)	(10,279)

Net loss

Net loss

Balance at December 31, 2022

Balance at December 31, 2022

Balance at December 31, 2022	**Balance at December 31, 2022**	876	$ —	9,849	$ 1	$ 148,545	$ (3)	$ (149,020)	$ (477)

Issuance of common stock

Issuance of common stock

Issuance of common stock

Stock issued in exchange transactions

Stock issued in exchange transactions
Stock issued in exchange transactions
Par value adjustment due to reverse stock split
Par value adjustment due to reverse stock split
Par value adjustment due to reverse stock split
Reduction in equity due to costs from reverse stock split
Reduction in equity due to costs from reverse stock split
Reduction in equity due to costs from reverse stock split
Stock-based compensation
Stock-based compensation
Stock-based compensation
Impact of adoption of ASU 2016-13 - CECL
Impact of adoption of ASU 2016-13 - CECL
Impact of adoption of ASU 2016-13 - CECL
Net loss
Net loss
Net loss
Balance at December 31, 2023
Balance at December 31, 2023
Balance at December 31, 2023

*Shares outstanding for prior periods have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

The accompanying notes are an integral part of these consolidated financial statements.

ENERGY FOCUS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31,
(amounts in thousands)

	2022	2021
Cash flows from operating activities:		
Net loss	$ (10,279)	$ (7,886)
Adjustments to reconcile net loss to net cash used in operating activities:		
Other income	(30)	(876)
Capitalized interest on promissory notes payable	40	—
Gain on forgiveness of PPP loan	—	(801)
Depreciation	159	188
Stock-based compensation	117	429
Provision for doubtful accounts receivable	14	6
Provision for slow-moving and obsolete inventories	32	156
Provision for warranties	(111)	68
Amortization of loan discounts and origination fees	364	230
Loss on impairment	338	—
Change in operating assets and liabilities:		
Accounts receivable	783	783
Inventories	2,358	(2,381)
Short-term deposits	120	257
Prepaid and other assets	247	669
Accounts payable	(1)	(423)
Accrued and other liabilities	(596)	(380)
Deferred revenue	(268)	196
Total adjustments	3,566	(1,879)
Net cash used in operating activities	(6,713)	(9,765)
Cash flows from investing activities:		
Acquisitions of property and equipment	(41)	(443)
Proceeds from the sale of property and equipment	25	—
Net cash used in investing activities	(16)	(443)
Cash flows from financing activities:		
Proceeds from the issuance of common stock and warrants	3,500	9,500

Proceeds from the exercise of warrants	—	801
Offering costs paid on the issuance of common stock and warrants	(334)	(969)
Principal payments under finance lease obligations	(1)	(3)
Proceeds from exercise of stock options and purchases through employee stock purchase plan	6	80
Common stock withheld in lieu of income tax withholding on vesting of restricted stock units	—	(1)
Payments on the 2021 Streeterville Note	(1,640)	—
Proceeds from the 2021 Streeterville Note	—	1,515
Proceeds from the 2022 Streeterville Note	2,000	—
Proceeds from related party promissory notes payable	800	
Proceeds from promissory notes payable	650	—
Payments for deferred financing costs	(114)	(30)
Net payments on credit line borrowings - Credit Facilities	(768)	(181)
Net cash provided by financing activities	4,099	10,712

	2023	2022
Cash flows from operating activities:		
Net loss	$ (4,293)	$ (10,279)
Adjustments to reconcile net loss to net cash used in operating activities:		
Other income	(40)	(30)
Capitalized interest on promissory notes payable	—	40
Depreciation	33	159
Stock-based compensation	44	117
Provision for doubtful accounts receivable	6	14
Provision for slow-moving and obsolete inventories	25	32
Provision for warranties	(33)	(111)
Amortization of loan discounts and origination fees	225	364
Loss on impairment	—	338
Change in operating assets and liabilities:		
Accounts receivable	(1,131)	783
Accounts receivable - related party	(202)	—
Inventories	1,012	2,358
Prepayments to vendors	(200)	120
Prepaid and other assets	521	247
Accounts payable	(580)	(1)
Accounts payable- related party	2,146	—
Accrued and other liabilities	(47)	(584)

Right of use assets and lease liabilities	75	(12)
Deferred revenue	—	(268)
Total adjustments	1,854	3,566
Net cash used in operating activities	(2,439)	(6,713)
Cash flows from investing activities:		
Acquisitions of property and equipment	(69)	(41)
Proceeds from the sale of property and equipment	—	25
Net cash used in investing activities	(69)	(16)
Cash flows from financing activities:		
Proceeds from the issuance of common stock and warrants	6,079	3,500
Costs related to reverse stock-split	(16)	—
Offering costs paid on the issuance of common stock and warrants	—	(334)
Principal payments under finance lease obligations	—	(1)
Proceeds from exercise of stock options and purchases through employee stock purchase plan	—	6
Payments on the 2021 Streeterville Note	—	(1,640)
Payments on the 2022 Streeterville Note	(625)	—
Proceeds from the 2022 Streeterville Note	—	2,000
Proceeds from related party promissory notes payable	—	800
Proceeds from promissory notes payable	—	650
Payments for deferred financing costs	—	(114)
Net payments on credit line borrowings - Credit Facilities	(1,402)	(768)
Advanced capital contribution	450	—
Net cash provided by financing activities	4,486	4,099

(continued on the following page)

ENERGY FOCUS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31,

(amounts in thousands)

	2022	**2021**
Net increase in cash	(2,630)	504
Net increase (decrease) in cash		
Net increase (decrease) in cash		
Net increase (decrease) in cash		

Cash, beginning of year	Cash, beginning of year		2,682		2,178
Cash, beginning of year					
Cash, beginning of year					
Cash, end of year					
Cash, end of year					
Cash, end of year	Cash, end of year	$	52	$	2,682
Supplemental information:	**Supplemental information:**				
Supplemental information:					
Supplemental information:					
Cash paid in year for interest	Cash paid in year for interest	$	364	$	381
Cash paid in year for interest					
Cash paid in year for interest					
Cash paid in year for income taxes					
Cash paid in year for income taxes					
Cash paid in year for income taxes	Cash paid in year for income taxes	$	1	$	4
Non-cash investing and financing activities:	**Non-cash investing and financing activities:**				
Non-cash investing and financing activities:					
Non-cash investing and financing activities:					
Debt-to-equity exchange transactions					
Debt-to-equity exchange transactions					
Debt-to-equity exchange transactions	Debt-to-equity exchange transactions	$	304	$	—

The accompanying notes are an integral part of these consolidated financial statements.

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1. NATURE OF OPERATIONS

Energy Focus, Inc. engages primarily in the design, development, manufacturing, marketing and sale of energy-efficient lighting systems and controls. We develop, market and sell high quality light-emitting diode ("LED") lighting and controls products in the commercial market and military maritime market ("MMM"), and began to expand our offerings into the consumer market in the fourth quarter of 2021. . Our mission is to enable our customers to run their facilities offices with greater energy efficiency and productivity, and increased human health and wellness through advanced LED retrofit solutions. Our goal is to be the human wellness lighting and LED technology and market leader for the most demanding applications where performance, quality, value, environmental impact and health are considered paramount. We specialize in LED lighting retrofit by replacing fluorescent, high-intensity discharge lighting and other types of lamps in institutional buildings for primarily indoor lighting applications with our innovative, high-quality commercial and military-grade tubular LED ("TLED") products, as well as other LED and lighting control products for commercial and consumer applications. In late 2020, we announced the launch of ultraviolet-C light disinfection ("UVCD") products. After evaluating market demand and supply chain challenges for our UVCD products, we revised our business strategy to primarily focus on our MMM and commercial and industrial lighting and control products. We are also evaluating adjacent technologies including Gallium Nitride ("GaN") based power supplies and additional market opportunities in for energy solution products that promote sustainability.

The LED lighting industry has changed dramatically over the past several years due to increasing competition and price erosion. We have been experiencing these industry forces in both our military business since 2016 and support sustainability in our commercial segment, where we once commanded significant price premiums for our flicker-free TLEDs with primarily 10-year warranties. In more recent years, we have focused on redesigning our products for lower costs and consolidated our supply chain for stronger purchasing power in an effort to price our products more competitively. Despite these efforts, our legacy products continue to face aggressive pricing competition and a convergence of product functionality in the marketplace, and we have shifted to diversifying our supply chain in an effort to increase value and remain competitive. These trends are not unique to Energy Focus as evidenced by the increasing number of industry peers facing challenges, exiting LED lighting, selling assets and even going out of business. existing channels.

In addition to continuously pursuing cost reductions, our strategy to combat these trends is to innovate both our technology and product offerings with differentiated products and solutions that offer greater, distinct value. Specific examples of theseproducts we have developed include the RedCap®, our emergency backup battery integrated TLED, EnFocus™, our new dimmable/color-tunable lighting and powerline control platform that we launched in 2020, and the second generation of EnFocus™ powerline control switches and circadian lighting system for both commercial and residential markets, which as a result of supply chain challenges we now plan to launch in 2023. Similarly, our plans to expand and enhance the performance of our RedCap®product line are also now expected in 2023. We continue to evaluate our sales strategy and believe our go-to-market strategy that focuses more on direct-sales marketing, selectively expanding our channel partner network to cover territories across the country, and listening to the voice of the customer, will lead to better and more impactful product development efforts that we believe will eventually translate into larger addressable markets and greater sales growth for us.

The Company has experienced significant sales declines, operating losses and increases in its inventory. Beginning in 2019, significant restructuring efforts were undertaken. The Company replaced the entire senior management team, significantly reduced non-critical expenses, minimized the amount of inventory the Company was purchasing, dramatically changed the composition of our board of directors ("Board of Directors") and the executive team, and recruited new departmental leaders across the Company. The initial cost savings efforts to reduce costs to minimize cash usage included the elimination of certain positions, restructuring of the sales organization and incentive plan, flattening of the senior management team, additional operational streamlining, management compensation reductions, and outsourcing of certain functions including certain elements of supply chain and marketing.

During 2021 and 2022, we realized initial cost-savings benefits from these relaunch efforts, but continued to face significant operating losses. Despite these cost-cutting efforts, the company faced a challenging commercial market with continuing impacts from the global pandemic combined with ongoing delays in MMM projects and funding that continued to depress sales through 2021 while the company invested in exploring additional lines of business with UVCD technology that ultimately gained little traction in the market.

At the beginning of 2022, the board of directors appointed our lead independent director to serve as interim chief executive officer and replace our previous chief executive officer. During 2022, the company expanded its cost-reduction efforts, reduced its warehouse square footage, undertook an inventory reduction project, and dramatically reduced head count. In February and September of 2022, we also added three experienced executives to our Board of Directors with extensive lighting and consumer products industry experience. We reinvested in our MMM sales channel with a strategic hire in May 2022 and continue to pursue these sales opportunities, though the sales cycles for what are frequently made-to-order products are longer than commercial offerings.

NOTE 2. BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies of our Company, which are summarized below, are consistent with accounting principles generally accepted in the United States ("U.S. GAAP") and reflect practices appropriate to the business in which we operate. Unless indicated otherwise, the information in the Notes to the Consolidated Financial Statements relates to our operations.

Going Concern and Nasdaq Continued Listing Requirements Compliance

Due to our financial performance as of December 31, 2023 and 2022, including net losses of $4.3 million and $10.3 million for the twelve months ended December 31, 2023 and 2022, respectively, and total cash used in operating activities of $2.4 million and $6.7 million for the twelve months ended December 31, 2023 and 2022, respectively, we determined that substantial doubt about our ability to continue as a going concern continues to exist at December 31, 2023. As a result of restructuring actions and initiatives, we have tailored our operating expenses to be more in line with our expected sales volumes; however, we continue to incur losses and have a substantial accumulated deficit.

Additionally, global supply chain and logistics constraints are impacting our inventory purchasing strategy, as we seek to manage both shortages of available components and longer lead times in obtaining components while balancing the development and implementation of an inventory reduction plan. Disruptions in global logistics networks are also impacting our lead times and ability to efficiently and cost-effectively transport products from our third-party suppliers to our facility. As a result, we will continue to review and pursue selected external funding sources to ensure adequate financial resources to execute across the timelines required to achieve these objectives including, but not limited to, the following:

- obtaining financing from traditional or non-traditional investment capital organizations or individuals;
- obtaining funding from the sale of our common stock or other equity or debt instruments; and
- obtaining debt financing with lending terms that more closely match our business model and capital needs.

There can be no assurance that we will obtain funding on acceptable terms, in a timely fashion, or at all. Obtaining additional funding contains risks, including:

- additional equity financing may not be available to us on satisfactory terms, particularly in light of the current price of our common stock, and any equity we are able to issue could lead to dilution for current stockholders and have rights, preferences and privileges senior to our common stock;
- loans or other debt instruments may have terms or conditions, such as interest rate, restrictive covenants, conversion features, refinancing demands, and control or revocation provisions, which are not acceptable to management or the Company's Board of Directors (the "Board of Directors"); and
- the current environment in the capital markets and volatile interest rates, combined with our capital constraints, may prevent us from being able to obtain adequate debt financing.

Considering both quantitative and qualitative information, we continue to believe that the combination of our plans to ensure adequate external funding, timely re-organizational actions, current financial position, liquid resources, obligations due or anticipated within the next year, development and implementation of an excess inventory reduction plan, plans and initiatives in our research and development, product development and sales and marketing, and development of potential channel partnerships, if adequately executed, could provide us with an ability to finance our operations through the next twelve months and may mitigate the substantial doubt about our ability to continue as a going concern.

Nasdaq Capital Market Compliance

Our common stock is listed on the Nasdaq Capital Market, which has a minimum bid price of at least $1.00 per share as one of its continued listing requirements. On August 23, 2022, we received a letter from the Nasdaq Listing Qualifications Staff (the “Staff”) notifying us that we were not in compliance with the Nasdaq Listing Rule 5550(a)(2) (the “Bid Price Rule”), because the closing bid price for our common stock was below the minimum $1.00 per share for 30 consecutive business days. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided an initial period of 180 calendar days, or until February 20, 2023, to regain compliance with the Bid Price Rule. During the initial compliance period, our common stock continued to trade on the Nasdaq Capital Market, but did not satisfy the Bid Price Rule.

On November 16, 2022, we received a letter from the Staff notifying us that we were no longer in compliance with Nasdaq Listing Rule 5550(b)(1), which requires listed companies to maintain stockholders’ equity of at least $2.5 million if they do not meet the alternative compliance standards relating to the market value of listed securities or net income from continuing operations (the “Minimum Stockholders’ Equity Rule”). Our Form 10-Q for the quarterly period ended September 30, 2022 filed on November 10, 2022 reflected that our stockholders’ equity as of September 30, 2022 was $1.5 million. Based on our timely submission of our plan to regain compliance (the “Plan”), Nasdaq granted us an extension through May 15, 2023 to regain compliance with the Minimum Stockholders’ Equity Rule.

On February 21, 2023, we received written notification (the “Bid Price Notification”) from the Staff stating that we had not regained compliance with the Bid Price Rule and our common stock is subject to delisting from Nasdaq. On February 24, 2023, we submitted a request for a hearing before the Nasdaq Hearings Panel (the “Panel”) to appeal the delisting (the “Appeal”). Under Nasdaq rules, the delisting of the Company’s common stock was stayed during the pendency of the Appeal and, during such time, the Company’s common stock continued to be listed on Nasdaq.

On March 28, 2023, the Company received written notification (the “Additional Staff Determination”) from the Staff stating that (i) following the Bid Price Notification, and in accordance with Listing Rule 5810(c)(2)(A), Nasdaq is no longer permitted to consider the stockholders’ equity compliance plan, (ii) the Additional Staff Determination serves as an additional basis for delisting the Company’s common stock from Nasdaq and (iii) the Panel will consider the Additional Staff Determination in rendering a determination regarding the continued listing of the Company’s common stock on Nasdaq.

On April 6, 2023, the Company participated in the Appeal before the Panel. The Company provided an update to the Panel on the Company’s substantial progress made towards the previously submitted Plan during the three months ended March 31, 2023, and requested the Panel grant the Company an exception to (1) re-allow the previously granted exception until May 15, 2023 for the Company to regain compliance with the Minimum Stockholders’ Equity Rule and (2) grant an exception allowing the Company up to 180 days following the Bid Price Notification to regain compliance with the Bid Price Rule by effecting a reverse stock split following stockholder approval at the Company’s 2023 annual meeting of stockholders. On May 1, 2023, the Panel granted the Company’s request (the “Panel Decision”) to continue the Company’s listing on Nasdaq, subject to the following conditions: (1) on or before May 15, 2023, the Company shall file with the SEC its quarterly report for the three months ended March 31, 2023 demonstrating compliance with the Minimum Stockholders’ Equity Rule and (2) on or before July 7, 2023, the Company shall demonstrate compliance with the Bid Price Rule.

On July 27, 2023, the Company received written notification from the Staff stating that the Company has regained compliance with the Bid Price Rule and the Minimum Stockholders’ Equity Rule, as required by the Panel Decision. Pursuant to Nasdaq Listing Rule 5815(d)(4)(B), the Company will be subject to a mandatory panel monitor for a period of one year from July 27, 2023 (the “Monitoring Period”). If, within the Monitoring Period, the Staff finds the Company again out of compliance with the Minimum Stockholders’ Equity Rule, notwithstanding Nasdaq Listing Rule 5810(c)(2), the Company will not be permitted to provide the Staff with a plan of compliance with respect to that deficiency and the Staff will not be permitted to grant additional time for the Company to regain compliance with respect to that deficiency, nor will the Company be afforded an applicable cure or compliance period pursuant to Nasdaq Listing Rule 5810(c)(3). Instead, the Staff will issue a delist determination letter and the Company will have an opportunity to request a new hearing with the initial Panel or a newly convened hearings panel if the initial Panel is unavailable. The Company will have the opportunity to respond and present to the Panel as provided by Nasdaq Listing Rule 5815(d)(4)(C). The Company's common stock may be at that time delisted from Nasdaq.

As of the date of this Annual Report, the Company believes it has maintained compliance with the Minimum Stockholders' Equity Rule for continued listing on the Nasdaq Capital Market. To become compliant with the Bid Price Rule, the Company

effected a 1-for-7 reverse stock split to increase the per share trading price of the common stock effective June 16, 2023 (See Note 9, "Stockholders' Equity").

However, there can be no assurance that the Company will be able to maintain compliance with the Minimum Stockholders' Equity Rule, Bid Price Rule, or other Nasdaq listing requirements. If the Company fails to maintain compliance with Nasdaq's continued listing standards in accordance with the Panel's decision, the Company's common stock will be subject to delisting from Nasdaq.

Use of estimates

The preparation of financial statements in conformity accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the in our financial statements and accompanying notes. Management bases its estimates on historical experience and various other assumptions believed to be reasonable. Although these estimates are based on management's best knowledge of current events and actions that may impact us in the reported amounts of revenues and expenses during future, actual results may vary from the reporting periods presented. estimates. Estimates include, but are not limited to, the establishment of reserves for accounts receivable, sales returns, inventory excess and obsolescence reserve and warranty claims, the useful lives for of property and equipment, valuation allowance for net deferred taxes, and stock-based compensation. The Company began using estimates for its calculation of allowance for doubtful accounts receivable under Accounting Standards Codification ("ASC") 326, *Measurement of Credit Losses on Financial Instruments* ("CECL") commencing in 2023. In addition, estimates and assumptions associated with the determination of the fair value of financial instruments and evaluation of long-lived assets for impairment requires considerable judgment. Actual results could differ from those estimates and such differences could be material.

Basis of presentation

The Consolidated Financial Statements include the accounts of the Company. All significant inter-company balances and transactions have been eliminated. Unless indicated otherwise, We have prepared the information accompanying consolidated financial statements in accordance with U.S. GAAP and pursuant to the Notes to Consolidated Financial Statements relates to our operations. rules and regulations of the United States Securities & Exchange Commission ("SEC").

Revenue recognition

Net sales include revenues from sales of products and shipping and handling charges, net of estimates for product returns. Revenue is measured at the amount of consideration we expect to receive in exchange for the transferred products. We recognize revenue at the point in time when we transfer the promised products to the customer and the customer obtains control over the products. Distributors' obligations to us are not contingent upon the resale of our products. We recognize revenue for shipping and handling charges at the time the goods are shipped to the customer, and the costs of outbound freight are included in cost of sales. We provide for product returns based on historical return rates. While we incur costs for sales commissions to our sales employees and outside agents, we recognize commission costs concurrent with the related revenue, as the amortization period is less than one year. We do not incur any other incremental costs to obtain contracts with our customers. Our product warranties are assurance-type warranties, which promise the customer that the products are as specified in the contract. Therefore, the product warranties are not a separate performance obligation and are accounted for as described below. Sales taxes assessed by governmental authorities and collected by us are accounted for on a net basis and are excluded from net sales.

A disaggregation of product net sales is presented in Note 11, “Product and Geographic Information.”

Accounts Receivable and Allowance for Credit Losses

Our trade accounts receivable consists of amounts billed to and currently due from customers. Substantially all of our customers are concentrated in the United States. In the normal course of business, we extend unsecured credit to our customers related to the sale of our products. Credit is extended to customers based on an evaluation of the customer’s financial condition and the amounts due are stated at their estimated net realizable value. We maintain allowances for sales returns and doubtful accounts receivable to provide for the estimated number of account receivables that will not be collected. The allowance is based on an assessment of forward-looking customer credit-worthiness and historical payment experience, the age of outstanding receivables, and performance guarantees to the extent applicable. Past due amounts are written off when our internal collection efforts have been unsuccessful, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts. We do not generally require collateral from our customers.

Our standard payment terms with customers are net 30 days from the date of shipment, and we do not generally offer extended payment terms to our customers, but exceptions are made in some cases for major customers or with particular orders.

Accordingly, we do not adjust trade accounts receivable for the effects of financing, as we expect the period between the transfer of product to the customer and the receipt of payment from the customer to be in line with our standard payment terms.

Through November 2022, we utilized a third-party account receivable insurance program with a very high credit worthy insurance company where we had the large majority of the accounts receivable arising during the policy term insured with a portion of self-retention. This third party also provided credit-worthiness ratings and metrics that significantly assisted us in evaluating the credit-worthiness of both existing and new customers. Although the insurance policy is no longer in place, all invoices issued under the previous coverage period are still covered under the policy.

On January 1, 2023, the Company adopted Financial Instruments - Credit Losses (“ASC 326”). The standard adds to U.S. GAAP an impairment model known as the CECL model, which is based on expected losses rather than incurred losses. This standard only impacts the Company’s trade receivables. The Company decided to use the historical loss rate method of valuing its reserve for trade receivables. The allowance for credit losses is reviewed and assessed for adequacy on a quarterly basis. We take into consideration (1) any circumstances of which we are aware of a customer's inability to meet its financial obligations and (2) our judgments as to prevailing economic conditions in the industry and their impact on our customers. If circumstances change, and the financial condition of our customers is adversely affected and they are unable to meet their financial obligations, we may need to take additional allowances, which would result in an increase in our operating expense. This resulted in a $2 thousand adjustment to Retained Earnings as of January 1, 2023 and charges to credit loss expense of $4 thousand for the year ended December 31, 2023.

Pursuant to ASC 606, *Revenue Recognition*, contract assets and contract liabilities as of the beginning and ending of the reporting periods must be disclosed. Please find below Below is the breakout of the Company’s contracts: contract assets for such periods:

	At December 31,		
	2022	2021	2020
Gross Accounts Receivable	$ 471	$ 1,254	$ 2,029
Less: Allowance for Doubtful Accounts	(26)	(14)	(8)

Net Accounts Receivable	$ 445	$ 1,240	$ 2,021

	December 31, 2023	December 31, 2022	January 01, 2022
Accounts Receivable	$ 1,590	$ 471	$ 1,254
Less: Reserve for Credit Losses/Allowance for Doubtful Accounts	(20)	(26)	(14)
Net Accounts Receivable	$ 1,570	$ 445	$ 1,240

A disaggregation Activity related to our reserve for credit losses was as follows (in thousands):

Allowance for doubtful accounts as of December 31, 2022	$ (26)
Cumulative effect of the implementation of ASC 326	(2)
Reserve for credit losses as of December 31, 2023	(4)
Prior year reclassification of sales returns out of allowance for doubtful accounts	12
Allowance for doubtful accounts as of December 31, 2023	$ (20)

Geographic information

All of product our long-lived fixed assets are located in the United States. For the years ended December 31, 2023 and 2022, approximately 100% of sales were attributable to customers in the United States. The geographic location of our net sales is presented in Note 12, "Product and Geographic Information." derived from the destination to which we ship the product.

Cash

Cash consists of investments in money market funds and deposits with banks. At December 31, 2022, December 31, 2023 and 2022, we had cash of $0.1 million $2.0 million and at December 31, 2021, we had cash of $2.7 million $52 thousand, respectively, on deposit with financial institutions located in the United States.

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Inventories

We state inventories at the lower of standard cost (which approximates actual cost determined using the first-in-first-out method) or net realizable value. We establish provisions for excess and obsolete inventories after evaluation of historical sales, current economic trends, forecasted sales, product lifecycles, and current inventory levels. The assessment is both quantitative and qualitative. The reduction in warehouse space following the new lease agreement in July 2022 required both significant disposal of highly reserved, excess and obsolete inventory and a focus on selling down inventory on hand throughout 2022. As a result of our initiatives to sell down inventory, we sold some inventory below cost. The difference between cost and sale price

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was applied to remaining inventory and included in lower of cost or market component of the provision for excess and obsolete inventory calculation. We limited inventory and component purchases to top selling products that maintained high inventory turnover. This resulted in a net decrease of our gross inventory levels of $2.9 $1.0 million and a net increase of excess and obsolete inventory reserves of $0.5 million $26 thousand as compared compared to 2021. 2022.

During 2021, we experienced global supply chain and logistics constraints, which impacted our inventory purchasing strategy, leading to a buildup of inventory and inventory components in an effort to manage both shortages of available components and longer lead times in obtaining components. This resulted in a net increase of our gross inventory levels of $2.4 million. We had an increase of excess inventory reserves of $0.2 million as compared to 2020. Adjustments to our estimates, such as forecasted sales and expected product lifecycles, could harm our operating results and financial position. Please refer to Note 5, “Inventories,” 4, “Inventories” for additional information.

Accounts receivable

Our trade accounts receivable consists of amounts billed to and currently due from customers. Our customers are concentrated in the United States. In the normal course of business, we extend unsecured credit to our customers related to the sale of our products. Credit is extended to customers based on an evaluation of the customer’s financial condition and the amounts due are stated at their estimated net realizable value. From time to time, we have utilized a third-party account receivables insurance program with a very high credit worthy insurance company where we have the large majority of the accounts receivable insured with a portion of self-retention. This third party also provided credit-worthiness ratings and metrics that significantly assisted us in evaluating the credit worthiness of both existing and new customers. We maintain allowances for sales returns and doubtful accounts receivable to provide for the estimated amount of account receivables that will not be collected. The allowance is based on an assessment of customer creditworthiness and historical payment experience, the age of outstanding receivables, and performance guarantees to the extent applicable. Past due amounts are written off when our internal collection efforts have been unsuccessful, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts. We do not generally require collateral from our customers.

Our standard payment terms with customers are net 30 days from the date of shipment, and we do not generally offer extended payment terms to our customers, but exceptions are made in some cases to major customers or with particular orders. Accordingly, we do not adjust trade accounts receivable for the effects of financing, as we expect the period between the transfer of product to the customer and the receipt of payment from the customer to be in line with our standard payment terms.

Income taxes

As part of the process of preparing the Consolidated Financial Statements, we are required to estimate our income tax liability in each of the jurisdictions in which we do business. This process involves estimating our actual current tax expense together with assessing temporary differences resulting from differing treatment of items, such as deferred revenues, for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in our Consolidated Balance Sheets. We then assess the likelihood of the deferred tax assets being recovered from future taxable income and, to the extent we believe it is more likely than not that the deferred tax assets will not be recovered, or is unknown, we establish a valuation allowance. Significant management judgment is required in determining our provision for income taxes, deferred tax assets and liabilities, and any valuation allowance recorded against our deferred tax assets. At December 31, 2022 December 31, 2023 and 2021, 2022, we have recorded a full valuation allowance against our net deferred tax assets due to uncertainties related to our ability to utilize our deferred tax assets, primarily consisting of certain net operating losses carried forward. The valuation allowance is based upon our estimates of taxable income by jurisdiction and the period over which our deferred tax assets will be recoverable. In considering the need for a valuation allowance, we assess all evidence, both positive and negative, available to determine whether all or some portion of the deferred tax assets will not be realized. Such evidence includes, but is not limited to, recent earnings history, projections of future income or loss, reversal patterns of existing taxable and deductible temporary differences, and tax planning strategies. We continue to evaluate the need for a valuation allowance on a quarterly basis.

Financial Instruments

Fair value measurements

Fair value is defined as the price that would be received to sell an asset or would be paid to transfer a liability in an orderly transaction between market participants on the measurement date. The fair value of financial assets and liabilities are measured on a recurring or non-recurring basis. Financial assets and liabilities measured on a recurring basis are those that are adjusted to fair value each time a financial statement is prepared. Financial assets and liabilities measured on a non-recurring basis are those that are adjusted to fair value when a significant event occurs.

We utilize valuation techniques that maximize the use of available market information and generally accepted valuation methodologies. We assess the inputs used to measure fair value using a three-tier hierarchy. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value, giving the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

The three levels of the fair value hierarchy are described below. We classify the inputs used to measure fair value into the following hierarchy:

Level 1	Unadjusted quoted prices in active markets for identical assets or liabilities.
Level 2	Unadjusted quoted prices in active markets for similar assets or liabilities, or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability.
Level 3	Unobservable inputs for the asset or liability.

The carrying amounts of certain financial instruments including cash, accounts receivable, accounts payable, and accrued liabilities approximate fair value due to their short maturities. Based on borrowing rates currently available to us for loans with similar terms, the carrying value of borrowings under our revolving credit facilities also approximates fair value.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. In determining the appropriate levels, we perform a detailed analysis of the assets and liabilities whose fair value is measured on a recurring basis. We review and reassess the fair value hierarchy classifications on a quarterly basis. Changes from one quarter to the next related to the observability of inputs in a fair value measurement may result in a reclassification between fair value hierarchy levels. There were no reclassifications for all periods presented.

Long-lived assets

Property and equipment

Property and equipment are stated at cost and include expenditures for additions and major improvements. Expenditures for repairs and maintenance are charged to operations as incurred. We use the straight-line method of depreciation over the estimated useful lives of the related assets (generally two to 15 years) for financial reporting purposes. Accelerated methods of depreciation are used for federal income tax purposes. When assets are sold or otherwise disposed of, the cost and accumulated depreciation are removed from the accounts and any gain or loss is reflected in the Consolidated Statements of Operations. Refer to Note 6, "Property and Equipment," for additional information.

Impairment of Long-lived assets

Long-lived assets are reviewed for impairment whenever events or circumstances indicate the carrying amount may not be recoverable. Events or circumstances that would result in an impairment review primarily include operations reporting losses, a significant change in the use of an asset, or the planned disposal or sale of the asset. The asset would be considered impaired when the future net undiscounted cash flows generated by the asset are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value of the asset exceeds its fair value, as determined by quoted market prices (if available) or the present value of expected future cash flows.

Refer to Note 6, 5, “Property and Equipment,” for additional information.

Leases

Under the new The Company determines if an arrangement is a lease standard, ASC 842, Leases (“Topic 842”), both operating and finance lease are capitalized on the balance sheet. at its inception. A contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. A period of time may be described in terms of the amount of use of an identified asset. An operating lease is a contract that permits the use of an asset without transferring

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the ownership rights of said asset. A finance lease is a contract that permits the use of an asset Right-of-use (“ROU”) assets and transfers ownership after liabilities are recognized at the lease period is complete, and commencement date based on the lessor meets all other contract obligations. The leased asset is amortized present value of lease payments over the life lease term. We use our estimated incremental borrowing rate in determining the present value of lease payments considering the term of the lease, contract. which is derived from information available at the lease commencement date. The lease term includes renewal options when it is reasonably certain that the option will be exercised and excludes termination options.

Lease expense for these leases is recognized on a straight-line basis over the lease term. We have elected not to recognize ROU assets and lease liabilities that arise from short-term leases for any class of underlying asset. Operating leases are included in Operating lease, right-of-use-assets, Operating lease liabilities, and Long-term operating lease liabilities in our Consolidated Balance Sheets.

Product development

Product development expenses include salaries, contractor and consulting fees, supplies and materials, as well as costs related to other overhead items such as depreciation and facilities costs. Research and development costs are expensed as they are incurred. We recognized $0.6 million and $1.5 million for the years ended December 31, 2023 and 2022, respectively.

Net loss per share

Basic loss per share is computed by dividing net loss available to common stockholders by the weighted average number of shares of common stock outstanding during the period, excluding the effects of any potentially dilutive securities. Diluted loss per share gives effect to all dilutive potential shares of common stock outstanding during the period. Dilutive potential shares of common stock consist of incremental shares upon the exercise of stock options, warrants and convertible securities, unless the effect would be anti-dilutive.

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The following table presents a reconciliation of basic and diluted loss per share computations (in thousands, except per share amounts):

			For the years ended December 31,			For the years ended December 31,
			2022		2021	
Numerator:	Numerator:					
Numerator:						
Numerator:						
Net loss						
Net loss						
Net loss	Net loss	$	(10,279)	$	(7,886)	
Denominator:	Denominator:					
Basic and diluted weighted average common shares outstanding			8,110		4,561	
Denominator:						
Denominator:						
Basic and diluted weighted average common shares outstanding*						
Basic and diluted weighted average common shares outstanding*						
Basic and diluted weighted average common shares outstanding*						

* Shares outstanding for prior periods have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

As a result of the net loss we incurred for the year ended December 31, 2023, convertible preferred stock representing approximately 25 thousand shares of common stock were excluded from the basic loss per share calculation because their inclusion would have been anti-dilutive.

As a result of the net loss we incurred for the year ended December 31, 2022, convertible preferred stock representing approximately 175 25 thousand shares of common stock were excluded from the basic loss per share calculation because their inclusion would have been anti-dilutive. We determined the exercise price of the June 2022 Pre-Funded Warrants to be nominal and, as such, have considered the approximately 1,378,848 196,978 shares underlying them, for the purposes of calculating basic EPS. The June 2022 Pre-Funded Warrants were all exercised in July 2022.

As a result of the net loss we incurred for the year ended December 31, 2021, options, warrants and convertible preferred stock representing approximately 51 thousand, 47 thousand and 260 thousand shares of common stock, respectively, were excluded from the basic loss per share calculation because their inclusion would have been anti-dilutive. We determined the exercise price of the December 2021 Pre-Funded Warrants to be nominal and, as such, have considered the approximately 85 thousand shares underlying them to be outstanding effective December 31, 2021, for the purposes of calculating basic EPS.

Stock-based compensation

We recognize compensation expense based on the estimated grant date fair value under the authoritative guidance. Management applies the Black-Scholes option pricing model to value stock options issued to employees and directors and applies judgment in estimating key assumptions that are important elements of the model in expense recognition. These elements include the expected life of the option, the expected stock-price volatility, and expected forfeiture rates. Compensation expense is generally amortized on a straight-line basis over the requisite service period, which is generally the vesting period.

See Note 10, 9, “Stockholders’ Equity,” for additional information. Common stock, stock options, and warrants issued to non-employees that are not part of an equity offering are accounted for under the applicable guidance under Accounting Standards Codification (“ASC”) 505-50, “Equity-Based Payments to Non-Employees,” and are generally re-measured at each reporting date until the awards vest.

Advertising expenses

Advertising expenses are charged to operations in the period incurred. They consist of costs for the placement of our advertisements in various media and the costs of demos provided to potential distributors of our products. Advertising expenses were $0.3 million $6 thousand and $0.4 million $0.3 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively.

Product warranties

We warrant our commercial and MMM LED products and controls for periods generally ranging from five to ten years. One product was sold in 2020 with a twenty year warranty. Warranty settlement costs consist of actual amounts expensed for warranty, which are largely a result of the cost of replacement products or rework services provided to our customers. A liability for the estimated future costs under product warranties is maintained for products under warranty based on the actual claims incurred to date and the estimated nature, frequency, and costs of future claims. One contract that expired in 2022 held a warranty of 10 years and this is driving drove the downward adjustment to existing warranties. These estimates are inherently uncertain and changes to our historical or projected experience may cause material changes to our warranty reserves in the future. We continuously review the assumptions related to the adequacy of our warranty reserve, including product failure rates, and make adjustments to the existing warranty liability when there are changes to these estimates or the underlying replacement product costs, or the warranty period expires.

The following table summarizes warranty activity for the periods presented (in thousands):

		At December 31,		At December 31,	
		2022	2021	2023	2022
Balance at the beginning of the year	Balance at the beginning of the year	$295	$227		
Accruals for warranties issued	Accruals for warranties issued	24	(41)		
Adjustments to existing warranties	Adjustments to existing warranties	(136)	47		

Settlements made during the year (in kind)	—	62
Accrued warranty reserve at the end of the period	$183	$295
Accrued warranty reserve at the end of the year		
Accrued warranty reserve at the end of the year		
Accrued warranty reserve at the end of the year		

Recently issued accounting pronouncements standards

On November 27, 2023, the Financial Accounting Standards Board ("FASB") issued ASU 2023-07, *Segment Reporting-Improvements to Reportable Segment Disclosures*, which requires public entities to provide disclosures of significant segment expenses and other segment items. The guidance requires public entities to provide in interim periods all disclosures about a reportable segment's profit or loss and assets that are currently required annually and also applies to public entities with a single reportable segment. Entities are permitted to disclose more than one measure of a segment's profit or loss if such measures are used by the chief operating decision-maker to allocate resources and assess performance, as long as at least one of those measures is determined in a way that is most consistent with the measurement principles used to measure the corresponding amounts in the consolidated financial statements. The guidance is applied retrospectively to all periods presented in financial statements, unless it is impracticable, and is effective for fiscal years beginning after December 15, 2023, and for interim periods beginning after December 15, 2024. Early adoption is permitted. This standard will only impact disclosures and will be adopted by the Company on January 1, 2024. We are currently evaluating the impact this ASU will have on our financial statements and disclosures.

On December 14, 2023, the FASB issued ASU 2023-09, *Improvements to Income Tax Disclosures*, which establishes new income tax disclosure requirements in addition to modifying and eliminating certain existing requirements. Under the new guidance, entities must consistently categorize and provide greater disaggregation of information in the rate reconciliation. They must also further disaggregate income taxes paid. The standard is intended to benefit investors by providing more detailed income tax disclosures that would be useful in making capital allocation decisions. The guidance applies to all entities subject to income taxes and is effective for annual periods beginning after December 15, 2024. The guidance will be applied on a prospective basis with the option to apply the standard retrospectively. Early adoption is permitted. The Company plans to adopt this standard on January 1, 2025. We are currently evaluating the impact this ASU will have on our financial statements and disclosures.

Recently adopted accounting standards

In June 2016, the FASB issued ASU Accounting Standard Update No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which significantly changes the accounting for credit losses on instruments within its scope. The new guidance introduces an approach based on expected losses to estimate credit losses on certain financial instruments, including trade receivables, and requires an entity to recognize an allowance based on its estimate of expected credit losses rather than incurred losses. This For smaller reporting companies, this standard is became effective for interim and annual periods starting after December 15, 2022, and generally requires adoption has been adopted by the Company. We adopted this guidance during the first quarter of 2023, and it did not have a material impact on a modified retrospective basis. We are in the process our consolidated balance sheets or results of evaluating the impact of the standard. operations.

Certain risks and concentrations

Historically, our products were sold through a direct sales model, which included a combination of direct sales employees, electrical and lighting contractors, and distributors. From time to time, we have utilized a third-party accounts receivable insurance and credit assessment company. Although we maintain allowances for potential credit losses that we believe to be adequate, a payment default on a significant sale could materially and adversely affect our operating results and financial condition, although we have mitigated this risk somewhat through the accounts receivable insurance program.

We have certain customers whose net sales individually represented 10% or more of our total net sales, or whose net trade accounts receivable balance individually represented 10% or more of our total net trade accounts receivable as follows:

- In 2023, two customers accounted for 48% of net sales, with sales to our primary distributor for the U.S. Navy accounting for approximately 35% and sales to a shipbuilder for the U.S. Navy accounting for approximately 13%. In 2022, two customers accounted for 27% of net sales, with sales to our primary distributor for the U.S. Navy accounting for approximately 13% and sales to a regional commercial lighting retrofit company accounting for approximately 14% of net sales. When sales

- At December 31, 2023, one distributor to our primary distributor for the U.S. Navy are Department of Defense accounted for 74% of our net trade accounts receivable, when combined with sales our net trade accounts receivable to shipbuilders for the U.S. Navy, total net sales of products for the accounts

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receivable related to U.S. Navy comprised approximately 30% sales is 78% of net sales for the same period. In 2021, two customers accounted for 43% of net sales, with sales to our primary distributor for the U.S. Navy accounting for approximately 30% and sales to a regional commercial lighting retrofit company accounting for approximately 13% of net sales. When sales to our primary distributor for the U.S. Navy are combined with sales to shipbuilders for the U.S. Navy, total net sales of products for the U.S. Navy comprised approximately 38% of net sales for the same period.

- accounts receivable. At December 31, 2022, a distributor to the U.S. Department of Defense accounted for 25% of our net trade accounts receivable, when combined with our net trade accounts receivable to shipbuilders for the U.S. Navy, total net accounts receivable related to U.S. Navy sales is 30% of total net accounts receivable. At December 31, 2021, a distributor to the U.S. Department of Defense accounted for 20% of our net trade accounts receivable and a shipbuilder for the U.S. Navy accounted for 36% of our net trade accounts receivable.

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We require substantial amounts of purchased materials from selected vendors. With specific materials, all of our purchases are from a single vendor. The availability and costs of materials may be subject to change due to, among other things, new laws or regulations, suppliers' allocation to other purchasers, interruptions in production by suppliers, global health issues such as the COVID-19 pandemic, and changes in exchange rates and worldwide price and demand levels. Our inability to obtain adequate supplies of materials for our products at favorable prices could have a material adverse effect on our business, financial position, or results of operations by decreasing our profit margins and by hindering our ability to deliver products to our customers on a timely basis. Additionally, certain vendors require advance deposits prior to the fulfillment of orders. Deposits paid on unfulfilled orders totaled $0.8 million and $0.6 million at December 31, 2023 and $0.7 million at December 31, 2022 and 2021, 2022, respectively.

We have certain vendors who individually represented 10% or more of our total expenditures, or whose net trade accounts payable balance individually represented 10% or more of our total net trade accounts payable, as follows:

- One offshore supplier, a related party, accounted for approximately 28.0% of our total expenditures for the twelve months ended December 31, 2023. At December 31, 2023, two offshore suppliers accounted for approximately 16% and 57% (the latter a related party, see Note 13 "Related Party Transactions") of our trade accounts payable balance.
- One offshore supplier accounted for approximately 16% of our total expenditures for the twelve months ended December 31, 2022. At December 31, 2022, this same offshore supplier accounted for approximately 36% of our trade accounts payable balance.

- One offshore supplier accounted for approximately 29% of our total expenditures for the twelve months ended December 31, 2021. At December 31, 2021, this same offshore supplier accounted for approximately 60% of our trade accounts payable balance.

NOTE 3. LEASES

The Company leases certain equipment, manufacturing, warehouse and office space under non-cancellable operating leases expiring with expirations through 2027 under which it is responsible for related maintenance, taxes and insurance. The Company had one equipment finance lease on a forklift containing a bargain purchase option, which was exercised in July 2022. The lease term consists of the non-cancellable period of the lease, periods covered by options, to extend the lease if the Company is reasonably certain to exercise the option, and periods covered by an option to terminate the lease if the Company is reasonably certain not to exercise the option. As of January 21, 2021 March 25, 2022, the terms of one of the equipment operating leases was extended through 2026. Additionally, as of March 25, 2022, the Company extended its headquarters our real estate operating lease for manufacturing, warehouse have been modified beginning July 1, 2022 and office space commencing July 1, 2022 to reflect a smaller footprint at reduced costs. extended through 2027. In accordance with "Topic ASC 842, *Leases* ("ASC 842"), as a result of the extensions, the related lease liabilities were liability was remeasured and the right-of-use assets and corresponding lease liabilities were asset was adjusted for each lease at the time of modification. The present value of the lease obligation obligations for the lease was calculated using an incremental borrowing rate of 15.93% for the equipment lease and 16.96% for the real estate lease,, which was the Company's blended borrowing rate rates (including interest, annual facility fees, collateral management fees, bank fees and other miscellaneous lender fees) on its revolving lines of credit. The present value of the remaining lease obligation was calculated using an incremental borrowing rate of 7.25% (which excludes the annual facility fee credit with Crossroads Financial Group, LLC (as described below in Note 7, "Debt") and other lender fees), which was the Company's borrowing rate on its revolving lines of credit at the time the leases were entered into. Factors Southwest L.L.C. (as described below in Note 7, "Debt"). The weighted average remaining lease term for the operating leases is 4.4 3.5 years.

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Components of the operating restructured and finance lease costs recognized in net loss were as follows (in thousands):

	For the years ended December 31,	
Components of leases recognized in net income (loss):	**2022**	**2021**
Operating lease cost (income)		
Sub-lease income	$ (90)	$ (112)
Lease cost	501	558
Operating lease cost, net	411	446

Restructured lease cost (income)		
Sub-lease income	—	(136)
Lease cost	—	110
Restructured lease income, net	—	(26)
Finance lease cost		
Interest of lease liabilities	1	—
Finance lease cost, net	1	—
Total lease cost, net	$ 412	$ 420

	For the years ended December 31,	
	2023	**2022**
Sub-lease income	$ —	$ (90)
Lease cost	461	501
Total lease cost, net	$ 461	$ 411

Supplemental Consolidated Balance Sheet information related to the Company's operating and finance leases are as follows (in thousands):

	At December 31,	
	2022	**2021**
Operating Leases		
Operating lease right-of-use assets	$ 1,180	$ 292
Operating lease liabilities	1,227	351
Finance Leases		
Property and equipment	13	13
Allowances for depreciation	(13)	(12)
Finance lease assets, net	—	1
Finance lease liabilities	—	1
Total finance lease liabilities	$ —	$ 1

	At December 31,	
	2023	**2022**
Operating Leases		
Operating lease right-of-use assets	$ 899	$ 1,180
Operating lease liabilities	1,021	1,227

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Future minimum lease payments required under operating and finance leases for each of the years 2023 2024 through 2027 are as follows (in thousands):

		Operating Leases
Jan 2023 to Dec 2023	$	386
Jan 2024 to Dec 2024		379
Jan 2025 to Dec 2025		385
Jan 2026 to Dec 2026		390
Jan 2027 to Dec 2027		197
Total future undiscounted lease payments		1,737
Less imputed interest		(510)
Total lease obligations	$	1,227

		Operating Leases
2024		379
2025		385
2026		390
2027		197
Total future undiscounted lease payments		1,351
Less imputed interest		(330)
Total lease obligations	$	1,021

Supplemental cash flow information related to leases was as follows (in thousands):

	Years ended December 31,	
	Years ended December 31,	
	Years ended December 31,	
	Years ended December 31,	
	2022	2021
Supplemental Cash Flow Information: Supplemental Cash Flow Information:		
Supplemental Cash Flow Information:		
Supplemental Cash Flow Information:		
Cash paid, net, for amounts included in the measurement of lease liabilities:		
Cash paid, net, for amounts included in the measurement of lease liabilities:		

Cash paid, net, for amounts included in the measurement of lease liabilities:	Cash paid, net, for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	Operating cash flows from operating leases	$	423	$	532
Operating cash flows from restructured leases		$	—	$	35
Operating cash flows from operating leases					
Operating cash flows from operating leases					
Financing cash flows from finance leases	Financing cash flows from finance leases	$	1	$	3
Financing cash flows from finance leases					
Financing cash flows from finance leases					

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NOTE 4.RESTRUCTURING

Due to our financial performance in 2022 and 2021, including net losses of $10.3 million and $7.9 million, respectively, and total cash used in operating activities of $6.7 million and $9.8 million, respectively, we determined that substantial doubt about our ability to continue as a going concern continues to exist at December 31, 2022.

As a result of the restructuring actions and initiatives described in Note 1, we have tailored our operating expenses to be more in line with our expected sales volumes, however, we continue to incur losses and have a substantial accumulated deficit, and substantial doubt about our ability to continue as a going concern continues to exist at December 31, 2022.

Additionally, global supply chain and logistics constraints are impacting our inventory purchasing strategy, as we seek to manage both shortages of available components and longer lead times in obtaining components while balancing the development and implementation of an inventory reduction plan. Disruptions in global logistics networks are also impacting our lead times and ability to efficiently and cost-effectively transport products from our third-party suppliers to our facility. As a result, we will continue to review and pursue selected external funding sources to ensure adequate financial resources to execute across the timelines required to achieve these objectives including, but not limited to, the following:

- obtaining financing from traditional or non-traditional investment capital organizations or individuals;
- obtaining funding from the sale of our common stock or other equity or debt instruments; and
- obtaining debt financing with lending terms that more closely match our business model and capital needs.

There can be no assurance that we will obtain funding on acceptable terms, in a timely fashion, or at all. Obtaining additional funding contains risks, including:

- additional equity financing may not be available to us on satisfactory terms, particularly in light of the current price of our common stock, and any equity we are able to issue could lead to dilution for current stockholders and have rights, preferences and privileges senior to our common stock;
- loans or other debt instruments may have terms or conditions, such as interest rate, restrictive covenants, conversion features, refinancing demands, and control or revocation provisions, which are not acceptable to management or our Board of Directors; and

- the current environment in the capital markets and volatile interest rates, combined with our capital constraints, may prevent us from being able to obtain adequate debt financing.

Along with the new additions to our Board of Directors, we hired a permanent Chief Executive Officer in September 2022, following a period of interim leadership by our Lead Independent Director after the departure of our previous Chief Executive Officer in February 2022 and Chief Financial Officer and Chief Operating Officer in May 2022.

Considering both quantitative and qualitative information, we continue to believe that the combination of our plans to ensure adequate external funding, timely re-organizational actions, current financial position, liquid resources, obligations due or anticipated within the next year, development and implementation of an excess inventory reduction plan, plans and initiatives in our research and development, product development and sales and marketing, and development of potential channel partnerships, if adequately executed, could provide us with an ability to finance our operations through the next twelve months and may mitigate the substantial doubt about our ability to continue as a going concern.

On December 21, 2021, we received a letter from the Listing Qualifications staff (the “Staff”) of The Nasdaq Stock Market (“Nasdaq”) notifying us that, as a result of the resignation of a director, as previously disclosed, from the Board of Directors and the Audit and Finance Committee, we were not in compliance with Nasdaq Listing Rule 5605, which requires that our Audit and Finance Committee be comprised of at least three directors, all of whom are independent pursuant to the rules of Nasdaq and applicable law. The notification letter had no immediate effect on our listing on the Nasdaq Capital Market. The letter further provided that, pursuant to Nasdaq Listing Rule 5605(c)(4), we were entitled to a cure period to regain compliance with Nasdaq Listing Rule 5605. On February 24, 2022, we announced the appointment of two additional independent directors, one of which, was appointed to fill the vacancy on the Audit and Finance Committee, bringing us into compliance with Nasdaq Listing Rule 5605.

On August 23, 2022, we received a letter from the Staff notifying us that we are not in compliance with the requirement to maintain a minimum closing bid price of $1.00 per share, as set forth in Nasdaq Listing Rule 5550(a)(2) (the “Bid Price Rule”), because the closing bid price for our common stock was below the minimum $1.00 per share for 30 consecutive business days. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided an initial period of 180 calendar days, or until February 20, 2023, to regain compliance with the Bid Price Rule. During the initial compliance period, our common stock continued to trade on the Nasdaq Capital Market, but did not satisfy the Bid Price Rule. On February 21, 2023, we received written notification (the “Notification”) from the Staff stating that we had not regained compliance with the Bid Price Rule and

were ineligible to obtain a second 180 calendar day period to regain compliance because we did not meet the Nasdaq Capital Market’s minimum $5,000,000 Stockholders’ Equity initial listing requirement as of September 30, 2022. Pursuant to the Notification, our common stock is subject to delisting from Nasdaq pending our opportunity to request a hearing before the Nasdaq Hearings Panel (the “Panel”). The Company intends to diligently pursue an appeal of the Notification before the Panel and regain compliance with the Bid Price Rule. Under Nasdaq rules, the delisting of our common stock will be stayed during the pendency of the appeal and during such time, our common stock will continue to be listed on Nasdaq. If we had not requested a hearing before the Panel by February 28, 2023, our common stock would have been scheduled for delisting at the opening of business on March 2, 2023. On February 24, 2023, we submitted our request for an appeal before the Panel. There can be no assurance that such appeal will be successful or that we will be able to regain compliance with the Bid Price Rule or maintain compliance with other Nasdaq listing requirements. If our appeal is denied or if we fail to regain compliance with Nasdaq’s continued listing standards during any period granted by the Panel, our common stock will be subject to delisting from Nasdaq.

On November 16, 2022, we received a letter from the Staff notifying us that we were no longer in compliance with Nasdaq Listing Rule 5550(b)(1), which requires listed companies to maintain stockholders’ equity of at least $2.5 million if they do not meet the alternative compliance standards relating to the market value of listed securities or net income from continuing operations (the “Minimum Stockholders’ Equity Rule”). Our Form 10-Q for the Quarterly Period Ended September 30, 2022 filed on November 10, 2022 reflected that our stockholders’ equity as of September 30, 2022 was $1.5 million. Based on our timely submission of our plan to regain compliance, Nasdaq granted us an extension through May 15, 2023 to regain compliance with the Minimum Stockholders’ Equity Rule.

NOTE 5. INVENTORIES

Inventories are stated at the lower of standard cost (which approximates actual cost determined using the first-in, first-out cost method) or net realizable value and consists consist of the following (in thousands):

		At December 31,		At December 31,	
		2022	2021	2023	2022
Raw materials	Raw materials	$3,347	$3,882		
Finished goods	Finished goods	4,656	7,034		
Reserve for excess, obsolete, and slow-moving inventories	Reserve for excess, obsolete, and slow-moving inventories	(2,527)	(3,050)		
Inventories, net	**Inventories, net**	$5,476	$7,866		

The following is a roll-forward of the reserves for excess, obsolete, and slow-moving inventories (in thousands):

	At December 31, 2022	At December 31, 2021
Beginning balance	$ (3,050)	$ (2,894)
Accrual	(312)	(281)
Reduction due to sold inventory	323	125
Write-off for disposed inventory	512	—
Reserves for excess, obsolete, and slow-moving inventories	$ (2,527)	$ (3,050)

As part of our expense reduction initiatives, we significantly decreased our warehouse space beginning in the third quarter of 2022. In connection with the space reduction, in the second quarter of 2022, we began disposing of a substantial portion of our excess and obsolete commercial finished goods inventory that was highly reserved, which effort continued into the fourth quarter of 2022. The scraping of inventory primarily drove the decrease in excess inventory reserves of $0.5 million as compared to 2021. We also focused on selling down inventory on hand and limited inventory and component purchases to top selling products with expected higher turnover. This resulted in a net decrease of our gross inventory levels of $2.9 million.

We experienced significant global supply chain and logistics constraints during 2021, which impacted our inventory purchasing strategy, leading to a buildup of inventory and inventory components in an effort to manage both shortages of available components and longer lead times in obtaining components. This resulted in a net increase of our gross inventory levels of $2.4 million and excess inventory reserves of $0.2 million as compared to 2020.

	At December 31,

	2023	2022
Beginning balance	$ (2,527)	$ (3,050)
Accrual	(404)	(312)
Reduction due to sold inventory	378	323
Write-off for disposed inventory	—	512
Reserves for excess, obsolete, and slow-moving inventories	$ (2,553)	$ (2,527)

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ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 6. 5. PROPERTY AND EQUIPMENT

Property and equipment are stated at cost and depreciated using the straight-line method over the estimated useful lives of the related assets and consist of the following (in thousands):

		At December 31,		At December 31,	
		2022	2021	2023	2022
Equipment (useful life 3 - 15 years)	Equipment (useful life 3 - 15 years)	$1,061	$1,308		
Tooling (useful life 2 - 5 years)	Tooling (useful life 2 - 5 years)	190	384		
Vehicles (useful life 5 years)	Vehicles (useful life 5 years)	—	83		
Furniture and fixtures (useful life 5 years)		—	86		
Computer software (useful life 3 years)		—	1,194		
Leasehold improvements (the shorter of useful life or lease life)	Leasehold improvements (the shorter of useful life or lease life)	141	169		
Finance lease right-of-use asset		—	13		
UV - Robots (useful life 5 years)		—	105		

Leasehold improvements (the shorter of useful life or lease life)

Leasehold improvements (the shorter of useful life or lease life)

Construction in progress

Construction in progress

Construction in progress	Construction in progress	—	135
Property and equipment at cost	**Property and equipment at cost**	1,392	3,477
Less: accumulated depreciation	Less: accumulated depreciation	(1,316)	(2,802)
Property and equipment, net	**Property and equipment, net**	$ 76	$ 675

Depreciation expense was $0.2 million $33 thousand and $159 thousand for both of the years ended December 31, 2022 December 31, 2023 and 2021. 2022, respectively. During the third quarter of 2022 it was determined that the mUVeTM ultraviolet-C light disinfection robots were no longer of use and the net book value of $76 thousand was recorded as a loss on impairment of fixed assets. During the fourth quarter of 2022, impairment charges totaling $258 $262 thousand were recorded, which primarily relates to other assets disposed or otherwise abandoned following a review by management. Impairment charges were based on level 3 inputs, including estimated residual or sale value to market participants, in determining fair value. As impaired assets relate primarily to the Company and/or its discontinued products, management determined fair value was insignificant. For the year ended December 31, 2022, the Company recognized a loss of $334 $338 thousand on the impairment of fixed assets. No such loss was recorded during the year ended December 31, 2021 December 31, 2023.

NOTE 7. 6. PREPAID AND OTHER CURRENT ASSETS

Prepaid and other current assets consisted of the following (in thousands):

		At December 31,		**At December 31,**	
		2022	**2021**	**2023**	**2022**
Prepaid insurance	Prepaid insurance	$ 63	$131		
Prepaid expenses	Prepaid expenses	130	253		
Prepaid rent	Prepaid rent	39	74		

Short-term deposits - non-inventory		—	18
Other			
Other			
Other	Other	—	3
Total prepaid and other current assets	**Total prepaid and other current assets**	$232	479

NOTE 8. 7. DEBT

Debt consisted of the following (in thousands):

	At December 31,	
	2023	**2022**
Credit facilities, net	$ —	$ 1,447
Promissory notes - related parties	—	814
Streeterville notes, net	1,323	2,618
Advanced capital contribution	450	—
Total	$ 1,773	$ 4,879

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Credit Facilities

On August 11, 2020, we entered into two debt financing arrangements (together, the "Credit Facilities") that allowed for expanded borrowing capacity at a lower blended borrowing cost. We paid off and terminated the Credit Facilities during the year ended December 31, 2023.

Inventory Facility with Crossroads

The first arrangement is an inventory financing facility (the "Inventory Facility") pursuant to the Loan and Security Agreement (the "Inventory Loan Agreement") between the Company and Crossroads Financial Group, LLC, a North Carolina limited liability company (the "IF Lender" ("Crossroads"). Borrowings under the original Inventory Facility are were permitted up to the lower of (i) $3.0 million, which amount was subsequently increased to $3.5 million in April 2022 and reduced to $500 thousand in January 2023 as described below, 2021, and (ii) a borrowing base determined from time to time based on the value of the Company's eligible inventory, valued at 75% of inventory costs or 85% of the inventory net orderly liquidation value, less the availability reserves.

On January 18, 2023, the Company and the IF Lender Crossroads entered into an

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amendment to the Inventory Loan Agreement (the “Crossroads Amendment”) to restructure and pay down the Inventory Facility. Please refer The Crossroads Amendment provided that the Company makes payments to Note 15, “Subsequent Events” for further detail. As of December 31, 2022, reduce the terms of the Inventory Facility were as follows. The outstanding indebtedness obligations under the Inventory Facility accrues at an annual rate equal of $750 thousand by January 20, 2023 and $250 thousand by February 15, 2023. The Company also agreed to make monthly payments of approximately $40 thousand towards the greater of (i) 5.75% and (ii) 4.00% plus the three-month LIBOR rate (4.77% and 0.21% at December 31, 2022 and 2021, respectively) and is also subject to a service fee of 1% per month. The annualized interest rate at December 31, 2022 and 2021, which includes interest fees, the annual facility fee, bank fees and other miscellaneous lender fees, was 25.5% and 22.4%, respectively. The Inventory Facility’s interest and service fees combined amount is subject to a minimum monthly fee of $18 thousand. There would be no breakage fee for the Company for remaining outstanding obligations under the Inventory Facility, if and to reduce the maximum amount that may be available to the Company were to refinance it with an American Bankers Association (“ABA”) equivalent institution. The under the Inventory Facility is secured by substantially all of the present and future assets of the Company and is also governed by an intercreditor agreement among the Company, the IF Lender and the RF Lender (defined below). The Inventory Facility would have matured on August 11, 2023, from $3.5 million to $500 thousand, subject to early termination upon 90 days’ notice and otherwise the borrowing base as set forth in accordance with the terms of the Inventory Loan Agreement.

Pursuant to the Crossroads Amendment, Crossroads and the Company also agreed to extend the Inventory Facility’s current term through December 31, 2023, while eliminating the minimum borrowing amount and unused line fees and reducing the monthly service fee to a lower, fixed amount. The Company also agreed to a slightly increased interest rate, which was more than offset by the reduction in the monthly service fees. Pursuant to the Crossroads Amendment, the interest rate on borrowings under the Inventory Facility per annum was a rate equal to (i) the Three-Month LIBOR rate plus 5.5% or (ii) at Crossroads’ discretion, an alternative reference rate, SOFR (Secured Overnight Financing Rate), plus 6.00%. The Inventory Facility was paid in full on September 24, 2023, using the interest rate of 11.16% per annum, and the Company wrote off the difference of $40 thousand between the final invoice amount and the carrying value of the debt, which was recorded as interest income.

Receivables Facility with FSW Funding

The second arrangement is Credit Facility was a receivables financing facility (the “Receivables Facility”) pursuant to the Loan and Security Agreement (the “Receivables Loan Agreement”) between the Company and Factors Southwest L.L.C. (d/b/a FSW Funding), an Arizona limited liability company (the “RF Lender”). Borrowings under the Receivables Facility are were permitted up to the lower of (i) $2.5 million or $2.5 million and (ii) a borrowing base determined from time to time based on the value of the Company’s eligible accounts receivable, valued at 90% of the face value of such accounts receivable, less availability reserves, if any.

On February 7, 2023, the Company completed and the termination of its RF Lender agreed to terminate the Receivables Facility. Please refer to Note 15, “Subsequent Events” for further detail.

As of December 31, 2022, the terms of the Receivables Facility were as follows. Interest on All outstanding indebtedness amounts under the Receivables Facility accrues at an annual rate equal had been repaid prior to (i) the highest prime rate announced from time to time by the Wall Street Journal (7.50% termination, and 3.25% at December 31, 2022 and 2021, respectively) plus (ii) 2%. At December 31, 2022 and 2021, the annualized interest rate, which includes interest there were no prepayment fees and the annual facility fee, was 10.1% and 8.0%, respectively. The annualized interest rate on the collateral management fee was 6.3% and 5.9% at December 31, 2022 and 2021, respectively. in connection with termination. The Receivables Facility is also was secured by substantially all of the present and future assets of the Company and is also governed by was subject to an intercreditor agreement among the Company, the IF Lender and the RF Lender. A $25 thousand, or 1%, facility fee with Crossroads, which intercreditor agreement was charged at closing. There would be no breakage fee for the Company for the Receivables Facility if the Company were to refinance it with an ABA equivalent institution. also terminated.

Borrowings under the Inventory Facility were $1.4 million and $1.2 million was $1.4 million at December 31, 2022 and 2021, respectively. . Borrowings under the Receivables Facility were less than $0.1 million and $1.0 million was $0.1 million at December 31, 2022 and 2021, respectively. Borrowings. These facilities are recorded in the Consolidated Balance Sheets as of December 31, 2022 as a current liability under the Credit Facilities caption "Credit line borrowings."

Promissory Notes-Related Parties

During the third and fourth quarters of the year ended December 31, 2022, we entered into short-term unsecured promissory notes (the "2022 Promissory Notes") with Mei-Yun (Gina) Huang, Chiao Chieh (Jay) Huang, and Tingyu Lin. Ms. Gina Huang is a member of the Board of Directors and Mr. Jay Huang is our Chief Executive Officer ("CEO") and a former member of the Board of Directors. The total liability for the 2022 Promissory Notes was $1.5 million at December 31, 2022. All of the 2022 Promissory Notes were exchanged for common stock on January 17, 2023. See Note 9, "Stockholders' Equity."

The following summarizes the 2022 Promissory Notes at December 31, 2022:

	At December 31, 2022							
	G. Huang	**J. Huang**	**J. Huang**	**G. Huang**	**J. Huang**	**J. Huang**	**T. Lin**	**Total**
Date entered	September 16, 2022	October 25, 2022	November 4, 2022	November 9, 2022	December 6, 2022	December 21, 2022	December 31, 2022	
Term	9 months	9 months	9 months	9 months	9 months	9 months	9 months	
Principal amount	$450,000	$50,000	$250,000	$350,000	$200,000	$100,000	$50,000	$1,450,000
Maturity date	June 16, 2023	July 25, 2023	August 4, 2023	August 9, 2023	September 6, 2023	September 21, 2023	September 30, 2023	
Interest rate	8 %	8 %	8 %	8 %	8 %	8 %	8 %	
Default interest rate	10 %	10 %	10 %	10 %	10 %	10 %	10 %	
Outstanding Amount	$460,455	$50,734	$253,123	$353,989	$201,096	$100,219	$50,011	$1,469,627

Streeterville Notes

<u>2022 Streeterville Note</u>

On April 21, 2022, we entered into a note purchase agreement (the "2022 Streeterville Note Purchase Agreement") with Streeterville Capital, LLC ("Streeterville") pursuant to which we sold and issued to Streeterville a promissory note in the principal amount of approximately $2.0 million (the "2022 Streeterville Note"). The 2022 Streeterville Note was issued with an original issue discount of $215 thousand and Streeterville paid a purchase price of approximately $1.8 million for the 2022 Streeterville Note, from which the Company paid $15 thousand to Streeterville for Streeterville's transaction expenses.

The 2022 Streeterville Note had an original maturity date of April 21, 2024, and accrues interest at 8% per annum, compounded daily, on the outstanding balance. On January 17, 2023, we agreed with Streeterville to restructure and pay down the 2022 Streeterville Note and extend its maturity date to December 1, 2024 (the "2022 Streeterville Note Amendment"). We agreed to make payments to reduce the outstanding amounts of the 2022 Streeterville Note of $500 thousand by January 20, 2023 and by $250 thousand by July 14, 2023. Beginning January 1, 2024, we agreed to make twelve monthly repayments of approximately $117 thousand each. We have the right to prepay any of the scheduled repayments at any time or from time to time without additional penalty or fees.

On March 31, 2023, the Company entered into an Exchange Agreement (the “March 2023 Exchange Agreement”) with Streeterville, pursuant to which we agreed to (i) partition from the 2022 Streeterville Note a new Promissory Note (the “March 2023 Partitioned Note”) in the original principal amount of $250 thousand (the “March 2023 Exchange Amount”), (ii) cause the outstanding balance of the 2022 Streeterville Note to be reduced by an amount equal to the March 2023 Exchange Amount, and (iii) exchange (the “March 2023 Exchange”) the March 2023 Partitioned Note for 71,715 shares of the Company’s common stock. The March 2023 Exchange was priced at-the-market under the Nasdaq rules and was effected pursuant to one or more exemptions from the registration requirements of the Securities Act of 1933, as amended (the “Securities Act”). There were no gross proceeds to the Company in respect of the March 2023 Exchange, provided that $125 thousand of the March 2023 Exchange Amount was applied toward the $250 thousand payment due on or before July 14, 2023 pursuant to the 2022 Streeterville Note Amendment, and $125 thousand was credited to satisfy the December 1, 2024 required payment.

The total liability for the 2022 Streeterville Note, net of discount and financing fees, was $1.3 million and $2.0 million at December 31, 2023 and 2022, respectively. In January 2024, we paid off the 2022 Streeterville Note in full. See Note 14 “Subsequent Events”.

Unamortized loan discount and debt issuance costs for Streeterville Notes were $36 thousand and $43 thousand at December 31, 2023 and 2022, respectively.

2021 Streeterville Note

On April 27, 2021, we entered into a note purchase agreement with Streeterville pursuant to which we sold and issued to Streeterville a promissory note in the principal amount of approximately $1.7 million (the “2021 Streeterville Note”). The 2021 Streeterville Note was issued with an original issue discount of $194 thousand and Streeterville paid a purchase price of $1.5 million for the 2021 Streeterville Note, after deduction of $15 thousand of Streeterville’s transaction expenses. The 2021 Streeterville Note had a maturity date of April 27, 2023, and accrued interest at 8% per annum, compounded daily, on the outstanding balance.

Beginning on November 1, 2021, Streeterville could require the Company to redeem up to $205 thousand of the 2021 Streeterville Note in any calendar month. The Company had the right on three occasions to defer all redemptions that Streeterville could otherwise require the Company to make during any calendar month. Each exercise of this deferral right by the Company increased the amount outstanding under the Streeterville Note by 1.5%. The Company exercised this right twice during the fourth quarter of 2021, once during the second quarter of 2022 and once during the third quarter of 2022. The Company and Streeterville agreed to exchange common stock, priced at-the-market, for the required redemptions in October 2022 and December 2022, totaling $305 thousand converted to equity. These exchanges satisfied the redemption notices provided by Streeterville, and following the December 2022 exchange, the 2021 Streeterville Note was paid in full. We wrote off $100 thousand in remaining original issue discount costs at that time.

Advanced capital contribution

In October 2023, an unrelated party agreed to subscribe the Company’s common stocks in the next round of private placement and transferred funds in the amount of $450 thousand. There is no restriction in use of the funds and the advanced capital contribution bears no interest. The terms of the next round of private placement are undetermined and the Company may return the funds on demand.

NOTE 8. COMMITMENTS AND CONTINGENCIES

Purchase Commitments

As of December 31, 2023, we had approximately $0.5 million in outstanding purchase commitments for inventory, of which the majority is expected to ship in the first quarter of 2024. We have 49% of the outstanding purchase commitments with a related party.

NOTE 9.STOCKHOLDERS' EQUITY

Common Stocks

1-for-7 Reverse Stock Split

At the Company's annual meeting of stockholders held on June 15, 2023, the Company's stockholders approved a form of the certificate of amendment ("Certificate of Amendment") to the Certificate of Incorporation and authorized our board of directors to amend the Certificate of Incorporation to effect a reverse stock split of the outstanding shares of the Company's common stock at a ratio ranging from any whole number of at least 1-for-2 and up to 1-for-10, with the exact ratio within the foregoing range to be determined by the board of directors in its sole discretion.

On June 15, 2023, our board of directors determined to set the reverse stock split at 1-for-7 (the "Split Ratio"). The Certificate of Amendment to our Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on June 15, 2023, with the reverse stock split becoming effective on June 16, 2023 (the "Effective Time"). At the Effective Time, every seven shares of common stock issued and outstanding automatically combined into one validly issued, fully paid and non-assessable share of common stock. No fractional shares were issued as a result of the reverse stock split. The fractional shares were settled in cash in an amount not material to the Company. The $0.0001 par value per share of common stock and other terms of the common stock were not affected by the reverse stock split. The number of authorized shares of common stock under the Certificate of Incorporation remained unchanged at 50,000,000 shares.

The current financial statements, as well as the prior-period financial statements have been retroactively adjusted to reflect the reverse stock split.

Our outstanding shares of restricted stock and shares underlying our options and warrants entitling the holders to purchase shares of common stock have been adjusted as a result of the reverse stock split, as required by the terms of these securities. Also, the number of shares reserved for issuance under our existing 2020 Stock Incentive Plan, as amended, and our 2013 Employee Stock Purchase Plan were reduced proportionately based on the Split Ratio. Preferred shares outstanding were not affected by the reverse stock split and as such, those shares have not been adjusted.

The reverse stock split was effected solely to increase the per share trading price of the common stock to satisfy the Bid Price Rule for continued listing on Nasdaq. The common stock began trading on Nasdaq on a split-adjusted basis at the opening of trading on June 19, 2023.

Private Placements

The Company entered the securities purchase agreements with certain investors and issued 2,870,964 (including debt-to-equity exchange noted in Note 7, "Debt") and 384,615 shares of common stock during the years ended December 31, 2023 and 2022, respectively.

<u>September 2023 Private Placement</u>

On September 29, 2023, the Company entered into a securities purchase agreement with certain purchasers, pursuant to which the Company agreed to issue and sell in a private placement an aggregate of 853,658 shares of the Company's common stock, par value $0.0001 per share, for a purchase price per share of $2.05 (the "September 2023 Private Placement").

Aggregate gross proceeds to the Company in respect of the September 2023 Private Placement were approximately $1.75 million. The September 2023 Private Placement closed on September 29, 2023.

June 2023 Private Placement

On June 29, 2023, the Company entered into a securities purchase agreement with certain purchasers, pursuant to which the Company agreed to issue and sell in a private placement an aggregate of 746,875 shares of the Company's common stock, par value $0.0001 per share, for a purchase price per share of $1.76 (the "June 2023 Private Placement"). One of the purchasers was Mr. Huang, the Company's CEO.

Aggregate gross proceeds to the Company in respect of the June 2023 Private Placement were approximately $1.3 million. The June 2023 Private Placement closed on June 29, 2023.

March 2023 Private Placements

On March 28, 2023, the Company entered into a securities purchase agreement with Mr. Chiao Chieh (Jay) Huang, pursuant to which the Company agreed to issue and sell, in a private placement (the "March 28, 2023 Private Placement"), 15,500 shares of the Company's common stock for a purchase price of $3.55 per share.

On March 30, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement (collectively with the March 28, 2023 Private Placement, the "March 2023 Private Placements"), 71,428 shares of the Company's common stock for a purchase price of $3.50 per share.

Aggregate gross proceeds to the Company in respect of the March 2023 Private Placements were $305 thousand. Each of the March 2023 Private Placements was priced at-the-market under the Nasdaq rules.

February 2023 Private Placement

On February 24, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement (the "February 2023 Private Placement"), 114,744 shares of the Company's common stock, for a purchase price of $3.49 per share.

Gross proceeds to the Company in respect of the February 2023 Private Placement were $400 thousand. The February 2023 Private Placement was priced at fair market value under the Nasdaq rules.

January 2023 Sander Electronics Private Placement

On January 17, 2023, the Company entered into a securities purchase agreement (the "Sander Purchase Agreement") with certain purchasers associated with Sander Electronics, Inc., pursuant to which the Company agreed to issue and sell in a private placement (the "Sander Private Placement") an aggregate of 778,017 shares of common stock for a purchase price per share of $3.51. Consideration for the transaction included exchange of approximately $657 thousand in the aggregate of outstanding amounts on previous short-term bridge financings, including the 2022 Promissory Notes issued to Mr. Huang, as described above in Note 7, "Debt".

Aggregate gross proceeds from the Sander Private Placement were approximately $2.1 million. The Sander Private Placement was priced at-the-market under the Nasdaq rules.

January 2023 Transactions with Mei Yun (Gina) Huang

On January 5, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement, 36,828 shares of the Company's common stock, for a purchase price of $2.72 per share. On January 10, 2023, the Company entered into a securities purchase agreement with Ms. Huang, pursuant to which the Company agreed to issue and sell, in a private placement, 46,543 shares of the Company's common stock for a purchase price of $3.22 per share.

Aggregate gross proceeds to the Company in respect of these private placements to Ms. Huang were $250 thousand. Each of the private placements to Ms. Huang was priced at fair market value under the Nasdaq rules.

On January 17, 2023, the Company and Ms. Huang entered into exchange agreements pursuant to which the Company and Ms. Huang agreed to exchange the approximately $817 thousand aggregate outstanding amounts on previous short-term bridge financings, including the 2022 Promissory Notes issued to Ms. Huang, as described above in Note 7, "Debt", for an aggregate of 207,371 shares of common stock at a price per share of $3.94. The exchanges were priced at fair market value under the Nasdaq rules.

June 2022 Private Placement

In June 2022, we completed a private placement (the "June 2022 Private Placement") with certain institutional investors for the sale of 187,637 shares of our common stock at a purchase price of $9.10 per share. We also sold to the same institutional investors (i) pre-funded warrants (the "June 2022 Pre-Funded Warrants") to purchase 196,978 shares of common stock at an exercise price of $0.0007 per share and (ii) warrants (collectively with the June 2022 Pre-Funded Warrants, the "June 2022 Warrants") to purchase up to an aggregate of 384,615 shares of common stock at an exercise price of $9.10 per share. In connection with the June 2022 Private Placement, we paid the placement agent commissions of $252 thousand, plus $35 thousand in expenses, and we also paid legal, accounting and other fees of $47 thousand. Total offering costs of $334 thousand have been presented as a reduction of additional paid-in capital and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2022. Net proceeds to us from the June 2022 Private Placement were approximately $3.2 million. We determined the exercise price of the June 2022 Pre-Funded Warrants to be nominal and, as such, have considered the 196,978 shares underlying them to be outstanding effective June 7, 2022, for purposes of calculating net loss per share.

In July 2022, all of the June 2022 Pre-Funded Warrants were exercised. As of December 31, 2023, June 2022 Warrants to purchase an aggregate of 384,615 shares remained outstanding, with a weighted average exercise price of $9.10 per share. The exercise of the remaining June 2022 Warrants outstanding could provide us with cash proceeds of up to $3.5 million in the aggregate.

December 2021 Private Placement

In December 2021, we completed a private placement (the "December 2021 Private Placement") with certain institutional investors for the sale of 170,455 shares of our common stock at a purchase price of $24.64 per share. We also sold to the same institutional investors (i) pre-funded warrants (the "December 2021 Pre-Funded Warrants") to purchase 12,175 shares of common stock at an exercise price of $0.0007 per share and (ii) warrants (collectively with the December 2021 Pre-Funded Warrants, the "December 2021 Warrants") to purchase up to an aggregate of 182,630 shares of common stock at an exercise price of $24.64 per share. In connection with the December 2021 Private Placement, we paid the placement agent commissions of $360 thousand plus $42 thousand in expenses and we also paid legal, accounting and other fees of $97 thousand. Net proceeds from the December 2021 Private Placement were approximately $4.0 million.

In January 2022, all of the December 2021 Pre-Funded Warrants were exercised. As of December 31, 2023, December 2021 Warrants to purchase an aggregate of 182,630 shares remained outstanding, with an exercise price of $24.64 per share. The December 2021 Warrants expire on December 16, 2026. The exercise of the remaining December 2021 Warrants outstanding could provide us with cash proceeds of up to $4.5 million in the aggregate.

Preferred Stock

The Series A Preferred Stock was created by the filing of a Certificate of Designation with the Secretary of State of the State of Delaware on March 29, 2019, which designated 2,000,000 shares of the Company's preferred stock, par value $0.0001 per share, as Series A Preferred Stock (the "Original Series A Certificate of Designation"). On January 15, 2020 with prior stockholder approval, the Company amended the Certificate of Incorporation to increase the number of authorized shares of preferred stock to 5,000,000. The Original Series A Certificate of Designation was also amended on January 15, 2020, to increase the number of shares of preferred stock designated as Series A Preferred Stock to 3,300,000 (the Original Series A Certificate of Designation, as so amended, the "Series A Certificate of Designation").

Pursuant to the Series A Certificate of Designation, each holder of outstanding shares of Series A Preferred Stock is entitled to vote with holders of outstanding shares of common stock, voting together as a single class, with respect to any and all matters presented to the stockholders of the Company for their action or consideration, except as provided by law. In any such vote, each share of Series A Preferred Stock shall entitle its holder to a number of votes equal to 1.582% of the number of shares of common stock into which such share of Series A Preferred Stock is convertible.

The Series A Preferred Stock (a) has a preference upon liquidation equal to $0.67 per share and then participates on an as-converted basis with the common stock with respect to any additional distributions, (b) shall receive any dividends declared and payable on our common stock on an as-converted basis, and (c) is convertible at the option of the holder into shares of our common stock on a 1- for-35 basis.

As of December 31, 2023 and 2022, there were 876,447 Series A Preferred Stock issued and outstanding which can be convertible into 25 thousand shares of common stock at the option of the holder.

Warrants

During the years ended December 31, 2023 and 2022, no warrants were exercised.

As of December 31, 2023 and 2022, we had the following outstanding warrants:

	As of December 31, 2023	As of December 31, 2022		
	Number of Underlying Shares		Exercise Price	Expiration
June 2022 Warrants	384,615	384,615	$9.10	December 16, 2026
December 2021 Warrants	182,630	182,630	$24.64	June 7, 2027
January 2020 Investor Warrants	26,819	26,819	$23.59	January 13, 2025
January 2020 Placement Agent Warrants	5,954	5,954	$34.96	January 13, 2025
	600,018	600,018		

Stock-based Compensation

Stock-based compensation expense is attributable to stock options and restricted stock unit awards. For all stock-based awards, we recognize expense using a straight-line amortization method.

The following table summarizes stock-based compensation expense and the impact it had on operations for the periods presented (in thousands):

	For the year ended December 31,	
	2023	2022
Cost of sales	$ 2	$ 2
Product development	—	15

Selling, general, and administrative	42	100
Total stock-based compensation	$ 44	$ 117

At December 31, 2023 and 2022, we had unearned stock compensation expense of $64 thousand and $128 thousand, respectively. These costs will be charged to expense and amortized on a straight-line basis in subsequent periods. The remaining weighted average period over which the unearned compensation is expected to be amortized was approximately 2.7 years years as of December 31, 2023 and 2.8 years as of December 31, 2022.

Stock Options

The fair value of each stock option is estimated on the date of grant using the Black-Scholes option pricing model. Estimates utilized in the calculation include the expected life of the option, risk-free interest rate, and expected volatility, and are further comparatively detailed as follows:

	2023	2022
Fair value of options issued	$ 2.49	$ 0.77
Exercise price	$ 3.04	$ 0.95
Expected life of option (in years)	6.1	6.1
Risk-free interest rate	3.5 %	3.0 %
Expected volatility	101.8 %	104.0 %
Dividend yield	0.00 %	0.00 %

We utilize the simplified method as provided by ASC 718-10 to calculate the expected stock option life. Under ASC 718-10, the expected stock option life is based on the midpoint between the vesting date and the end of the contractual term of the stock option award. The use of this simplified method in place of using the actual historical exercise data is allowed when a stock option award meets all of the following criteria: the exercise price of the stock option equals the stock price on the date of grant; the exercisability of the stock option is only conditional upon completing the service requirement through the vesting date; employees who terminate their service prior to the vesting date forfeit their stock options; employees who terminate their service after vesting are granted a limited time period to exercise their stock options; and the stock options are nontransferable and non-hedgeable. We believe that our stock option awards meet all of these criteria. The estimated expected life of the option is calculated based on contractual life of the option, the vesting life of the option, and historical exercise patterns of vested options. The risk-free interest rate is based on U.S. treasury zero-coupon yield curve on the grant date for a maturity similar to the expected life of the option. The volatility estimates are calculated using historical volatility of our stock price calculated over a period of time representative of the expected life of the option. We have not paid dividends in the past, and do not expect to pay dividends over the corresponding expected term as of the grant date.

Options outstanding under all plans at December 31, 2023 have a contractual life of ten years, and vesting periods between one and four years. A summary of option activity under all plans was as follows:

	Number of Options*	Weighted Average Exercise Price Per Share

Outstanding at December 31, 2021	38,032	$	24.30
Granted	32,317		6.67
Exercised	(22,893)		21.00
Canceled/forfeited	(318)		19.52
Expired	(36)		10.18
Outstanding at December 31, 2022	47,102		13.78
Granted	11,427	$	3.04
Canceled/forfeited	(24,076)		18.55
Expired	(3,878)		17.03
Balance at December 31, 2023	30,575	$	5.60
Vested and expected to vest at December 31, 2023	25,679	$	5.77
Exercisable at December 31, 2023	8,068	$	7.53

*Options have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

The “Expected to Vest” options are the unvested options that remain after applying the pre-vesting forfeiture rate assumption to total unvested options. No options were exercised during 2023 and 22,893 options were exercised during 2022. All outstanding equity awards were out of the money as of December 31, 2023.

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The options outstanding at December 31, 2023 have been segregated into ranges for additional disclosure as follows:

	OPTIONS OUTSTANDING				OPTIONS EXERCISABLE			
Range of Exercise Prices	**Number of Shares Outstanding**	**Weighted Average Remaining Contractual Life (in years)**		**Weighted Average Exercise Price**	**Number of Shares Exercisable**	**Weighted Average Remaining Contractual Life (in years)**		**Weighted Average Exercise Price**
\$3.04 — \$4.14	7,142	9.3	$	3.04	—	—	$	—
\$4.15 — \$5.73	21,428	8.7		5.25	6,702	8.7		5.25
\$5.74 — \$13.48	882	7.2		8.34	453	6.7		9.26
\$13.49 — \$27.55	661	5.8		16.80	661	5.8		16.80
\$27.56 — \$59.78	463	7.0		39.91	252	6.8		40.68
	30,576	8.7	$	5.60	8,068	8.3	$	7.53

Restricted Stock Units

In 2015, we began issuing restricted stock units to certain employees and non-employee Directors under the 2014 Plan with vesting periods ranging from one to four years from the grant date. In 2020, we began issuing restricted stock units to certain employees and non-employee Directors under the 2020 Plan with vesting periods ranging from one to four years.

The following table shows a summary of restricted stock unit activity:

	Restricted Stock Units Outstanding*		Weighted Average Grant Date Fair Value
Outstanding at December 31, 2021	343	$	1.02
Granted	7,143	$	0.18
Expired	(5,829)	$	0.22
Outstanding at December 31, 2022	1,657	$	11.13
Expired	(1,428)	$	4.90
Canceled/forfeited	(229)	$	49.99
Outstanding at December 31, 2023	—	$	—

*Restricted stock units have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

NOTE 10. INCOME TAXES

We file income tax returns in the U.S. federal jurisdiction, as well as in various state and local jurisdictions. With few exceptions, we are no longer subject to U.S. federal, state, and local, or non-U.S. income tax examinations by tax authorities for years before 2020. Our practice is to recognize interest and penalties related to income tax matters in income tax expense when and if they become applicable. At December 31, 2023 and 2022, respectively, there were no accrued interest and penalties related to uncertain tax positions.

The following table shows the components of the provision for income taxes (in thousands):

	For the year ended December 31,			
	2023		2022	
Current:				
State	$	3	$	4
Deferred:				
U.S. Federal		—		—
Provision for (benefit from) income taxes	$	3	$	4

The principal items accounting for the difference between income taxes computed at the U.S. statutory rate and the (benefit from) provision for income taxes reflected in our Consolidated Statements of Operations are as follows:

	For the year ended December 31,	
	2023	2022
U.S. statutory rate	21.0 %	21.0 %

State taxes (net of federal tax benefit)	4.5	1.3
Valuation allowance	(29.5)	(18.2)
Other	4.1	(4.1)
	0.0 %	0.0 %

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets are as follows (in thousands):

	At December 31,	
	2023	**2022**
Accrued expenses and other reserves	$ 1,195	$ 1,458
Right-of-use-asset	(197)	(294)
Lease liabilities	224	306
Tax credits, deferred R&D, and other	470	438
Net operating loss	20,935	18,856
Valuation allowance	(22,627)	(20,764)
Net deferred tax assets	$ —	$ —

In 2023, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance as a result of the $6.3 million additional federal net operating loss we recognized for the year. In 2022, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance of the $9.2 million additional federal net operating loss we recognized for the year.

At December 31, 2023, we had federal and state net operating loss carry-forwards (“NOLs”) of approximately $138.7 million for federal income tax purposes ($48.0 million for state and local income tax purposes). However, due to changes in our capital structure, approximately $84.3 million of the $138.7 million is available after the application of IRC Section 382 limitations. As a result of the Tax Cuts and Job Act of 2017 (the “Tax Act”), NOLs generated in tax years beginning after December 31, 2017 can only offset 80% of taxable income. These NOLs can no longer be carried back, but they can be carried forward indefinitely. The $6.3 million and $9.2 million in federal net operating losses generated in December 31, 2023 and 2022 will be subject to the new limitations under the Tax Act. If not utilized, the NOLs generated prior to December 31, 2017 of $0.9 million will begin to expire in 2024 for federal purposes and have begun to expire for state and local purposes.

Since we believe it is more likely than not that the benefit from NOLs will not be realized, we have provided a full valuation allowance against our deferred tax assets at December 31, 2023 and 2022, respectively. We had no net deferred tax liabilities at December 31, 2023 or 2022, respectively.

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NOTE 11.PRODUCT AND GEOGRAPHIC INFORMATION

We focus our efforts on the sale of LED lighting and controls products in the commercial market and MMM, and began to expand our offerings into the consumer market in the fourth quarter of 2021. Our products are sold primarily in the United States through a combination of direct sales employees, lighting agents, independent sales representatives and distributors. We currently operate in a single industry segment, developing and selling our LED lighting products and controls into the MMM and commercial markets.

The following table provides a breakdown of product net sales for the years indicated (in thousands):

	Year ended December 31,	
	2023	2022
Commercial products	$ 1,593	$ 3,746
MMM products	4,124	2,222
Total net sales	$ 5,717	$ 5,968

A geographic summary of net sales is as follows (in thousands):

	For the year ended December 31,	
	2023	2022
United States	$ 5,690	$ 5,815
International	27	153
Total net sales	$ 5,717	$ 5,968

At December 31, 2023 and 2022, approximately 100% of our long-lived assets, which consist of property and equipment, were located in the United States.

NOTE 12. RECEIVABLE FOR CLAIMED EMPLOYEE RETENTION TAX CREDIT

The CARES Act, which was enacted on March 27, 2020, provides an ERTC that is a refundable tax credit against certain employer taxes. The ERTC was subsequently amended by the Taxpayer Certainty and Disaster Tax Relief Act of 2020, the Consolidated Appropriation Act of 2021, and the American Rescue Plan Act of 2021, all of which amended and extended the ERTC availability and guidelines under the CARES Act. Following these amendments, we and other businesses became retroactively eligible for the ERTC, and as a result of the foregoing legislation, are eligible to claim a refundable tax credit against the employer share of Social Security taxes equal to 70% of the qualified wages paid to employees between January 1, 2021 and September 30, 2021. Qualified wages are limited to $10,000 per employee per calendar quarter in 2021 for a maximum allowable ERTC per employee of $7,000 per calendar quarter in 2021.

For purposes of the amended ERTC, an eligible employer is defined as having experienced a significant (20% or more) decline in gross receipts during each of the first three 2021 calendar quarters when compared with the same quarter in 2019 or the immediately preceding quarter to the corresponding calendar quarter in 2019. The credit is taken against the Company's share of Social Security Tax when the Company's payroll provider files, or subsequently amends the applicable quarterly employer tax filings.

Under the amended guidelines, we were eligible to receive the ERTC for the second and third quarters of 2021. As part of the filing of our employer tax filings for the third quarter of 2021, we applied for and received a refund of $431 thousand, and we amended our filing for the second quarter of 2021, for which we received an additional refund of approximately $445 thousand during 2023. This amount was recorded as a receivable in the Consolidated Balance Sheet as of December 31, 2022 and 2021 as a current liability under the caption "Credit line borrowings, net of origination fees." Outstanding balances include unamortized net issuance costs totaling $47 thousand and $84 thousand for the Inventory Facility and $15 thousand and $24 thousand for the Receivables Facility as of December 31, 2022 and 2021, respectively. was received during 2023.

NOTE 13. RELATED PARTY TRANSACTIONS

Promissory Notes Purchase Commitments

During As of December 31, 2023, we had approximately $0.5 million in outstanding purchase commitments for inventory, of which the third and fourth quarters majority is expected to ship in the first quarter of 2024. We have 49% of the year ended December 31, 2022 outstanding purchase commitments with a related party.

NOTE 9.STOCKHOLDERS' EQUITY

Common Stocks

1-for-7 Reverse Stock Split

At the Company's annual meeting of stockholders held on June 15, 2023, we entered into short-term unsecured promissory notes (the "2022 Promissory Notes" the Company's stockholders approved a form of the certificate of amendment ("Certificate of Amendment") with Mei-Yun (Gina) Huang, Jay Huang, to the Certificate of Incorporation and Tingyu Lin. Ms. Huang is authorized our board of directors to amend the Certificate of Incorporation to effect a member reverse stock split of the outstanding shares of the Company's Board common stock at a ratio ranging from any whole number of Directors at least 1-for-2 and Jay Huang became a member up to 1-for-10, with the exact ratio within the foregoing range to be determined by the board of directors in its sole discretion.

On June 15, 2023, our board of directors determined to set the reverse stock split at 1-for-7 (the "Split Ratio"). The Certificate of Amendment to our Certificate of Incorporation was filed with the Secretary of State of the Board State of Directors in January 2023. The total liability for Delaware on June 15, 2023, with the 2022 Promissory Notes was $1.5 million at December 31, 2022 reverse stock split becoming effective on June 16, 2023 (the "Effective Time"). All At the Effective Time, every seven shares of common stock issued and outstanding automatically combined into one validly issued, fully paid and non-assessable share of common stock. No fractional shares were issued as a result of the 2022 Promissory Notes reverse stock split. The fractional shares were exchanged for settled in cash in an amount not material to the Company. The $0.0001 par value per share of common stock on January 17, 2023. Please refer to Note 14, "Related Party Transactions" and Note 15, Subsequent Events" for further detail. other terms of the common stock were not affected by the reverse stock split. The number of authorized shares of common stock under the Certificate of Incorporation remained unchanged at 50,000,000 shares.

The following summarizes current financial statements, as well as the 2022 Promissory Notes prior-period financial statements have been retroactively adjusted to reflect the reverse stock split.

Our outstanding shares of restricted stock and shares underlying our options and warrants entitling the holders to purchase shares of common stock have been adjusted as a result of the reverse stock split, as required by the terms of these securities. Also, the number of shares reserved for issuance under our existing 2020 Stock Incentive Plan, as amended, and our 2013 Employee Stock Purchase Plan were reduced proportionately based on the Split Ratio. Preferred shares outstanding were not affected by the reverse stock split and as such, those shares have not been adjusted.

The reverse stock split was effected solely to increase the per share trading price of the common stock to satisfy the Bid Price Rule for continued listing on Nasdaq. The common stock began trading on Nasdaq on a split-adjusted basis at December 31, 2022: the opening of trading on June 19, 2023.

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	At December 31, 2022							
	G. Huang	**J. Huang**	**J. Huang**	**G. Huang**	**J. Huang**	**J. Huang**	**T. Lin**	**Total**
Date entered	September 16, 2022	October 25, 2022	November 4, 2022	November 9, 2022	December 6, 2022	December 21, 2022	December 31, 2022	
Term	9 months	9 months	9 months	9 months	9 months	9 months	9 months	
Principal amount	$450,000	$50,000	$250,000	$350,000	$200,000	$100,000	$50,000	$1,450,000
Maturity date	June 16, 2023	July 25, 2023	August 4, 2023	August 9, 2023	September 6, 2023	September 21, 2023	September 30, 2023	
Interest rate	8 %	8 %	8 %	8 %	8 %	8 %	8 %	

Default interest rate	10 %	10 %	10 %	10 %	10 %	10 %	10 %	
Outstanding Amount	$460,455	$50,734	$253,123	$353,989	$201,096	$100,219	$50,011	$1,469,627

Private Placements

Streeterville Notes The Company entered the securities purchase agreements with certain investors and issued 2,870,964 (including debt-to-equity exchange noted in Note 7, "Debt") and 384,615 shares of common stock during the years ended December 31, 2023 and 2022, respectively.

2022 Streeterville Note September 2023 Private Placement

On April 21, 2022 September 29, 2023, we the Company entered into a note securities purchase agreement with Streeterville Capital, LLC ("Streeterville") certain purchasers, pursuant to which we sold the Company agreed to issue and issued sell in a private placement an aggregate of 853,658 shares of the Company's common stock, par value $0.0001 per share, for a purchase price per share of $2.05 (the "September 2023 Private Placement").

Aggregate gross proceeds to Streeterville the Company in respect of the September 2023 Private Placement were approximately $1.75 million. The September 2023 Private Placement closed on September 29, 2023.

June 2023 Private Placement

On June 29, 2023, the Company entered into a promissory note securities purchase agreement with certain purchasers, pursuant to which the Company agreed to issue and sell in a private placement an aggregate of 746,875 shares of the principal amount Company's common stock, par value $0.0001 per share, for a purchase price per share of approximately $2.0 million $1.76 (the "2022 Streeterville Note" "June 2023 Private Placement"). One of the purchasers was Mr. Huang, the Company's CEO.

Aggregate gross proceeds to the Company in respect of the June 2023 Private Placement were approximately $1.3 million. The 2022 Streeterville Note was issued June 2023 Private Placement closed on June 29, 2023.

March 2023 Private Placements

On March 28, 2023, the Company entered into a securities purchase agreement with an original Mr. Chiao Chieh (Jay) Huang, pursuant to which the Company agreed to issue discount and sell, in a private placement (the "March 28, 2023 Private Placement"), 15,500 shares of $215 thousand and Streeterville paid the Company's common stock for a purchase price of approximately $1.8 million for $3.55 per share.

On March 30, 2023, the 2022 Streeterville Note, from Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company paid $15 thousand to Streeterville for Streeterville's transaction expenses.

The 2022 Streeterville Note had an original maturity date of April 21, 2024, and accrues interest at 8% per annum, compounded daily, on the outstanding balance. On January 17, 2023, we agreed with Streeterville to restructure and pay down the 2022 Streeterville Note and extend its maturity date to December 1, 2024. We agreed to make payments to reduce issue and sell, in a private placement (collectively with the outstanding amounts March 28, 2023 Private Placement, the "March 2023 Private Placements"), 71,428 shares of the 2022 Streeterville Note of $500 thousand by January 20, 2023 (which amount has been paid) and $250 thousand by July 14, 2023. Streeterville agreed to extend the term of the 2022 Streeterville Note through December 1, 2024, and beginning January 1, 2024, we will make twelve monthly repayments of approximately $117 thousand each. We have the right to prepay any of the scheduled repayments at any time or from time to time without additional penalty or fees. Provided we make all payments as scheduled or earlier, the 2022 Streeterville Note will be deemed paid in full and shall automatically be deemed canceled. Please refer to Note 15, "Subsequent Events" for further detail.

The total liability for the 2022 Streeterville Note, net of discount and financing fees, was $2.0 million at December 31, 2022.

In the event our Company's common stock is delisted from Nasdaq, the amount outstanding under the 2022 Streeterville Note will automatically increase by 15% as of the date of such delisting.

2021 Streeterville Note

On April 27, 2021, we entered into a note purchase agreement with Streeterville pursuant to which we sold and issued to Streeterville a promissory note in the principal amount of approximately $1.7 million (the "2021 Streeterville Note"). The 2021 Streeterville Note was issued with an original issue discount of $194 thousand and Streeterville paid for a purchase price of $1.5 million $3.50 per share.

Aggregate gross proceeds to the Company in respect of the March 2023 Private Placements were $305 thousand. Each of the March 2023 Private Placements was priced at-the-market under the Nasdaq rules.

February 2023 Private Placement

On February 24, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement (the "February 2023 Private Placement"), 114,744 shares of the Company's common stock, for a purchase price of $3.49 per share.

Gross proceeds to the Company in respect of the February 2023 Private Placement were $400 thousand. The February 2023 Private Placement was priced at fair market value under the Nasdaq rules.

January 2023 Sander Electronics Private Placement

On January 17, 2023, the Company entered into a securities purchase agreement (the "Sander Purchase Agreement") with certain purchasers associated with Sander Electronics, Inc., pursuant to which the Company agreed to issue and sell in a private placement (the "Sander Private Placement") an aggregate of 778,017 shares of common stock for a purchase price per share of $3.51. Consideration for the 2021 Streeterville transaction included exchange of approximately $657 thousand in the aggregate of outstanding amounts on previous short-term bridge financings, including the 2022 Promissory Notes issued to Mr. Huang, as described above in Note after deduction of $15 thousand of Streeterville's transaction expenses. 7, "Debt".

Aggregate gross proceeds from the Sander Private Placement were approximately $2.1 million. The 2021 Streeterville Note had a maturity date of April 27, 2023, and accrued interest at 8% per annum, compounded daily, on the outstanding balance.

Beginning on November 1, 2021, Streeterville could require the Company to redeem up to $205 thousand of the 2021 Streeterville Note in any calendar month. The Company had the right on three occasions to defer all redemptions that Streeterville could otherwise require the Company to make during any calendar month. Each exercise of this deferral right by the Company increased the amount outstanding Sander Private Placement was priced at-the-market under the Streeterville Note by 1.5%. The Company exercised this right twice during the fourth quarter of 2021, once during the second quarter of 2022 and once during the third quarter of 2022. The Company and Streeterville agreed to exchange common stock, priced at-the-market, for the required redemptions in October 2022 and December 2022, totaling $305 thousand converted to equity. These exchanges satisfied the redemption notices provided by Streeterville, and following the December 2022 exchange, the 2021 Streeterville Note was paid in full. We wrote off $100 thousand in remaining original issue discount costs at that time. Nasdaq rules.

January 2023 Transactions with Mei Yun (Gina) Huang

On January 5, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement, 36,828 shares of the Company's common stock, for a purchase price of $2.72 per share. On January 10, 2023, the Company entered into a securities purchase agreement with Ms. Huang, pursuant to which the Company agreed to issue and sell, in a private placement, 46,543 shares of the Company's common stock for a purchase price of $3.22 per share.

Aggregate gross proceeds to the Company in respect of these private placements to Ms. Huang were $250 thousand. Each of the private placements to Ms. Huang was priced at fair market value under the Nasdaq rules.

On January 17, 2023, the Company and Ms. Huang entered into exchange agreements pursuant to which the Company and Ms. Huang agreed to exchange the approximately $817 thousand aggregate outstanding amounts on previous short-term bridge financings, including the 2022 Promissory Notes issued to Ms. Huang, as described above in Note 7, "Debt", for an aggregate of 207,371 shares of common stock at a price per share of $3.94. The exchanges were priced at fair market value under the Nasdaq rules.

June 2022 Private Placement

In June 2022, we completed a private placement (the "June 2022 Private Placement") with certain institutional investors for the sale of 187,637 shares of our common stock at a purchase price of $9.10 per share. We also sold to the same institutional investors (i) pre-funded warrants (the "June 2022 Pre-Funded Warrants") to purchase 196,978 shares of common stock at an exercise price of $0.0007 per share and (ii) warrants (collectively with the June 2022 Pre-Funded Warrants, the "June 2022 Warrants") to purchase up to an aggregate of 384,615 shares of common stock at an exercise price of $9.10 per share. In connection with the June 2022 Private Placement, we paid the placement agent commissions of $252 thousand, plus $35 thousand in expenses, and we also paid legal, accounting and other fees of $47 thousand. Total offering costs of $334 thousand have been presented as a reduction of additional paid-in capital and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2022. Net proceeds to us from the June 2022 Private Placement were approximately $3.2 million. We determined the exercise price of the June 2022 Pre-Funded Warrants to be nominal and, as such, have considered the 196,978 shares underlying them to be outstanding effective June 7, 2022, for purposes of calculating net loss per share.

In July 2022, all of the June 2022 Pre-Funded Warrants were exercised. As of December 31, 2023, June 2022 Warrants to purchase an aggregate of 384,615 shares remained outstanding, with a weighted average exercise price of $9.10 per share. The exercise of the remaining June 2022 Warrants outstanding could provide us with cash proceeds of up to $3.5 million in the aggregate.

December 2021 Private Placement

In December 2021, we completed a private placement (the "December 2021 Private Placement") with certain institutional investors for the sale of 170,455 shares of our common stock at a purchase price of $24.64 per share. We also sold to the same institutional investors (i) pre-funded warrants (the "December 2021 Pre-Funded Warrants") to purchase 12,175 shares of common stock at an exercise price of $0.0007 per share and (ii) warrants (collectively with the December 2021 Pre-Funded Warrants, the "December 2021 Warrants") to purchase up to an aggregate of 182,630 shares of common stock at an exercise price of $24.64 per share. In connection with the December 2021 Private Placement, we paid the placement agent commissions of $360 thousand plus $42 thousand in expenses and we also paid legal, accounting and other fees of $97 thousand. Net proceeds from the December 2021 Private Placement were approximately $4.0 million.

In January 2022, all of the December 2021 Pre-Funded Warrants were exercised. As of December 31, 2023, December 2021 Warrants to purchase an aggregate of 182,630 shares remained outstanding, with an exercise price of $24.64 per share. The December 2021 Warrants expire on December 16, 2026. The exercise of the remaining December 2021 Warrants outstanding could provide us with cash proceeds of up to $4.5 million in the aggregate.

Preferred Stock

The Series A Preferred Stock was created by the filing of a Certificate of Designation with the Secretary of State of the State of Delaware on March 29, 2019, which designated 2,000,000 shares of the Company's preferred stock, par value $0.0001 per share, as Series A Preferred Stock (the "Original Series A Certificate of Designation"). On January 15, 2020 with prior stockholder approval, the Company amended the Certificate of Incorporation to increase the number of authorized shares of preferred stock to 5,000,000. The Original Series A Certificate of Designation was also amended on January 15, 2020, to increase the number of shares of preferred stock designated as Series A Preferred Stock to 3,300,000 (the Original Series A Certificate of Designation, as so amended, the "Series A Certificate of Designation").

Pursuant to the Series A Certificate of Designation, each holder of outstanding shares of Series A Preferred Stock is entitled to vote with holders of outstanding shares of common stock, voting together as a single class, with respect to any and all matters presented to the stockholders of the Company for their action or consideration, except as provided by law. In any such vote, each share of Series A Preferred Stock shall entitle its holder to a number of votes equal to 1.582% of the number of shares of common stock into which such share of Series A Preferred Stock is convertible.

The Series A Preferred Stock (a) has a preference upon liquidation equal to $0.67 per share and then participates on an as-converted basis with the common stock with respect to any additional distributions, (b) shall receive any dividends declared and payable on our common stock on an as-converted basis, and (c) is convertible at the option of the holder into shares of our common stock on a 1- for-35 basis.

As of December 31, 2023 and 2022, there were 876,447 Series A Preferred Stock issued and outstanding which can be convertible into 25 thousand shares of common stock at the option of the holder.

Warrants

During the years ended December 31, 2023 and 2022, no warrants were exercised.

As of December 31, 2023 and 2022, we had the following outstanding warrants:

	As of December 31, 2023	As of December 31, 2022		
	Number of Underlying Shares		Exercise Price	Expiration
June 2022 Warrants	384,615	384,615	$9.10	December 16, 2026
December 2021 Warrants	182,630	182,630	$24.64	June 7, 2027
January 2020 Investor Warrants	26,819	26,819	$23.59	January 13, 2025
January 2020 Placement Agent Warrants	5,954	5,954	$34.96	January 13, 2025
	600,018	600,018		

Stock-based Compensation

Stock-based compensation expense is attributable to stock options and restricted stock unit awards. For all stock-based awards, we recognize expense using a straight-line amortization method.

The following table summarizes stock-based compensation expense and the impact it had on operations for the periods presented (in thousands):

	For the year ended December 31,	
	2023	2022
Cost of sales	$ 2	$ 2
Product development	—	15
Selling, general, and administrative	42	100
Total stock-based compensation	$ 44	$ 117

At December 31, 2023 and 2022, we had unearned stock compensation expense of $64 thousand and $128 thousand, respectively. These costs will be charged to expense and amortized on a straight-line basis in subsequent periods. The remaining weighted average period over which the unearned compensation is expected to be amortized was approximately 2.7 years years as of December 31, 2023 and 2.8 years as of December 31, 2022.

Stock Options

The fair value of each stock option is estimated on the date of grant using the Black-Scholes option pricing model. Estimates utilized in the calculation include the expected life of the option, risk-free interest rate, and expected volatility, and are further comparatively detailed as follows:

	2023	2022
Fair value of options issued	$ 2.49	$ 0.77
Exercise price	$ 3.04	$ 0.95
Expected life of option (in years)	6.1	6.1
Risk-free interest rate	3.5 %	3.0 %
Expected volatility	101.8 %	104.0 %
Dividend yield	0.00 %	0.00 %

We utilize the simplified method as provided by ASC 718-10 to calculate the expected stock option life. Under ASC 718-10, the expected stock option life is based on the midpoint between the vesting date and the end of the contractual term of the stock option award. The use of this simplified method in place of using the actual historical exercise data is allowed when a stock option award meets all of the following criteria: the exercise price of the stock option equals the stock price on the date of grant; the exercisability of the stock option is only conditional upon completing the service requirement through the vesting date; employees who terminate their service prior to the vesting date forfeit their stock options; employees who terminate their service after vesting are granted a limited time period to exercise their stock options; and the stock options are nontransferable and non-hedgeable. We believe that our stock option awards meet all of these criteria. The estimated expected life of the option is calculated based on contractual life of the option, the vesting life of the option, and historical exercise patterns of vested options. The risk-free interest rate is based on U.S. treasury zero-coupon yield curve on the grant date for a maturity similar to the expected life of the option. The volatility estimates are calculated using historical volatility of our stock price calculated over a period of time representative of the expected life of the option. We have not paid dividends in the past, and do not expect to pay dividends over the corresponding expected term as of the grant date.

Options outstanding under all plans at December 31, 2023 have a contractual life of ten years, and vesting periods between one and four years. A summary of option activity under all plans was as follows:

	Number of Options*	Weighted Average Exercise Price Per Share
Outstanding at December 31, 2021	38,032	$ 24.30
Granted	32,317	6.67
Exercised	(22,893)	21.00
Canceled/forfeited	(318)	19.52

Expired	(36)	10.18
Outstanding at December 31, 2022	47,102	13.78
Granted	11,427	$ 3.04
Canceled/forfeited	(24,076)	18.55
Expired	(3,878)	17.03
Balance at December 31, 2023	30,575	$ 5.60
Vested and expected to vest at December 31, 2023	25,679	$ 5.77
Exercisable at December 31, 2023	8,068	$ 7.53

*Options have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

The "Expected to Vest" options are the unvested options that remain after applying the pre-vesting forfeiture rate assumption to total unvested options. No options were exercised during 2023 and 22,893 options were exercised during 2022. All outstanding equity awards were out of the money as of December 31, 2023.

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The total liability options outstanding at December 31, 2023 have been segregated into ranges for additional disclosure as follows:

	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE		
Range of Exercise Prices	**Number of Shares Outstanding**	**Weighted Average Remaining Contractual Life (in years)**	**Weighted Average Exercise Price**	**Number of Shares Exercisable**	**Weighted Average Remaining Contractual Life (in years)**	**Weighted Average Exercise Price**
$3.04 — $4.14	7,142	9.3	$ 3.04	—	—	$ —
$4.15 — $5.73	21,428	8.7	5.25	6,702	8.7	5.25
$5.74 — $13.48	882	7.2	8.34	453	6.7	9.26
$13.49 — $27.55	661	5.8	16.80	661	5.8	16.80
$27.56 — $59.78	463	7.0	39.91	252	6.8	40.68
	30,576	8.7	$ 5.60	8,068	8.3	$ 7.53

Restricted Stock Units

In 2015, we began issuing restricted stock units to certain employees and non-employee Directors under the 2014 Plan with vesting periods ranging from one to four years from the grant date. In 2020, we began issuing restricted stock units to certain employees and non-employee Directors under the 2020 Plan with vesting periods ranging from one to four years.

The following table shows a summary of restricted stock unit activity:

	Restricted Stock Units Outstanding*	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2021	343	$ 1.02
Granted	7,143	$ 0.18
Expired	(5,829)	$ 0.22
Outstanding at December 31, 2022	1,657	$ 11.13
Expired	(1,428)	$ 4.90
Canceled/forfeited	(229)	$ 49.99
Outstanding at December 31, 2023	—	$ —

*Restricted stock units have been restated for the 2021 Streeterville Note, net of discount and financing fees, was $1.7 million at December 31, 2021. Unamortized loan discount and debt issuance costs were $43 thousand at December 31, 2021 1-for-7 reverse stock split effective June 16, 2023.

PPP Loan

On April 17, 2020, the Company was granted a loan from KeyBank National Association ("KeyBank") NOTE 10. INCOME TAXES

We file income tax returns in the amount U.S. federal jurisdiction, as well as in various state and local jurisdictions. With few exceptions, we are no longer subject to U.S. federal, state, and local, or non-U.S. income tax examinations by tax authorities for years before 2020. Our practice is to recognize interest and penalties related to income tax matters in income tax expense when and if they become applicable. At December 31, 2023 and 2022, respectively, there were no accrued interest and penalties related to uncertain tax positions.

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following table shows the components of the provision for income taxes (in thousands):

	For the year ended December 31,	
	2023	**2022**
Current:		
State	$ 3	$ 4
Deferred:		
U.S. Federal	—	—
Provision for (benefit from) income taxes	$ 3	$ 4

The principal items accounting for the difference between income taxes computed at the U.S. statutory rate and the (benefit from) provision for income taxes reflected in our Consolidated Statements of Operations are as follows:

	For the year ended December 31,	
	2023	**2022**
U.S. statutory rate	21.0 %	21.0 %

State taxes (net of federal tax benefit)	4.5	1.3
Valuation allowance	(29.5)	(18.2)
Other	4.1	(4.1)
	0.0 %	0.0 %

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets are as follows (in thousands):

	At December 31,	
	2023	2022
Accrued expenses and other reserves	$ 1,195	$ 1,458
Right-of-use-asset	(197)	(294)
Lease liabilities	224	306
Tax credits, deferred R&D, and other	470	438
Net operating loss	20,935	18,856
Valuation allowance	(22,627)	(20,764)
Net deferred tax assets	$ —	$ —

In 2023, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance as a result of the $6.3 million additional federal net operating loss we recognized for the year. In 2022, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance of the $9.2 million additional federal net operating loss we recognized for the year.

At December 31, 2023, we had federal and state net operating loss carry-forwards ("NOLs") of approximately $795 thousand, pursuant $138.7 million for federal income tax purposes ($48.0 million for state and local income tax purposes). However, due to changes in our capital structure, approximately $84.3 million of the $138.7 million is available after the application of IRC Section 382 limitations. As a result of the Tax Cuts and Job Act of 2017 (the "Tax Act"), NOLs generated in tax years beginning after December 31, 2017 can only offset 80% of taxable income. These NOLs can no longer be carried back, but they can be carried forward indefinitely. The $6.3 million and $9.2 million in federal net operating losses generated in December 31, 2023 and 2022 will be subject to the PPP new limitations under Division the Tax Act. If not utilized, the NOLs generated prior to December 31, 2017 of $0.9 million will begin to expire in 2024 for federal purposes and have begun to expire for state and local purposes.

Since we believe it is more likely than not that the benefit from NOLs will not be realized, we have provided a full valuation allowance against our deferred tax assets at December 31, 2023 and 2022, respectively. We had no net deferred tax liabilities at December 31, 2023 or 2022, respectively.

NOTE 11.PRODUCT AND GEOGRAPHIC INFORMATION

We focus our efforts on the sale of LED lighting and controls products in the commercial market and MMM, and began to expand our offerings into the consumer market in the fourth quarter of 2021. Our products are sold primarily in the United States through a combination of direct sales employees, lighting agents, independent sales representatives and distributors. We currently operate in a single industry segment, developing and selling our LED lighting products and controls into the MMM and commercial markets.

The following table provides a breakdown of product net sales for the years indicated (in thousands):

	Year ended December 31,	
	2023	2022
Commercial products	$ 1,593	$ 3,746
MMM products	4,124	2,222
Total net sales	$ 5,717	$ 5,968

A geographic summary of net sales is as follows (in thousands):

	For the year ended December 31,	
	2023	2022
United States	$ 5,690	$ 5,815
International	27	153
Total net sales	$ 5,717	$ 5,968

At December 31, 2023 and 2022, approximately 100% of our long-lived assets, which consist of property and equipment, were located in the Coronavirus Aid, Relief and Economic Security United States.

NOTE 12. RECEIVABLE FOR CLAIMED EMPLOYEE RETENTION TAX CREDIT

The CARES Act, (the "CARES Act"), which was enacted on March 27, 2020., provides an ERTC that is a refundable tax credit against certain employer taxes. The funds were received on April 20, 2020 ERTC was subsequently amended by the Taxpayer Certainty and accrued interest at a rate Disaster Tax Relief Act of 1% per annum. Under 2020, the terms Consolidated Appropriation Act of 2021, and the PPP, certain amounts American Rescue Plan Act of 2021, all of which amended and extended the loan may be forgiven if they are used for qualifying expenses as described in ERTC availability and guidelines under the CARES Act. Following these amendments, we and other businesses became retroactively eligible for the ERTC, and as a result of the foregoing legislation, are eligible to claim a refundable tax credit against the employer share of Social Security taxes equal to 70% of the qualified wages paid to employees between January 1, 2021 and September 30, 2021. Qualified wages are limited to $10,000 per employee per calendar quarter in 2021 for a maximum allowable ERTC per employee of $7,000 per calendar quarter in 2021.

For purposes of the amended ERTC, an eligible employer is defined as having experienced a significant (20% or more) decline in gross receipts during each of the first three 2021 calendar quarters when compared with the same quarter in 2019 or the immediately preceding quarter to the corresponding calendar quarter in 2019. The entire principal balance credit is taken against the Company's share of Social Security Tax when the Company's payroll provider files, or subsequently amends the applicable quarterly employer tax filings.

Under the amended guidelines, we were eligible to receive the ERTC for the second and interest were forgiven by third quarters of 2021. As part of the Small Business Administration on February 11, 2021. The $801 filing of our employer tax filings for the third quarter of 2021, we applied for and received a refund of $431 thousand, forgiveness income and we amended our filing for the second quarter of 2021, for which we received an additional refund of approximately $445 thousand during 2023. This amount was recorded as other income a receivable in the Consolidated Statements Balance Sheet as of Operations December 31, 2022 and was received during the year ended December 31, 2021. 2023.

NOTE 9. COMMITMENTS AND CONTINGENCIES 13. RELATED PARTY TRANSACTIONS

Purchase Commitments

As of December 31, 2022 December 31, 2023, we had approximately $0.6 million $0.5 million in outstanding purchase commitments for inventory, of which the majority is expected to ship in the first quarter of 2023. 2024. We have 49% of the outstanding purchase commitments with a related party.

NOTE 10. 9. STOCKHOLDERS' EQUITY

Common Stocks

1-for-7 Reverse Stock Split

At the Company's annual meeting of stockholders held on June 15, 2023, the Company's stockholders approved a form of the certificate of amendment ("Certificate of Amendment") to the Certificate of Incorporation and authorized our board of directors to amend the Certificate of Incorporation to effect a reverse stock split of the outstanding shares of the Company's common stock at a ratio ranging from any whole number of at least 1-for-2 and up to 1-for-10, with the exact ratio within the foregoing range to be determined by the board of directors in its sole discretion.

On June 15, 2023, our board of directors determined to set the reverse stock split at 1-for-7 (the "Split Ratio"). The Certificate of Amendment to our Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on June 15, 2023, with the reverse stock split becoming effective on June 16, 2023 (the "Effective Time"). At the Effective Time, every seven shares of common stock issued and outstanding automatically combined into one validly issued, fully paid and non-assessable share of common stock. No fractional shares were issued as a result of the reverse stock split. The fractional shares were settled in cash in an amount not material to the Company. The $0.0001 par value per share of common stock and other terms of the common stock were not affected by the reverse stock split. The number of authorized shares of common stock under the Certificate of Incorporation remained unchanged at 50,000,000 shares.

The current financial statements, as well as the prior-period financial statements have been retroactively adjusted to reflect the reverse stock split.

Our outstanding shares of restricted stock and shares underlying our options and warrants entitling the holders to purchase shares of common stock have been adjusted as a result of the reverse stock split, as required by the terms of these securities. Also, the number of shares reserved for issuance under our existing 2020 Stock Incentive Plan, as amended, and our 2013 Employee Stock Purchase Plan were reduced proportionately based on the Split Ratio. Preferred shares outstanding were not affected by the reverse stock split and as such, those shares have not been adjusted.

The reverse stock split was effected solely to increase the per share trading price of the common stock to satisfy the Bid Price Rule for continued listing on Nasdaq. The common stock began trading on Nasdaq on a split-adjusted basis at the opening of trading on June 19, 2023.

Private Placements

The Company entered the securities purchase agreements with certain investors and issued 2,870,964 (including debt-to-equity exchange noted in Note 7, "Debt") and 384,615 shares of common stock during the years ended December 31, 2023 and 2022, respectively.

<u>September 2023 Private Placement</u>

On September 29, 2023, the Company entered into a securities purchase agreement with certain purchasers, pursuant to which the Company agreed to issue and sell in a private placement an aggregate of 853,658 shares of the Company's common stock, par value $0.0001 per share, for a purchase price per share of $2.05 (the "September 2023 Private Placement").

Aggregate gross proceeds to the Company in respect of the September 2023 Private Placement were approximately $1.75 million. The September 2023 Private Placement closed on September 29, 2023.

<u>June 2023 Private Placement</u>

On June 29, 2023, the Company entered into a securities purchase agreement with certain purchasers, pursuant to which the Company agreed to issue and sell in a private placement an aggregate of 746,875 shares of the Company's common stock, par value $0.0001 per share, for a purchase price per share of $1.76 (the "June 2023 Private Placement"). One of the purchasers was Mr. Huang, the Company's CEO.

Aggregate gross proceeds to the Company in respect of the June 2023 Private Placement were approximately $1.3 million. The June 2023 Private Placement closed on June 29, 2023.

March 2023 Private Placements

On March 28, 2023, the Company entered into a securities purchase agreement with Mr. Chiao Chieh (Jay) Huang, pursuant to which the Company agreed to issue and sell, in a private placement (the "March 28, 2023 Private Placement"), 15,500 shares of the Company's common stock for a purchase price of $3.55 per share.

On March 30, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement (collectively with the March 28, 2023 Private Placement, the "March 2023 Private Placements"), 71,428 shares of the Company's common stock for a purchase price of $3.50 per share.

Aggregate gross proceeds to the Company in respect of the March 2023 Private Placements were $305 thousand. Each of the March 2023 Private Placements was priced at-the-market under the Nasdaq rules.

February 2023 Private Placement

On February 24, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement (the "February 2023 Private Placement"), 114,744 shares of the Company's common stock, for a purchase price of $3.49 per share.

Gross proceeds to the Company in respect of the February 2023 Private Placement were $400 thousand. The February 2023 Private Placement was priced at fair market value under the Nasdaq rules.

January 2023 Sander Electronics Private Placement

On January 17, 2023, the Company entered into a securities purchase agreement (the "Sander Purchase Agreement") with certain purchasers associated with Sander Electronics, Inc., pursuant to which the Company agreed to issue and sell in a private placement (the "Sander Private Placement") an aggregate of 778,017 shares of common stock for a purchase price per share of $3.51. Consideration for the transaction included exchange of approximately $657 thousand in the aggregate of outstanding amounts on previous short-term bridge financings, including the 2022 Promissory Notes issued to Mr. Huang, as described above in Note 7, "Debt".

Aggregate gross proceeds from the Sander Private Placement were approximately $2.1 million. The Sander Private Placement was priced at-the-market under the Nasdaq rules.

January 2023 Transactions with Mei Yun (Gina) Huang

On January 5, 2023, the Company entered into a securities purchase agreement with Mei Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement, 36,828 shares of the Company's common stock, for a purchase price of $2.72 per share. On January 10, 2023, the Company entered into a securities purchase agreement with Ms. Huang, pursuant to which the Company agreed to issue and sell, in a private placement, 46,543 shares of the Company's common stock for a purchase price of $3.22 per share.

Aggregate gross proceeds to the Company in respect of these private placements to Ms. Huang were $250 thousand. Each of the private placements to Ms. Huang was priced at fair market value under the Nasdaq rules.

On January 17, 2023, the Company and Ms. Huang entered into exchange agreements pursuant to which the Company and Ms. Huang agreed to exchange the approximately $817 thousand aggregate outstanding amounts on previous short-term bridge financings, including the 2022 Promissory Notes issued to Ms. Huang, as described above in Note 7, “Debt”, for an aggregate of 207,371 shares of common stock at a price per share of $3.94. The exchanges were priced at fair market value under the Nasdaq rules.

June 2022 Private Placement

In June 2022, we completed the June a private placement (the “June 2022 Private Placement Placement”) with certain institutional investors for the sale of 1,313,462 187,637 shares of our common stock at a purchase price of $1.30 $9.10 per share. We also sold to the same institutional investors (i) June pre-funded warrants (the “June 2022 Pre-Funded Warrants Warrants”) to purchase 1,378,848 196,978 shares of common stock at an exercise price of $0.0001 $0.0007 per share and (ii) warrants (collectively with the June 2022 Pre-Funded Warrants, the “June 2022 Warrants”) to purchase up to an aggregate of 2,692,310 384,615 shares of common stock at an exercise price of $1.30 $9.10 per share. In connection with the June 2022 Private Placement, we paid the placement agent commissions of $252 thousand, plus $35 thousand in expenses, and we also paid legal, accounting and other fees of $47 thousand. Total offering costs of $334 thousand have been presented as a reduction of additional paid-in capital and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2022. Net proceeds to us from the June 2022 Private Placement were approximately $3.2 million. We determined the exercise price of the June 2022 Pre-Funded Warrants to be nominal and, as such, have considered the 1,378,848 196,978 shares underlying them to be outstanding effective June 7, 2022, for purposes of calculating net loss per share.

In July 2022, all of the June 2022 Pre-Funded Warrants were exercised. As of December 31, 2022 December 31, 2023, June 2022 Warrants to purchase an aggregate of 2,692,310 384,615 shares of common stock remained outstanding, with an a weighted average exercise price of $1.30 $9.10 per share. The exercise of the remaining June 2022 Warrants outstanding could provide us with cash proceeds of up to $3.5 million in the aggregate.

December 2021 Private Placement

In December 2021, we completed the December a private placement (the “December 2021 Private Placement Placement”) with certain institutional investors for the sale of 1,193,185 170,455 shares of our common stock at a purchase price of $3.52 $24.64 per share. We also sold to the same institutional investors (i) December pre-funded warrants (the “December 2021 Pre-Funded Warrants Warrants”) to purchase 85,228 12,175 shares of common stock at an exercise price of $0.0001 $0.0007 per share and (ii) warrants (collectively with the December 2021 Pre-Funded Warrants, the “December 2021 Warrants”) to purchase up to an aggregate of 1,278,413 182,630 shares of common stock at an exercise price of $3.52 $24.64 per share. We In connection with the December 2021 Private Placement, we paid the placement agent commission commissions of $360 thousand plus $42 thousand in expenses in connection with the December 2021 Private Placement and we also paid legal, accounting and other fees of $97 thousand related to the December 2021 Private Placement. Total offering costs of $499 thousand have been presented as a reduction of additional paid-in capital and have been netted within equity in the Consolidated Balance Sheet as of December 31, 2021. thousand. Net proceeds from the December 2021 Private Placement were approximately $4.0 million. We determined the exercise price of the December 2021 Pre-Funded Warrants to be nominal and, as such, have considered the 85,228 shares underlying them to be outstanding effective December 16, 2021, for the purposes of calculating basic EPS. $4.0 million.

In January 2022, all of the December 2021 Pre-Funded Warrants were exercised. As of December 31, 2022 December 31, 2023, December 2021 Warrants to purchase an aggregate of 1,278,413 182,630 shares of common stock remained outstanding, with an exercise price of $3.52

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$24.64 per share. The December 2021 Warrants expire on December 16, 2026. The exercise of the remaining December 2021 Warrants outstanding could provide us with cash proceeds of up to $4.5 million in the aggregate.

June 2021 Equity Offering

In June 2021, we completed a registered direct offering of 990,100 shares of our common stock to certain institutional investors, at a purchase price of $5.05 per share. We paid the placement agent commissions of $400 thousand, plus $51 thousand in expenses, in connection with the June 2021 Equity Offering and we also paid legal and other fees of $19 thousand related to the offering. Total offering costs of $469 thousand have been presented as a reduction of additional paid-in capital and have been netted within equity in the Condensed Consolidated Balance Sheet as of December 31, 2021. Net proceeds to us from the June 2021 Equity Offering were approximately $4.5 million.

January 2020 Equity Offering

In January 2020, we completed the January 2020 Equity Offering, pursuant to which we issued the January 2020 Warrants. January 2020 Warrants to purchase an aggregate of 229,414 shares of common stock were outstanding at December 31, 2022 and 2021, with a weighted average exercise price of $3.67 per share. During the year ended December 31, 2022, no January 2020 Warrants issued were exercised and did not result in any proceeds. During the twelve months ended December 31, 2021, 237,892 January 2020 Warrants were exercised, resulting in total proceeds of $801 thousand. The exercise of the remaining January 2020 Warrants outstanding could provide us with cash proceeds of up to $841 thousand in the aggregate.

As of December 31, 2022 and 2021, we had the following outstanding January 2020 Warrants to purchase shares of common stock:

	As of December 31, 2022	As of December 31, 2021		
	Number of Underlying Shares		Exercise Price	Expiration
Investor Warrants	187,734	187,734	$3.3700	January 13, 2025
Placement Agent Warrants	41,680	41,680	$4.9940	January 13, 2025
	229,414	229,414		

Preferred Stock

On March 29, 2019 we issued $1.7 million aggregate principal amount of subordinated convertible promissory notes (the “Convertible Notes”) to certain investors in a private placement exempt from registration requirements of the Securities Act of 1933, as amended (the “Securities Act”). The Convertible Notes had a maturity date of December 31, 2021 and bore interest at a rate of 5.0% per annum until June 30, 2019 and at a rate of 10.0% thereafter.

Pursuant to the terms of the Convertible Notes, on January 16, 2020, following approval by our stockholders of certain amendments to the Certificate of Incorporation, the principal amount of all of the Convertible Notes and the accumulated interest thereon at the date of conversion (totaling $1.8 million) were converted at a conversion price of $0.67 per share into an aggregate of 2,709,018 shares of the Company’s Series A Preferred Stock, which is convertible on a one-for-five basis into shares of our common stock. During the year ended December 31, 2020, 111,548 shares of the Series A Preferred Stock were converted into 22,310 shares of common stock. During the year ended December 31, 2021, 1,721,023 shares of Series A Preferred Stock were converted into 344,205 shares of common stock. The Series A Preferred Stock that was converted in 2021 was held by a Schedule 13D ownership group (under Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, and Rule 13d-5 promulgated thereunder) that includes Fusion Park LLC (“Fusion Park”) and 5 Elements Global Fund L.P. (controlled affiliates of James Tu, the Company's former Executive Chairman and Chief Executive Officer and former member of the Board of Directors), as well as Brilliant Start Enterprise Inc. (“Brilliant Start”) and Jag International Ltd. (controlled affiliates of Gina Huang, a current member of the Company's Board of Directors). Upon conversion of their respective shares of Series A Preferred Stock in 2021, Fusion Park and Brilliant Start received 184,851 and 159,354 shares, respectively, of the Company’s common stock.

The Series A Preferred Stock was created by the filing of a Certificate of Designation with the Original Secretary of State of the State of Delaware on March 29, 2019, which designated 2,000,000 shares of the Company's preferred stock, par value $0.0001 per share, as Series A Preferred Stock (the "Original Series A Certificate of Designation. Designation"). On January 15, 2020 with prior stockholder approval, the Company amended the Certificate of Incorporation to increase the number of authorized shares of preferred stock to 5,000,000. The Original Series A Certificate of Designation was also amended on January 15, 2020, to

increase the number of shares of preferred stock designated as Series A Preferred Stock to 3,300,000 (the Original Series A Certificate of Designation, as so amended, the "Series A Certificate of Designation").

Pursuant to the Series A Certificate of Designation, each holder of outstanding shares of Series A Preferred Stock is entitled to vote with holders of outstanding shares of common stock, voting together as a single class, with respect to any and all matters presented to the stockholders of the Company for their action or consideration, except as provided by law. In any such vote, each share of Series A Preferred Stock shall entitle its holder to a number of votes equal to 11.07% 1.582% of the number of shares of common stock into which such share of Series A Preferred Stock is convertible.

The Series A Preferred Stock (a) has a preference upon liquidation equal to $0.67 per share and then participates on an as-converted basis with the common stock with respect to any additional distributions, (b) shall receive any dividends declared and payable on our common stock on an as-converted basis, and (c) is convertible at the option of the holder into shares of our common stock on a one-for-five1- for- 35 basis. On March 29, 2019, the Company also filed a Certificate

As of Elimination with respect to its authorized, but unissued, Series A Participating Preferred Stock, to return such shares to the status of undesignated preferred stock available for designation as December 31, 2023 and 2022, there were 876,447 Series A Preferred Stock.

The purchase agreement related to the Convertible Notes contained customary representations Stock issued and warranties and provided for resale registration rights with respect to the shares of our common stock issuable upon conversion of the Series A Preferred Stock.

Stock-based compensation

On March 18, 2020, our Board of Directors approved the Energy Focus, Inc. 2020 Stock Incentive Plan (the "2020 Plan"). The 2020 Plan was approved by the stockholders at our annual meeting on September 17, 2020, after outstanding which no further awards could can be issued under the Energy Focus, Inc. 2014 Stock Incentive Plan (the "2014 Plan"). The 2020 Plan initially allows for awards up to 350,000 convertible into 25 thousand shares of common stock and expires on September 17, 2030. On June 22, 2022, at the stockholders approved an amendment and restatement option of the 2020 Plan that increased holder.

Warrants

During the shares available for issuance under the 2020 Plan by an additional 300,000 shares. At December 31, 2022, 480,741 shares remain available to grant under the 2020 Plan. years ended December 31, 2023 and 2022, no warrants were exercised.

Effective September 12, 2022, as a material inducement to our Chief Executive Officer's acceptance As of employment, December 31, 2023 and 2022, we granted her an initial stock option award to purchase 150,000 shares of had the Company's common stock (the "Inducement Option Award"), which Inducement Option Award will generally vest over a four-year period, with 25% generally vesting on the first anniversary of the grant date, and the remainder generally vesting in substantially equal monthly installments for 36 months thereafter.The Inducement Option Award, which was intended to be an inducement award under Rule 5635(c)(4) of the Nasdaq Stock Market Listing Rules, was effective on September 12, 2022 and has a per share exercise price equal to the closing price of a share of the Company's common stock on such date.following outstanding warrants:

	As of December 31, 2023	As of December 31, 2022		
	Number of Underlying Shares		Exercise Price	Expiration
June 2022 Warrants	384,615	384,615	$9.10	December 16, 2026
December 2021 Warrants	182,630	182,630	$24.64	June 7, 2027
January 2020 Investor Warrants	26,819	26,819	$23.59	January 13, 2025
January 2020 Placement Agent Warrants	5,954	5,954	$34.96	January 13, 2025
	600,018	600,018		

We have awards outstanding pursuant to the 2014 Plan and one other historical equity-based compensation plan, however no new awards may be granted under these plans. Generally, stock options are granted at fair market value and expire ten years from the grant date. Employee grants generally vest in three or four years, while grants to non-employee directors generally vest in one year. The specific terms of each grant are determined by our Board of Directors.**Stock-based Compensation**

Stock-based compensation expense is attributable to stock options and restricted stock unit awards. For all stock-based awards, we recognize compensation expense using a straight-line amortization method.

The following table summarizes stock-based compensation expense and the impact it had on operations for the periods presented (in thousands):

		For the year ended December 31,		For the year ended December 31,
		2022	2021	
Cost of sales	Cost of sales	$ 2	$ 9	
Cost of sales				
Cost of sales				
Product development				
Product development				
Product development	Product development	15	14	
Selling, general, and administrative	Selling, general, and administrative	100	406	
Selling, general, and administrative				
Selling, general, and administrative				
Total stock-based compensation	**Total stock-based compensation**	$ 117	$ 429	
Total stock-based compensation				
Total stock-based compensation				

At December 31, 2022 December 31, 2023 and 2021, 2022, we had unearned stock compensation expense of $0.1 million $64 thousand and $0.3 million, $128 thousand, respectively. These costs will be charged to expense and amortized on a straight-line basis in subsequent periods. The remaining weighted average period over which the unearned compensation is expected to be amortized was approximately 2.7 years years as of December 31, 2023 and 2.8 years as of December 31, 2022 and 2.7 years as of December 31, 2021.

Stock Options

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Stock options

The fair value of each stock option is estimated on the date of grant using the Black-Scholes option pricing model. Estimates utilized in the calculation include the expected life of the option, risk-free interest rate, and expected volatility, and are further comparatively detailed as follows:

	2022	2021
Fair value of options issued	$ 0.77	$ 3.92
Exercise price	$ 0.95	$ 5.07
Expected life of option (in years)	6.1	6.2
Risk-free interest rate	3.0 %	0.9 %
Expected volatility	104.0 %	96.3 %
Dividend yield	0.00 %	0.00 %

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	2023	2022
Fair value of options issued	$ 2.49	$ 0.77
Exercise price	$ 3.04	$ 0.95
Expected life of option (in years)	6.1	6.1
Risk-free interest rate	3.5 %	3.0 %
Expected volatility	101.8 %	104.0 %
Dividend yield	0.00 %	0.00 %

We utilize the simplified method as provided by ASC 718-10 to calculate the expected stock option life. Under ASC 718-10, the expected stock option life is based on the midpoint between the vesting date and the end of the contractual term of the stock option award. The use of this simplified method in place of using the actual historical exercise data is allowed when a stock option award meets all of the following criteria: the exercise price of the stock option equals the stock price on the date of grant; the exercisability of the stock option is only conditional upon completing the service requirement through the vesting date; employees who terminate their service prior to the vesting date forfeit their stock options; employees who terminate their service after vesting are granted a limited time period to exercise their stock options; and the stock options are nontransferable and non-hedgeable. We believe that our stock option awards meet all of these criteria. The estimated expected life of the option is calculated based on contractual life of the option, the vesting life of the option, and historical exercise patterns of vested options. The risk-free interest rate is based on U.S. treasury zero-coupon yield curve on the grant date for a maturity similar to the expected life of the option. The volatility estimates are calculated using historical volatility of our stock price calculated over a period of time representative of the expected life of the option. We have not paid dividends in the past, and do not expect to pay dividends over the corresponding expected term as of the grant date.

Options outstanding under all plans at December 31, 2022 December 31, 2023 have a contractual life of ten years, and vesting periods between one and four years. A summary of option activity under all plans was as follows:

	Number of Options*		Number of Options*	Weighted Average Exercise Price Per Share

		Number of Options		Weighted Average Exercise Price Per Share
Outstanding at December 31, 2020		221,450		3.45
Granted		88,240		5.07
Cancelled		(36,706)		5.35
Expired		(1,650)		49.18
Exercised		(4,225)		1.96
Outstanding at December 31, 2021				
Outstanding at December 31, 2021				
Outstanding at December 31, 2021	**Outstanding at December 31, 2021**	267,109	$	3.46
Granted	Granted	226,960		0.95
Cancelled		(160,778)		2.99
Exercised				
Canceled/forfeited				
Expired	Expired	(2,233)		2.78
Exercised		(250)		1.45

Outstanding at December 31, 2022	**Outstanding at December 31, 2022**	330,808	$	1.97
Granted				
Vested and expected to vest at December 31, 2022		276,267	$	2.13
Canceled/forfeited				
Canceled/forfeited				
Canceled/forfeited				
Expired				
Balance at December 31, 2023				
Exercisable at December 31, 2022		117,542	$	3.13
Vested and expected to vest at December 31, 2023				
Vested and expected to vest at December 31, 2023				
Vested and expected to vest at December 31, 2023				
Exercisable at December 31, 2023				
Exercisable at December 31, 2023				
Exercisable at December 31, 2023				

*Options have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

*Options have been restated for the 1-for-7 reverse stock split effective June 16, 2023.

The “Expected to Vest” options are the unvested options that remain after applying the pre-vesting forfeiture rate assumption to total unvested options. 250 No options were exercised during 2022 2023 and 4,225 22,893 options were exercised during 2021. 2022. All outstanding equity awards were out of the money as of December 31, 2022 December 31, 2023.

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The options outstanding at December 31, 2022 December 31, 2023 have been segregated into ranges for additional disclosure as follows:

OPTIONS OUTSTANDING	OPTIONS EXERCISABLE

Range of Exercise Prices			Number of Shares Outstanding	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price	Number of Shares Exercisable	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price
$0.42	—	$0.74	2,640	9.6	$ 0.72	—	—	$ —
$0.75	—	$0.78	150,000	9.7	0.75	—	—	—
$0.79	—	$1.80	69,284	7.0	1.46	32,204	4.8	1.49
$1.81	—	$2.25	48,125	5.2	2.10	48,125	5.2	2.10
$2.26	—	$27.35	60,759	6.9	5.53	37,213	6.1	5.88
			330,808	8.0	$ 1.97	117,542	5.4	$ 3.13

			OPTIONS OUTSTANDING			OPTIONS EXERCISABLE		
Range of Exercise Prices			Number of Shares Outstanding	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price	Number of Shares Exercisable	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price
$3.04	—	$4.14	7,142	9.3	$ 3.04	—	—	$ —
$4.15	—	$5.73	21,428	8.7	5.25	6,702	8.7	5.25
$5.74	—	$13.48	882	7.2	8.34	453	6.7	9.26
$13.49	—	$27.55	661	5.8	16.80	661	5.8	16.80
$27.56	—	$59.78	463	7.0	39.91	252	6.8	40.68
			30,576	8.7	$ 5.60	8,068	8.3	$ 7.53

Restricted Stock Units

In 2015, we began issuing restricted stock units to certain employees and non-employee Directors under the 2014 Plan with vesting periods ranging from one to four years from the grant date. In 2020, we began issuing restricted stock units to certain employees and non-employee Directors under the 2020 Plan with vesting periods ranging from one to four years.

The following table shows a summary of restricted stock unit activity:

	Restricted Stock Units Outstanding	Weighted Average Grant Date Fair Value
At December 31, 2020	4,480	$ 8.64
Granted	50,000	5.26
Vested	(52,080)	5.46

At December 31, 2021	2,400	$	7.14
Granted	50,000		1.26
Vested	(40,800)		1.51
At December 31, 2022	11,600	$	1.59

	Restricted Stock Units Outstanding*		Weighted Average Grant Date Fair Value
Outstanding at December 31, 2021	343	$	1.02
Granted	7,143	$	0.18
Expired	(5,829)	$	0.22
Outstanding at December 31, 2022	1,657	$	11.13
Expired	(1,428)	$	4.90
Canceled/forfeited	(229)	$	49.99
Outstanding at December 31, 2023	—	$	—

Employee*Restricted stockpurchaseplans

In September 2013, our stockholders approved units have been restated for the 2013 Employee Stock Purchase Plan (the "2013 Plan") to replace the 1994 prior purchase plan. A total of 100,000 shares of common 1-for-7 reverse stock were provided for issuance under the 2013 Plan. The 2013 Plan permits eligible employees to purchase common stock through payroll deductions at a price equal to the lower of 85 percent of the fair market value of our common stock at the beginning or end of the offering period. Employees may end their participation at any time during the offering period, and participation ends automatically upon termination of employment with us. During 2022 and 2021, employees purchased 3,971 and 22,000 shares, respectively. At December 31, 2022, 28,523 shares remained available for purchase under the 2013 Plan. split effective June 16, 2023.

NOTE 11. 10. INCOME TAXES

We file income tax returns in the U.S. federal jurisdiction, as well as in various state and local jurisdictions. With few exceptions, we are no longer subject to U.S. federal, state, and local, or non-U.S. income tax examinations by tax authorities for years before 2019. 2020. Our practice is to recognize interest and penalties related to income tax matters in income tax expense when and if they become applicable. At December 31, 2022 December 31, 2023 and 2021, 2022, respectively, there were no accrued interest and penalties related to uncertain tax positions.

The following table shows the components of the provision for income taxes (in thousands):

	For the year ended December 31,	
	2022	**2021**
Current:		

State	$ 4	$ (1)
Deferred:		
U.S. Federal	—	—
Provision for (benefit from) income taxes	$ 4	$ (1)

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	For the year ended December 31,	
	2023	**2022**
Current:		
State	$ 3	$ 4
Deferred:		
U.S. Federal	—	—
Provision for (benefit from) income taxes	$ 3	$ 4

The principal items accounting for the difference between income taxes computed at the U.S. statutory rate and the (benefit from) provision for income taxes reflected in our Consolidated Statements of Operations are as follows:

		For the year ended December 31,		**For the year ended December 31,**
		2022	**2021**	
U.S. statutory rate	U.S. statutory rate	21.0 %	21.0 %	
U.S. statutory rate				
U.S. statutory rate				
State taxes (net of federal tax benefit)	State taxes (net of federal tax benefit)	1.3	9.7	
State taxes (net of federal tax benefit)				
State taxes (net of federal tax benefit)				
Valuation allowance				
Valuation allowance				
Valuation allowance	Valuation allowance	(18.2)	(32.7)	
Other	Other	(4.1)	2.0	
		0.0 %	0.0 %	
Other				
Other				

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets are as follows (in thousands):

	At December 31,		**At December 31,**
	2022	**2021**	

Accrued expenses and other reserves	Accrued expenses and other reserves	$ 1,455	$ 1,550
Accrued expenses and other reserves			
Accrued expenses and other reserves			
Right-of-use-asset			
Right-of-use-asset			
Right-of-use-asset	Right-of-use-asset	(294)	(73)
Lease liabilities	Lease liabilities	306	88
Lease liabilities			
Lease liabilities			
Tax credits, deferred R&D, and other			
Tax credits, deferred R&D, and other			
Tax credits, deferred R&D, and other	Tax credits, deferred R&D, and other	438	49
Net operating loss	Net operating loss	18,856	17,318
Net operating loss			
Net operating loss			
Valuation allowance			
Valuation allowance			
Valuation allowance	Valuation allowance	(20,764)	(18,932)
Net deferred tax assets	**Net deferred tax assets**	$ —	$ —
Net deferred tax assets			
Net deferred tax assets			

In 2022, 2023, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance as a result of the $9.2 million $6.3 million additional federal net operating loss we recognized for the year. In 2021, 2022, our effective tax rate was lower than the statutory rate due to an increase in the valuation allowance of the $9.6 million $9.2 million additional federal net operating loss we recognized for the year.

At December 31, 2022 December 31, 2023, we had federal and state net operating loss carry-forwards ("NOLs") of approximately $132.4 million $138.7 million for federal income tax purposes ($77.6 48.0 million for state and local income tax purposes). However, due to changes in our capital structure, approximately $78.0 million $84.3 million of the $132.4 million $138.7 million is available after the application of IRC Section 382 limitations. As a result of the Tax Cuts and Job Act of 2017 (the "Tax Act"), NOLs generated in tax years beginning after December 31, 2017 can only offset 80% of taxable income. These NOLs can no longer be carried back, but they can be carried forward indefinitely. The $9.2 million $6.3 million and $9.6 million $9.2 million in federal net operating losses generated in December 31, 2022 December 31, 2023 and 2021 2022 will be subject to the new limitations under the Tax Act. If not utilized, the NOLs generated prior to December 31, 2017 of $37.5 million $0.9 million will begin to expire in 2024 for federal purposes and have begun to expire for state and local purposes.

Since we believe it is more likely than not that the benefit from NOLs will not be realized, we have provided a full valuation allowance against our deferred tax assets at December 31, 2022 December 31, 2023 and 2021, 2022, respectively. We had no net deferred tax liabilities at December 31, 2022 December 31, 2023 or 2021, 2022, respectively. In 2021, we recognized various states tax benefits as a result of the adjustment from the 2020 provision to the actual tax on the 2020 returns that were filed in 2020.

The CARES Act was enacted on March 27, 2020 and the Consolidated Appropriations Act (the “Relief Act”) was enacted on December 27, 2020 in the United States. The key provisions of the CARES Act and the Relief Act, as applicable to the Company, include the following:

The ability to use NOLs to offset income without the 80% taxable income limitation enacted as part of the Tax Cuts and Jobs Act (“TCJA”) of 2017, and to carry back NOLs to offset prior year income for five years. These are temporary provisions that apply to NOLs incurred in 2018, 2019 or 2020 tax years. We did not recognize any tax benefit for the year ended December 31, 2021 related to our ability to carry back prior year losses, as well as projected current year losses, under the CARES Act to years with the previous 35% tax rate.

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The ability to claim a current deduction for interest expense up to 50% of Adjusted Taxable Income (“ATI”) for tax years 2019 and 2020. This limitation was previously 30% of ATI pursuant to the Tax Act, and will revert to 30% after 2020. The Company has no current interest expense limitation.

In addition to the aforementioned provisions, the CARES Act also provided the following non-income tax provisions as applicable to the Company:

- The ability to defer the payment of the employer portion of social security taxes incurred between March 27, 2020 and December 31, 2020, with 50% of the deferred amount to be paid by December 31, 2021 and the remaining 50% to be paid by December 31, 2022.
- In the year ended December 31, 2022, the Company paid $77 thousand of payroll taxes previously deferred from the year ended December 21, 2021.
- The ability to claim an Employee Retention Tax Credit (“ERTC”), which is a refundable payroll tax credit, subject to certain limitations. Refer to Note 13, “Other Income” for details.
- The Company received approximately $795 thousand in PPP loans, which were forgiven in 2021. The CARES Act provides that the loan forgiveness is tax-exempt for federal purposes. Refer to Note 8, “Debt” for details.

NOTE 12. 11. PRODUCT AND GEOGRAPHIC INFORMATION

We focus our efforts on the sale of LED lighting and controls products in the commercial market and MMM, and began to expand our offerings into the consumer market in the fourth quarter of 2021. Our products are sold primarily in the United States through a combination of direct sales employees, lighting agents, independent sales representatives and distributors. We currently operate in a single industry segment, developing and selling our LED lighting products and controls into the MMM and commercial markets.

The following table provides a breakdown of product net sales for the years indicated (in thousands):

		Year ended December 31,				Year ended December 31,
		2022		2021		
Commercial products	Commercial products	$	3,746	$	4,682	
Commercial products						
Commercial products						
MMM products						

MMM products						
MMM products	MMM products		2,222		5,183	
Total net sales	**Total net sales**	$	5,968	$	9,865	
Total net sales						
Total net sales						

A geographic summary of net sales is as follows (in thousands):

		For the year ended December 31,				**For the year ended December 31,**
			2022		**2021**	
United States	United States	$	5,944	$	9,712	
United States						
United States						
International						
International						
International	International		24		153	
Total net sales	**Total net sales**	$	5,968	$	9,865	
Total net sales						
Total net sales						

At December 31, 2022 December 31, 2023 and 2021, 2022, approximately 100% of our long-lived assets, which consist of property and equipment, were located in the United States.

NOTE 13. OTHER INCOME

Employee Retention Tax Credit 12. RECEIVABLE FOR CLAIMED EMPLOYEE RETENTION TAX CREDIT

The CARES Act, which was enacted on March 27, 2020, provides an ERTC that is a refundable tax credit against certain employer taxes. The ERTC was subsequently amended by the Taxpayer Certainty and Disaster Tax Relief Act of 2020, the Consolidated Appropriation Act of 2021, and the American Rescue Plan Act of 2021, all of which amended and extended the ERTC availability and guidelines under the CARES Act. Following these amendments, we and other businesses became retroactively eligible for the ERTC, and as a result of the foregoing legislation, are eligible to claim a refundable tax credit against the employer share of Social Security taxes equal to 70% of the qualified wages paid to employees between January 1, 2021 and September 30, 2021. Qualified wages are limited to $10,000 per employee per calendar quarter in 2021 for a maximum allowable ERTC per employee of $7,000 per calendar quarter in 2021.

For purposes of the amended ERTC, an eligible employer is defined as having experienced a significant (20% or more) decline in gross receipts during each of the first three 2021 calendar quarters when compared with the same quarter in 2019 or the

immediately preceding quarter to the corresponding calendar quarter in 2019. The credit is taken against the Company's share of Social Security Tax when the Company's payroll provider files, or subsequently amends the applicable quarterly employer tax filings.

Under the amended guidelines, we were eligible to receive the ERTC for the second and third quarters of 2021. As part of the filing of our employer tax filings for the third quarter of 2021, we applied for and received a refund of $431 thousand, and we amended our filing for the second quarter of 2021, for which we expect to receive received an additional refund of approximately $445 thousand. These amounts are thousand during 2023. This amount was recorded as other income in the Consolidated Statements of Operations during the year ended December 31, 2021, and the $445 thousand expected receivable is included as a receivable for claimed ERTC in the Consolidated Balance Sheet as of December 31, 2022 and 2021. was received during 2023.

PPP Loan

On April 17, 2020, the Company was granted a loan from KeyBank in the amount of approximately $795 thousand, pursuant to the PPP under the CARES Act, which was enacted on March 27, 2020. The funds were received on April 20, 2020 and accrued interest at a rate of 1% per annum. Under the terms of the PPP, certain amounts of the loan may be forgiven if they are used for qualifying expenses as described in the CARES Act. The entire principal balance and interest were forgiven by the SBA on February 11, 2021. The $801 thousand forgiveness income was recorded as other income in the Condensed Consolidated Statements of Operations during the year ended December 31, 2021.

NOTE 14. 13. RELATED PARTY TRANSACTIONS

On January 11, 2022, our Board of Directors appointed Stephen Socolof, our Lead Independent Director, as Interim Chief Executive Officer to replace James Tu. On February 11, 2022, Mr. Tu and the Company entered into a Separation and Release Agreement and Mr. Tu resigned from the Board of Directors. Promissory Notes

On September 16, 2022 and November 9, 2022, the Company issued and sold 2022 Promissory Notes to one of the members of its Board of Directors, Gina Mei-Yun (Gina) Huang, for $450 thousand and $350 thousand, respectively. Please refer to Note 8, “Debt” for further detail.

During the third and fourth quarters of the year ended December 31, 2022, we issued and sold 2022 Promissory Notes for an aggregate principal amount of $600,000 to Jay Huang. Mr. Chiao Chieh (Jay) Huang, became a member of the Board of Directors in January 2023. our CEO.

Please refer to Note 8, 7, “Debt” and Note 15, “Subsequent Events,” for further detail.

Purchase Transactions

The Company has a purchase agreement for TLED products and spare parts with Sander Electronics, Inc., a shareholder of the Company. Purchases from Sander Electronics, Inc. for the year ended December 31, 2023 totaled $2.1 million. Accounts payable to Sander Electronics, Inc. amounted to $2.1 million as of December 31, 2023. The Company did not enter into any transactions with Sander Electronics, Inc. during the fiscal year of 2022.

Private Placements

Please refer to Note 9 for further details on Private Placements in 2023 and 2022.

NOTE 14.SUBSEQUENT EVENTS

Early Payoff 2022 Streeterville Note

On January 18, 2024, the Company and Streeterville entered into a payoff letter (the “Letter”) and exchange agreement (“Exchange Agreement”) to pay off the 2022 Streeterville Note early. The Letter and Exchange Agreement provide that the Company makes payments to reduce the outstanding obligations under the 2022 Streeterville Note of $1.0 million in cash by January 19, 2024 and exchanges 94,440 shares of common stocks by January 23, 2024 for the remaining amount. In January 2024, we paid off the 2022 Streeterville Note in full early.

ENERGY FOCUS, INC.

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NOTE 15.SUBSEQUENT EVENTS

Ms. Huang Purchase Agreements

On January 5, 2023, the Company entered into a securities purchase agreement with Mei-Yun (Gina) Huang, a member of the Board of Directors, pursuant to which the Company agreed to issue and sell, in a private placement 257,798 shares of the Company’s common stock, for a purchase price of $0.3879 per share. On January 10, 2023, the Company entered into a securities purchase agreement with Ms. Huang, pursuant to which the Company agreed to issue and sell, in a private placement 325,803 shares of the Company’s common stock for a purchase price of $0.4604 per share. On February 24, 2023, the Company entered into a securities purchase agreement with Ms. Huang, pursuant to which the Company agreed to issue and sell, in a private placement 803,212 shares of the Company’s common stock for a purchase price of $0.4980 per share

Aggregate gross proceeds to the Company in respect of these private placements to Ms. Huang are $650 thousand, before deducting estimated offering expenses payable by the Company. Each of the private placements to Ms. Huang was priced at fair market value under the Nasdaq rules. The issuance and sale of the shares pursuant to the purchase agreements with Ms. Huang are not being registered under the Securities Act, and were made pursuant to the exemption provided in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder.

Sander Securities Purchase Agreement

On January 17, 2023, the Company entered into a securities purchase agreement (the “Sander Purchase Agreement”) with certain purchasers associated with Sander Electronics, Inc. (the “Sander Purchasers”), pursuant to which the Company agreed to issue and sell in a private placement (the “Sander Private Placement”) an aggregate of 5,446,252 shares (the “Sander Shares”) of the Company’s common stock, for a purchase price per share of $0.5008. Consideration for the transaction included exchange of approximately $657,000 in the aggregate of outstanding amounts on previous short-term bridge financings.

Aggregate gross proceeds to the Company in respect of the Sander Private Placement is approximately $2.1 million, before immaterial offering expenses payable by the Company. The Sander Private Placement closed on January 20, 2023.

The Sander Private Placement was priced at-the-market under the Nasdaq rules. The issuance and sale of the Sander Shares pursuant to the Sander Purchase Agreement are not being registered under the Securities Act, and were made pursuant to certain exemptions from registration, including Sections 3(a)(9) and 4(a)(2) of the Securities Act and Regulation D promulgated thereunder, in reliance on the representations and covenants of the Sander Purchasers under the Sander Purchase Agreement.

Pursuant to the Sander Purchase Agreement, the Company agreed to increase the size of the Board of Directors to eight members and to appoint each of Jay Huang and Wen-Jeng Chang as a director for a term expiring at the 2023 annual meeting of the Company’s stockholders or his earlier resignation, death or removal in accordance with the Company’s bylaws.

On January 17, 2023, in connection with the Sander Purchase Agreement, the Company entered into a registration rights agreement with each of the Sander Purchasers.

Exchange Agreement

As discussed in Note 8, “Debt,” on September 16, 2022 and November 9, 2022 the Company sold and issued to Mei Yun (Gina) Huang, a member of the Board of Directors, 2022 Promissory Notes totaling an aggregate principal amount of $800,000. On January 17, 2023, the Company and Ms. Huang entered into exchange agreements (the “Exchange Agreements”) with respect to the 2022 Promissory Notes, pursuant to which the Company and Ms. Huang agreed to exchange (the “Exchanges”) the approximately $809,000 aggregate outstanding amounts under the 2022 Promissory Notes for an aggregate of 1,436,959 shares of Common Stock (the “Exchange Shares”) at a price per share of $0.5630.

The Exchanges were priced at fair market value under the Nasdaq rules. The Exchanges of the Exchange Shares pursuant to the Exchange Agreements are not being registered under the Securities Act, and were effected pursuant to the exemption provided in Section 3(a)(9) of the Securities Act.

Second Amendment to Inventory Facility

On January 18, 2023, the Company and Crossroads entered into a Second Amendment to the Inventory Loan Agreement (the “Crossroads Amendment”) to restructure and pay down the Inventory Facility. The Crossroads Amendment provides that the Company will make payments to reduce the outstanding obligations under the Inventory Facility of $750,000 by January 20,

2023 (which amount the Company has paid) and $250,000 by February 15, 2023. The Company also agreed to make monthly payments of approximately $40,200 towards the remaining outstanding obligations under the Inventory Facility, and to reduce the maximum amount that may be available to the Company under the Inventory Facility from $3,500,000 to $500,000, subject to the borrowing base as set forth in the Inventory Loan Agreement.

Pursuant to the Crossroads Amendment, Crossroads and the Company also agreed to extend the Inventory Facility’s current term through December 31, 2023, while eliminating the minimum borrowing amount and unused line fees and reducing the monthly service fee to a lower, fixed amount. The Company also agreed to a slightly increased interest rate, which was more than offset by the reduction in the monthly service fees. Pursuant to the Crossroads Amendment, the interest rate on borrowings under the Inventory Facility is now a per annum rate equal to (i) the Three Month Libor rate plus 5.5% (currently 10.28% per annum) or (ii) at Crossroads’ discretion, an alternative reference rate, SOFR (Secured Overnight Financing Rate), plus 6% (currently 10.176% per annum).

The foregoing summary description of the Crossroads Amendment is not complete and is qualified in its entirety by reference to the full text of the Crossroads Amendment, which is filed as an exhibit to this Current Report on Form 8-K and is incorporated by reference herein.

Amendment to 2022 Streeterville Note

On April 21, 2022, the Company sold and issued to Streeterville the 2022 Streeterville Note. On January 17, 2023, the Company and Streeterville entered into an Amendment to Promissory Note (the “Streeterville Amendment”) to restructure and pay down the 2022 Streeterville Note.

Pursuant to the Streeterville Amendment, the Company agreed to make payments to reduce the outstanding amounts of the 2022 Streeterville Note of $500,000 by January 20, 2023 (which amount the Company has paid) and $250,000 by July 14, 2023. Streeterville agreed to extend the term of the 2022 Streeterville Note through December 1, 2024, and beginning January 1, 2024, the Company will make twelve monthly repayments of approximately $117,000 each. The Company will have the right to prepay any of the scheduled repayments at any time or from time to time without additional penalty or fees. Provided the Company makes all payments as scheduled or earlier, the 2022 Streeterville Note will be deemed paid in full and shall automatically be deemed canceled.

Termination of Receivables Facility

On February 7, 2023, the Company terminated the Receivables Facility pursuant to the Receivables Loan between the Company and FSW Funding. All outstanding amounts under the Receivables Facility had been repaid prior to termination, and there were no prepayment fees in connection with termination. The Receivables Facility was secured by substantially all of the present and future assets of the Company and was subject to an intercreditor agreement with the Company's inventory lending facility lender, which intercreditor agreement was also terminated.

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 16. LEGAL MATTERS

We may be the subject of threatened or pending legal actions and contingencies in the normal course of conducting our business. We provide for costs related to these matters when a loss is probable and the amount can be reasonably estimated. The effect of the outcome of these matters on our future results of operations and liquidity cannot be predicted because any such effect depends on future results of operations and the amount or timing of the resolution of such matters. While it is not possible to predict the future outcome of such matters, we believe that the ultimate resolution of such individual or aggregated matters will not have a material adverse effect on our consolidated financial position, results of operations, or cash flows. For certain types of claims, we maintain insurance coverage for personal injury and property damage, product liability and other liability coverages in amounts and with deductibles that we believe are prudent, but there can be no assurance that these coverages will be applicable or adequate to cover adverse outcomes of claims or legal proceedings against us.

ENERGY FOCUS, INC.

SUPPLEMENTARY NOTES TO CONSOLIDATED FINANCIAL INFORMATION TO ITEM 8.

The following table sets forth our selected unaudited financial information for the four quarters in the years ended December 31, 2022 and 2021, respectively. This information has been prepared on the same basis as the audited financial statements and, in the opinion of management, contains all adjustments necessary for a fair presentation thereof.

QUARTERLY FINANCIAL DATA (UNAUDITED)

(*amounts in thousands, except per share amounts*)

2022	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Net (loss) sales	$ 663	$ 1,764	$ 1,480	$ 2,061
Gross (loss) profit	(238)	(163)	109	(26)
Net loss	(2,310)	(2,662)	(2,486)	(2,821)
Net loss per common share attributable to common stockholders (basic and diluted):	$ (0.23)	$ (0.29)	$ (0.35)	$ (0.44)
Weighted average shares used in computing net loss per common share (basic and diluted)	9,583	9,190	4,211	6,437

2021	Fourth Quarter		Third Quarter		Second Quarter		First Quarter	
Net sales	$	2,405	$	2,749	$	2,074	$	2,637
Gross (loss) profit		189		563		393		553
Net loss		(2,631)		(1,140)		(2,473)		(1,642)
Net loss per common share attributable to common stockholders (basic and diluted):	$	(0.50)	$	(0.22)	$	(0.59)	$	(0.45)
Weighted average shares used in computing net loss per common share (basic and diluted)		5,312		5,086		4,211		3,612

STATEMENTS

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

We maintain disclosure controls and procedures, as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to management, including our Chief Executive Officer, to allow for timely decisions regarding required disclosure.

Pursuant to Rule 13a-15(b) under the Exchange Act, our management must evaluate, with the participation of our Chief Executive Officer, the effectiveness of our disclosure controls and procedures, as of December 31, 2022 December 31, 2023, the end of the period covered by this report. Management, with the participation of our current Chief Executive Officer, did evaluate the effectiveness of our disclosure controls and procedures as of the end of period covered by this report. Based on this evaluation, our Chief Executive Officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of December 31, 2022 December 31, 2023.

Management’s report on internal controls over financial reporting

Management of Energy Focus, Inc. is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including our Chief Executive Officer, we conducted an evaluation of the effectiveness of internal control over financial reporting as of December 31, 2022 December 31, 2023 based upon criteria established in “Internal Control – Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of the Treadway Commission (the “COSO Framework”).

An effective internal control system, no matter how well designed, has inherent limitations, including the possibility of human error and circumvention or overriding of controls; therefore, it can provide only reasonable assurance with respect to reliable financial reporting. Furthermore, effectiveness of an internal control system in future periods cannot be guaranteed, because the design of any system of internal controls is based in part upon assumptions about the likelihood of future events. There can be no assurance that any control design will succeed in achieving its stated goals under all potential future conditions. Over time, certain controls may become inadequate because of changes in business conditions, or the degree of compliance with policies and procedures may deteriorate. As such, misstatements due to error or fraud may occur and not be detected.

Based upon our evaluation under the COSO framework as of December 31, 2022 December 31, 2023, management concluded that its internal control over financial reporting was effective as of December 31, 2022 December 31, 2023.

Changes in internal control over financial reporting

During For the quarter fiscal year ended December 31, 2022 December 31, 2023, there were no changes in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Attestation Report of Independent Registered Public Accounting Firm

This Annual Report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our independent public accounting firm pursuant to the rules of the SEC that permit us to provide only management's report.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

ITEM 11. EXECUTIVE COMPENSATION.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

Except as set forth in Part I, the information required by Items 10, 11, 12, 13 and 14 will appear in the definitive Energy Focus, Inc. Proxy Statement for the Annual Meeting of Stockholders Shareholders to be held on or about June 15, 2023 June 15, 2024, which will be filed pursuant to Regulation 14A under the Securities Exchange Act of 1934 and is incorporated by reference in this Annual Report pursuant to General Instruction G(3) of Form 10-K (other than the portions thereof not deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934).

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) **(1) Financial statements**

The financial statements required by this Item 15(a)(1) are set forth in Item 8, "Financial Statements and Supplementary Data," of this Annual Report.

(2) Financial statement schedules

Schedule II—Valuation and Qualifying Accounts is set forth below. All other schedules are omitted either because they are not applicable, or the required information is shown in the financial statements or the notes.

SCHEDULE II
ENERGY FOCUS, INC.
SCHEDULE OF VALUATION AND QUALIFYING ACCOUNTS
(amounts in thousands)

Description	Description	Beginning Balance	Charges to Revenue/ Expense	Deductions	Ending Balance	Description	Beginning Balance	Charges to Revenue/ Expense	Deductions	Ending Balance
Year ended December 31, 2022										
Year ended December 31, 2023										
Allowance for doubtful accounts and returns										
Allowance for doubtful accounts and returns										
Allowance for doubtful accounts and returns	Allowance for doubtful accounts and returns	$ 14	$ 29	$ 17	$ 26					
Inventory reserves	Inventory reserves	3,050	312	835	2,527					
Valuation allowance for deferred tax assets	Valuation allowance for deferred tax assets	18,931	1,833	—	20,764					
Year ended December 31, 2021										
Year ended December 31, 2022										
Allowance for doubtful accounts and returns										
Allowance for doubtful accounts and returns										

Allowance for doubtful accounts and returns	Allowance for doubtful accounts and returns	$ 8	$ 6	$ —	$ 14
Inventory reserves	Inventory reserves	2,894	281	125	3,050
Valuation allowance for deferred tax assets	Valuation allowance for deferred tax assets	16,363	2,568	—	18,931

(3) Exhibits

EXHIBIT INDEX

Exhibit Number	Description of Documents
3.1	Certificate of Incorporation of Energy Focus, Inc. (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A filed May 1, 2006).

3.2	Certificate of Amendment to the Certificate of Incorporation of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on June 21, 2010 (incorporated by reference to Exhibit 3.2 to the Registrant's Annual Report on Form 10-K filed on March 24, 2020).
3.3	Certificate of Amendment to the Certificate of Incorporation of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on October 9, 2012 (incorporated by reference to Exhibit 3.3 to the Registrant's Annual Report on Form 10-K filed on March 24, 2020).
3.4	Certificate of Amendment to the Certificate of Incorporation of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on October 28, 2013 (incorporated by reference to Exhibit 3.4 to the Registrant's Annual Report on Form 10-K filed on March 24, 2020).
3.5	Certificate of Amendment to the Certificate of Incorporation of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on July 16, 2014 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on July 16, 2014).
3.6	Certificate of Amendment to the Certificate of Incorporation of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on July 24, 2015 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on July 27, 2015).
3.7	Certificate of Amendment to the Certificate of Incorporation of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on January 15, 2020 (incorporated by reference to Exhibit 3.7 to the Registrant's Annual Report on Form 10-K filed on March 24, 2020).

3.8	Certificate of Designation of Series A Convertible Preferred Stock of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on March 29, 2019 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on April 1, 2019).
3.9	Amendment to the Certificate of Designation of Series A Convertible Preferred Stock of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on May 30, 2019 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 30, 2019).
3.10	Amendment to the Certificate of Designation of Series A Convertible Preferred Stock of Energy Focus, Inc. filed with the Secretary of State of the State of Delaware on January 15, 2020 (incorporated by reference to Exhibit 3.10 to the Registrant's Annual Report on Form 10-K filed on March 24, 2020).
3.11	Certificate of Amendment of Certificate of Incorporation, dated June 11, 2020 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on June 11, 2020).
3.12	Certificate of Amendment of Certificate of Incorporation, dated June 15, 2023 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on June 22, 2023).
3.13	Bylaws of Energy Focus, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 18, 2020).
3.13 3.14	Certificate of Ownership and Merger, Merging Energy Focus, Inc., a Delaware corporation, into Fiberstars, Ind. a Delaware corporation, filed with the Secretary of State of the State of Delaware on May 4, 2007 (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q filed on May 10, 2007).
4.1	Description of Securities of Energy Focus, Inc. (incorporated by reference to Exhibit 4.1 to the Registrant's Annual Report on Form 10-K filed on March 24, 2020).
4.2	Form of Warrant (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on January 13, 2020).
4.3	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K filed on January 13, 2020).
4.4	Form of Amendment to Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.4 to the Registrant's Annual Report on Form 10-K filed on March 25, 2021).
4.5	Form of Warrant (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on December 15, 2021).
4.6	Form of Warrant (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on June 6, 2022).
10.2*	2008 Incentive Stock Plan, as amended (incorporated by reference from Appendix B to the Registrant's Preliminary Proxy Statement on Form PRER14A filed on June 8, 2012).
10.3*	2014 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K filed on February 22, 2018).
10.4*	Form of Nonqualified Stock Option Grant Agreement to Non-Employee Directors (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on July 16, 2014).
10.5*	Form of Nonqualified Stock Option Grant Agreement to Employees (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on July 16, 2014).
10.6*	Form of Restricted Stock Unit Grant Agreement to Employees (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on July 16, 2014).
10.7*	Form of Restricted Stock Unit Grant Agreement to Non-Employee Directors (incorporated by reference to Exhibit 10.8 to the Registrant's Annual Report on Form 10-K filed on February 22, 2018).
10.8*	Form of Incentive Stock Option Grant Agreement to Employees (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on July 16, 2014).

10.9*	Form of Notice of Stock Option Grant for 2008 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on November 13, 2013).
10.10*	Energy Focus, Inc. Executive Bonus Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on July 19, 2019).
10.11 10.3	Form of Securities Purchase Agreement, dated as of January 9, 2020, between the Company and each purchaser named in the signature pages thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on January 13, 2020).
10.12 10.4	Loan and Security Agreement, dated as of August 11, 2020, by and between the Company and Crossroads Financial Group, LLC (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on August 13, 2020).
10.13* 10.5*	Energy Focus, Inc. 2020 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 22, 2020).
10.14* 10.6*	Energy Focus, Inc. 2020 Stock Incentive Plan - Form of Restricted Stock Unit Award Agreement for Employees (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on September 22, 2020).
10.15* 10.7*	Energy Focus, Inc. 2020 Stock Incentive Plan - Form of Restricted Stock Unit Award Agreement for Non-Employee Directors (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on September 22, 2020).
10.16* 10.8*	Energy Focus, Inc. 2020 Stock Incentive Plan - Form of Nonqualified Stock Option Agreement for Employees (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on September 22, 2020).

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

10.17* 10.9*	Energy Focus, Inc. 2020 Stock Incentive Plan - Form of Incentive Stock Option Agreement (incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed on September 22, 2020).
10.18 10.10	First Amendment to Loan and Security Agreement, dates as of April 20, 2021 by and between the Company and Crossroads Financial Group, LLC (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on April 21, 2021).
10.19## 10.11##	Form of Securities Purchase Agreement, dated as of December 13, 2021, between the Company and each purchaser named in the signature pages thereto (incorporated by reference to Exhibit 10.1 in the Registrant's Current Report on Form 8-K filed on December 15, 2021).
10.20 10.12	Registration Rights Agreement, dated as of December 13, 2021, between the Company and each purchaser named in the signature pages thereto (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on December 15, 2021).
10.21 10.13	Note Purchase Agreement, dated as of April 21, 2022 by and between the Company and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on April 25, 2022).
10.22 10.14	Promissory Note, dated as of April 21, 2022 by and between the Company and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on April 25, 2022).
10.23 10.15	Securities Purchase Agreement, dated as of June 3, 2022 by and between the Company and Certain Investors (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 6, 2022).
10.24 10.16	Registration Rights Agreement dated as of June 3, 2022 by and between the Company and Certain Investors (incorporated by

	reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on June 6, 2022).
10.25* 10.17*	Amended and Restated Energy Focus, Inc. 2020 Stock Incentive Plan, dated as of June 22, 2022 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 24, 2022).
10.26* 10.18*	Chief Executive Officer Offer Letter dated September 6, 2022 between Lesley A. Matt and Energy Focus, Inc. (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on November 10, 2022).
10.27 10.19	Promissory Note, dated as of September 16, 2022, by and between the Company and Mei-Yun Huang (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 22, 2022).
10.28 10.20	Promissory Note, dated as of October 27, 2022, by and between the Company and Jay Chiao Chieh (Jay) Huang (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on November 10, 2022).
10.29 10.21	Promissory Note, dated as of November 4, 2022, by and between the Company and Jay Chiao Chieh (Jay) Huang (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on November 10, 2022).
10.30 10.22	Promissory Note, dated as of November 9, 2022, by and between the Company and Mei-Yun Huang (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on November 10, 2022).
10.31 10.23	Promissory Note, dated as of December 6, 2022, by and between the Company and Jay Chiao Chieh (Jay) Huang (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on December 9, 2022).
10.32 10.24	Promissory Note, dated as of December 21, 2022, by and between the Company and Jay Chiao Chieh (Jay) Huang (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on December 23, 2022).
10.33 10.25	Promissory Note, dated as of December 30, 2022, by and between the Company and Tingyu Lin (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 6, 2023).
10.34 10.26	Securities Purchase Agreement, dated as of January 5, 2023, between the Company and Mei Yun Huang (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 11, 2023).
10.35 10.27	Securities Purchase Agreement, dated as of January 5, 2023, between the Company and Mei Yun Huang (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on January 11, 2023).
10.36 10.28	Form of Securities Purchase Agreement, dated as of January 17, 2023, between the Company and each purchaser named in the signature pages thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 23, 2023).

10.37	10.29	Form of Registration Rights Agreement, dated as of January 17, 2023, between the Company and each purchaser named in the signature pages thereto (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on January 23, 2023).
10.38	10.30	Form of Exchange Agreement, dated January 17, 2023, between the Company and Mei Yun (Gina) Huang (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on January 23, 2023).
10.39	10.31	Second Amendment to Loan and Security Agreement, dated January 18, 2023, between the Company and Crossroads Financial Group, LLC (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on January 23, 2023).
10.40	10.32	Amendment to Promissory Note, dated January 17, 2023, between the Company and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed on January 23, 2023).
	10.33	Securities Purchase Agreement, dated as of February 24, 2023, between the Company and Mei Yun (Gina) Huang (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on February 28, 2023).
	10.34	Securities purchase agreement, dated as of March 28, 2023 with Chiao Chieh (Jay) Huang (incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q filed on May 11, 2023).
	10.35	Securities purchase agreement, dated as of March 30, 2023 with Mei Yun (Gina) Huang (incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q filed on May 11, 2023).
	10.36	Exchange Agreement, dated as of March 31, 2023, between the Company and Streeterville Capital, LLC. (incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q filed on May 11, 2023).

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

10.37	Form of Securities Purchase Agreement, dated as of September 29, 2023, between the Company and certain accredited investors (incorporated by reference to Exhibit 10.1 to the Registrant’s Current Report on Form 8-K filed on July 5, 2023).
21.1	Subsidiaries of the Registrant (filed with this Report). (incorporated by reference to Exhibit 21.1 to the Registrant’s Annual Report on Form 10-K filed on March 23, 2023)
23.1	Consent of GBQ Partners, LLC, Independent Registered Public Accounting Firm (filed with this Report).
31.1	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1+	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1	Compensation Recovery Policy of Energy Focus, Inc.
101+**	The following financial information from Energy Focus, Inc. Annual Report on Form 10-K for the year ended December 31, 2022, formatted in Inline XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Income (Loss), (iv) Consolidated Statements of Shareholders’ Equity, (v) Consolidated Statements of Cash Flows, (vi) the Notes to Consolidated Financial Statements.
104**	Cover Page Interactive Data File (embedded within the Inline XBRL document).

*	Management contract or compensatory plan or arrangement.
**	Pursuant to Regulation S-T, this interactive data file is not deemed filed for purposes of Section 11 of the Securities Act, or Section 18 of the Exchange Act, or otherwise subject to the liabilities of these sections.
+	This exhibit will not be deemed “filed” for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act or the Exchange Act.
#	Portions of this exhibit have been redacted in compliance with Regulation S-K Item 601(b)(10).
##	Certain schedules and exhibits to this agreement have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule or exhibit will be furnished to the Securities and Exchange Commission upon request.

ITEM 16. FORM 10-K SUMMARY

None.

ENERGY FOCUS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereto duly authorized.

ENERGY FOCUS, INC.

Date: March 23, 2023 March 22, 2024

By: /s/ Lesley A. Matt Chiao Chieh (Jay) Huang

Lesley A. Matt Chiao Chieh (Jay) Huang

Chief Executive Officer

(Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated and on the date indicated:

Date	Signature	Title
March 23, 2023 22, 2024	/s/ Chiao Chieh (Jay) Huang Chiao Chieh (Jay) Huang	Director, President, and Chairman of the Board Chief Executive Officer (Principal Executive Officer)
March 23, 2023 22, 2024	/s/ Wen-Jeng Chang Wen-Jeng Chang	Director
March 23, 2023 22, 2024	/s/ Gina Mei Yun (Gina) Huang (Mei Yun Huang) Gina Mei Yun (Gina) Huang (Mei Yun Huang)	Director
March 23, 2023 22, 2024	/s/ K.R. “Kaj” den Daas Kin-Fu Chen Kin-Fu Chen	Chairman of the Board
March 22, 2024	K.R. “Kaj” den Daas /s/ Shou-Jang Lee Shou-Jang Lee	Director
March 23, 2023 22, 2024	/s/ Brian J. Lagarto Jason Tien-Chia Tsai Brian J. Lagarto Jason Tien-Chia Tsai	Director
March 23, 2023	/s/ Jeffery R. Parker Jeffery R. Parker	Director
March 23, 2023	/s/ Stephen Socolof Stephen Socolof	Director and Lead Independent Director

EXHIBIT 21.1

SUBSIDIARIES

Name	Location	Doing Business as
Energy Focus LED Solutions, LLC	Solon, Ohio	Energy Focus LED Solutions, LLC

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EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Energy Focus, Inc.
Solon, Ohio

We hereby consent to the incorporation by reference in the Registration Statements on Form S-1 (No. 333-237614), and Form S-3 (Nos. 333-265685, 333-261905 and 333-261906) and Form S-8 (Nos. 333-249272, 333-219805, 333-206088, 333-197422, 333-193024, 333-184028 and 333-169274) of Energy Focus, Inc. (the "Company") of our report dated March 23, 2023 March 22, 2024, relating to the consolidated financial statements and financial statement schedule, which appear in the Company's Annual Report on Form 10-K for the year ended December 31, 2021 December 31, 2023 to which this consent is filed as an exhibit. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ GBQ Partners, LLC

Columbus, Ohio
March 23, 2023 22, 2024

EXHIBIT 31.1

CERTIFICATION

I, Lesley A. Matt, Chiao Chieh (Jay) Huang, certify that:

1. I have reviewed this Annual Report on Form 10-K of Energy Focus, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading

with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Lesley A. Matt Chiao Chieh (Jay) Huang
Name: Lesley A. Matt Chiao Chieh (Jay) Huang
Title: Chief Executive Officer
Date: March 23, 2023 22, 2024

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Energy Focus, Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 December 31, 2023 (the "Report"), I, Lesley A. Matt, Chiao Chieh (Jay) Huang, Chief Executive Officer of the Company certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes Oxley Act of 2002, that to the best of my knowledge:

(i) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Lesley A. Matt Chiao Chieh (Jay) Huang

Lesley A. Matt Chiao Chieh (Jay) Huang
Chief Executive Officer

Date: March 23, 2023 22, 2024

A signed original of this written statement required by Section 906 has been provided to Energy Focus, Inc. and will be retained by Energy Focus, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 97.1

Energy Focus, Inc.
Compensation Recovery Policy

This Compensation Recovery Policy (this "Policy") is adopted by Energy Focus, Inc. (the "Company") in accordance with Rule 10D-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (as promulgated pursuant to Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010), and related listing rules standards (the "Exchange Rules") of the Nasdaq Capital Market (the "Exchange"), including Nasdaq Rule 5608. This Policy is effective as of December 1, 2023 (the "Effective Date").

1. Definitions

(a) **"Accounting Restatement"** means a requirement that the Company prepare an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the U.S. federal securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. Changes to the Company's financial statements that do not represent error corrections are not an Accounting Restatement, including: (A) retrospective application of a change in accounting principle; (B) retrospective revision to reportable segment information due to a change in the structure of the Company's internal organization; (C) retrospective reclassification due to a discontinued operation; (D) retrospective application of a change in reporting entity, such as from a reorganization of entities under common control; and (E) retrospective revision for stock splits, reverse stock splits, stock dividends or other changes in capital structure.

(b) **"Committee"** means the Compensation Committee of the Company's Board of Directors (the "Board"), or any other Committee appointed by the Board for the administration of this Policy.

(c) **"Covered Person"** means a person who served as an Executive Officer at any time during the performance period for the applicable Incentive-Based Compensation.

(d) **"Erroneously Awarded Compensation"** means the amount of Incentive-Based Compensation that was Received that exceeds the amount of Incentive-Based Compensation that otherwise would have been Received had the amount of Incentive-Based Compensation been determined based on the restated amounts, computed without regard to any taxes paid by the Covered Person or by the Company on the Covered Person's behalf. For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in an Accounting Restatement, the amount of Erroneously Awarded Compensation will be based on a reasonable estimate by the Committee of the effect of the Accounting Restatement on the stock price or total shareholder return upon which the Incentive-Based Compensation was Received. The Company will maintain documentation of the determination of that reasonable estimate and provide such documentation to the Exchange.

(e) **"Executive Officer"** meansthe Company's officers as defined in Rule 16a-1(f) under the Exchange Act.

(f) **"Financial Reporting Measures"** means (A) measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures (whether or not such measures are presented within the Company's financial statements or included in a filing made with the U.S. Securities and Exchange Commission), (B) stock price and (C) total shareholder return.

(g) **"Incentive-Based Compensation"** means any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure.

(h) Incentive-Based Compensation is deemed to be **"Received"** in the Company's fiscal period during which the Financial Reporting Measure specified in the applicable Incentive-Based Compensation award is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period or is subject to additional time-based vesting requirements.

(i) **"Recovery Period"** means the three completed fiscal years immediately preceding the earlier of: (A) the date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if

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Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an Accounting Restatement; or (B) the date a court, regulator, or other legally authorized body directs the Company to prepare an Accounting Restatement. In addition, if there is a change in the Company's fiscal year end, the Recovery Period will also include any transition period to the extent required by Exchange Rules.

2. <u>Recovery of Erroneously Awarded Compensation</u>

(a) <u>Application of this Policy</u>. Subject to the terms of this Policy and the requirements of Exchange Rules, if, on or after the Effective Date, the Company is required to prepare an Accounting Restatement, the Company will attempt to recover, reasonably promptly from each Covered Person, any Erroneously Awarded Compensation that was Received by such Covered Person during the Recovery Period pursuant to Incentive-Based Compensation that is subject to this Policy.

3. Interpretation and Administration

(a) Role of the Committee. This Policy will be interpreted by the Committee in a manner that is consistent with Exchange Rules and any other applicable law and will otherwise be interpreted in the business judgment of the Committee. All decisions and interpretations of the Committee that are consistent with Exchange Rules will be final and binding.

(b) Compensation Not Subject to this Policy. This Policy does not apply to Incentive-Based Compensation that was Received before the Effective Date. With respect to any Covered Person, this Policy does not apply to Incentive-Based Compensation that was Received by such Covered Person before beginning service as an Executive Officer.

(c) Determination of Means of Recovery. Subject to the requirement that recovery be made reasonably promptly, the Committee will determine the appropriate means of recovery, which may vary between Covered Persons or based on the nature of the applicable Incentive-Based Compensation, and which may involve, without limitation, establishing a deferred repayment plan or setting off against current or future compensation otherwise payable to the Covered Person. Recovery of Erroneously Awarded Compensation will be made without regard to income taxes paid by the Covered Person or by the Company on the Covered Person's behalf in connection with such Erroneously Awarded Compensation.

(d) Determination That Recovery is Impracticable. The Company is not required to recover Erroneously Awarded Compensation if a determination is made by the Committee that either (A) after the Company has made and documented a reasonable attempt to recover such Erroneously Awarded Compensation, the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered or (B) recovery of such Erroneously Awarded Compensation would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the registrant, to fail to meet the requirements of Section 401(a)(13) or 411(a) of the Internal Revenue Code and regulations thereunder.

(e) No Indemnification or Company-Paid Insurance. The Company will not indemnify any Covered Person against the loss of Erroneously Awarded Compensation and will not pay or reimburse any Covered Person for the purchase of a third-party insurance policy to fund potential recovery obligations.

(f) Interaction with Other Clawback Provisions. The Company will be deemed to have recovered Erroneously Awarded Compensation in accordance with this Policy to the extent the Company actually receives such amounts pursuant to any other Company policy, program or agreement (including the Prior Policy), pursuant to Section 304 of the Sarbanes-Oxley Act or otherwise.

(g) No Limitation on Other Remedies. Nothing in this Policy will be deemed to limit the Company's right to terminate employment of any Covered Person, to seek recovery of other compensation paid to a Covered Person, or to pursue other rights or remedies available to the Company under applicable law.

4. Modification and Termination

(a) Modification. This Policy may be modified from time to time by the Board or by the Committee in a manner that is consistent with Exchange Rules and any other applicable law.

(b) Termination. This Policy will terminate and no longer be enforceable when the Company ceases to be listed on the Exchange.

DISCLAIMER

THE INFORMATION CONTAINED IN THE REFINITIV CORPORATE DISCLOSURES DELTA REPORT™ IS A COMPARISON OF TWO FINANCIALS PERIODIC REPORTS. THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORT INCLUDING THE TEXT AND THE COMPARISON DATA AND TABLES. IN NO WAY DOES REFINITIV OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED IN THIS REPORT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S ACTUAL SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.