UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

(Mark One)

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

For the quarterly period ended December 30, 2023

OR

☐ **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 001-36861

Lumentum Holdings Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**47-3108385**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

1001 Ridder Park Drive, San Jose, California 95131

(Address of principal executive offices including Zip code)

(408) 546-5483

(Registrant's telephone number, including area code)

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 of $0.001 per share	LITE	Nasdaq Global Select Market

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 x No o

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

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	x	Accelerated filer	o	Non-accelerated filer	o	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. o

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

As of February 1, 2024, the Registrant had 67.4 million shares of common stock outstanding.

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PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (UNAUDITED)

LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(in millions, except per share data)

(*Unaudited*)

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Net revenue	$ 366.8	$ 506.0	$ 684.4	$ 1,012.8
Cost of sales	281.3	315.1	504.2	597.7
Amortization of acquired developed intangibles	21.5	24.7	39.5	47.7
Gross profit	64.0	166.2	140.7	367.4
Operating expenses:				
Research and development	78.3	75.8	151.8	148.5
Selling, general and administrative	85.1	98.4	158.1	204.1
Restructuring and related charges	5.8	13.9	16.8	23.2
Total operating expenses	169.2	188.1	326.7	375.8
Loss from operations	(105.2)	(21.9)	(186.0)	(8.4)
Interest expense	(9.7)	(8.9)	(19.4)	(17.4)
Other income, net	13.4	3.7	34.6	17.5
Loss before income taxes	(101.5)	(27.1)	(170.8)	(8.3)
Income tax provision (benefit)	(2.4)	4.6	(3.8)	23.8
Net loss	$ (99.1)	$ (31.7)	$ (167.0)	$ (32.1)
Net loss per share:				
Basic	$ (1.47)	$ (0.46)	$ (2.49)	$ (0.47)
Diluted	$ (1.47)	$ (0.46)	$ (2.49)	$ (0.47)
Shares used to compute net loss per share:				
Basic	67.2	68.3	67.0	68.2
Diluted	67.2	68.3	67.0	68.2

See accompanying Notes to Condensed Consolidated Financial Statements.

LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in millions)
(Unaudited)

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Net loss	$ (99.1)	$ (31.7)	$ (167.0)	$ (32.1)
Other comprehensive income, net of tax:				
Foreign currency translation adjustments	0.2	—	—	—
Net change in unrealized gain on available-for-sale securities	3.8	3.6	5.1	3.0
Other comprehensive income, net of tax	4.0	3.6	5.1	3.0
Comprehensive loss, net of tax	$ (95.1)	$ (28.1)	$ (161.9)	$ (29.1)

See accompanying Notes to Condensed Consolidated Financial Statements.

LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in millions, except par value)
(*Unaudited*)

	December 30, 2023	July 1, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 469.3	$ 859.0
Short-term investments	754.7	1,154.6
Accounts receivable, net	248.3	246.1
Inventories	471.7	408.6
Prepayments and other current assets	118.1	109.6
Total current assets	2,062.1	2,777.9
Property, plant and equipment, net	582.3	489.5
Operating lease right-of-use assets, net	81.3	77.3
Goodwill	1,054.6	695.1
Other intangible assets, net	730.6	459.2
Deferred tax asset	130.2	116.3
Other non-current assets	14.9	16.8
Total assets	$ 4,656.0	$ 4,632.1
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 163.0	$ 169.4
Accrued payroll and related expenses	50.4	39.4
Accrued expenses	65.8	51.2
Convertible notes, current	319.7	311.6
Operating lease liabilities, current	14.5	14.4
Other current liabilities	45.0	47.8
Total current liabilities	658.4	633.8
Convertible notes, non-current	2,501.7	2,500.0
Operating lease liabilities, non-current	52.9	47.7
Deferred tax liability	67.6	3.4
Other non-current liabilities	97.6	91.4
Total liabilities	3,378.2	3,276.3
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Common stock, $0.001 par value, 990 authorized shares, 67.4 and 66.4 shares issued and outstanding as of December 30, 2023 and July 1, 2023, respectively	0.1	0.1
Additional paid-in capital	1,776.1	1,692.2
Accumulated deficit	(507.6)	(340.6)
Accumulated other comprehensive income	9.2	4.1
Total stockholders' equity	1,277.8	1,355.8
Total liabilities and stockholders' equity	$ 4,656.0	$ 4,632.1

See accompanying Notes to Condensed Consolidated Financial Statements.

LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)
(*Unaudited*)

	Common Stock					
	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
Balance as of July 1, 2023	**66.4**	**$ 0.1**	**$ 1,692.2**	**$ (340.6)**	**$ 4.1**	**$ 1,355.8**
Net loss	—	—	—	(67.9)	—	(67.9)
Other comprehensive income	—	—	—	—	1.1	1.1
Issuance of shares in connection with vesting of restricted stock units and performance stock units	0.8	—	—	—	—	—
Withholding taxes related to net share settlement of restricted stock units	(0.2)	—	(12.9)	—	—	(12.9)
Stock-based compensation	—	—	34.7	—	—	34.7
Balance as of September 30, 2023	**67.0**	**$ 0.1**	**$ 1,714.0**	**$ (408.5)**	**$ 5.2**	**$ 1,310.8**
Net loss				(99.1)		(99.1)
Other comprehensive income	—	—	—	—	4.0	4.0
Equity awards pursuant to merger agreement	—	—	23.5	—	—	23.5
Issuance of shares in connection with vesting of restricted stock units and performance stock units	0.3	—	—	—	—	—
Withholding taxes related to net share settlement of restricted stock units	(0.1)	—	(3.2)	—	—	(3.2)
ESPP shares issued	0.2	—	7.3	—	—	7.3
Stock-based compensation	—	—	34.5	—	—	34.5
Balance as of December 30, 2023	**67.4**	**$ 0.1**	**$ 1,776.1**	**$ (507.6)**	**$ 9.2**	**$ 1,277.8**

LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)
(*Unaudited*)

	Common Stock						
	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance as of July 2, 2022	**68.0**	**$ 0.1**	**$ 2,003.6**	**$ (129.1)**	**$ 0.4**	**$ 1,875.0**
Cumulative adjustment from adoption of ASU 2020-06	—	—	(426.5)	85.6	—	(340.9)
Net loss	—	—	—	(0.4)	—	(0.4)
Other comprehensive loss	—	—	—	—	(0.6)	(0.6)
Issuance of shares in connection with vesting of restricted stock units and performance stock units	0.7	—	—	—	—	—
Withholding taxes related to net share settlement of restricted stock units	(0.2)	—	(22.4)	—	—	(22.4)
Repurchases of common stock	(0.3)	—	—	(25.7)	—	(25.7)
Stock-based compensation	—	—	41.4	—	—	41.4
Balance as of October 1, 2022	**68.2**	**$ 0.1**	**$ 1,596.1**	**$ (69.6)**	**$ (0.2)**	**$ 1,526.4**
Net loss	—	—	—	(31.7)	—	(31.7)
Other comprehensive loss	—	—	—	—	3.6	3.6
Issuance of shares in connection with vesting of restricted stock units and performance stock units	0.2	—	—	—	—	—
Withholding taxes related to net share settlement of restricted stock units	(0.1)	—	(4.3)	—	—	(4.3)
ESPP shares issued	0.1	—	5.7	—	—	5.7
Stock-based compensation	—	—	43.9	—	—	43.9
Balance as of December 31, 2022	**68.4**	**$ 0.1**	**$ 1,641.4**	**$ (101.3)**	**$ 3.4**	**$ 1,543.6**

See accompanying Notes to Condensed Consolidated Financial Statements.

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LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)
(Unaudited)

	Six Months Ended	
	December 30, 2023	**December 31, 2022**
OPERATING ACTIVITIES:		
Net loss	$ (167.0)	$ (32.1)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation expense	55.4	50.9
Stock-based compensation	66.7	83.2
Amortization of acquired intangibles	66.6	68.3
Loss on sales and dispositions of property, plant and equipment	1.4	7.2
Amortization of debt discount and debt issuance costs	9.7	11.9
Amortization of inventory fair value adjustment in connection with acquisition	3.4	14.2
Other non-cash items	(8.5)	1.0
Changes in operating assets and liabilities:		
Accounts receivable	18.7	(1.5)
Inventories	7.5	(36.4)
Operating lease right-of-use assets, net	(5.1)	7.9
Prepayments and other current and non-currents assets	6.3	(13.9)
Income taxes, net	(26.6)	(14.8)
Accounts payable	(51.1)	(45.0)
Accrued payroll and related expenses	5.1	(15.0)
Operating lease liabilities	6.7	(7.3)
Accrued expenses and other current and non-current liabilities	7.0	37.1
Net cash provided by (used in) operating activities	(3.8)	115.7
INVESTING ACTIVITIES:		
Payments for acquisition of property, plant and equipment	(88.8)	(62.8)
Acquisition of businesses, net of cash acquired	(700.9)	(861.6)
Purchases of short-term investments	(184.3)	(327.8)
Proceeds from maturities and sales of short-term investments	599.7	501.0
Payments for acquisition of intangible assets	(3.0)	—
Proceeds from the sales of property, plant and equipment	0.2	0.1
Net cash used in investing activities	(377.1)	(751.1)
FINANCING ACTIVITIES:		
Repurchase of common stock	—	(35.8)
Payment of withholding taxes related to net share settlement of restricted stock units	(16.1)	(26.7)
Proceeds from employee stock plans	7.3	5.7
Repayment of term loan	—	(5.9)
Net cash used in financing activities	(8.8)	(62.7)
Decrease in cash and cash equivalents	(389.7)	(698.1)
Cash and cash equivalents at beginning of period	859.0	1,290.2
Cash and cash equivalents at end of period	$ 469.3	$ 592.1
Supplemental disclosure of cash flow information:		
Cash paid for taxes, net	$ 22.2	$ 38.5
Cash paid for interest	9.9	5.4
Supplemental disclosure of non-cash investing and financing activities:		
Unpaid property, plant and equipment in accounts payable and accrued expenses	8.1	16.4
Unpaid intangible assets in accrued expenses	2.0	—
Settlement of loan to NeoPhotonics	—	50.0

LUMENTUM HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)
(Unaudited)

Share-based purchase price consideration in connection with the Cloud Light acquisition	23.5	—
Right-of-use assets obtained in exchange for new operating lease liabilities	16.0	19.4

See accompanying Notes to Condensed Consolidated Financial Statements.

LUMENTUM HOLDINGS INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. Description of Business and Summary of Significant Accounting Policies

Description of Business

Lumentum Holdings Inc. (“we,” “us,” “our,” “Lumentum” or the “Company”) is an industry-leading provider of optical and photonic products addressing a range of end-market applications for manufacturing, inspection, and life-science applications.

Our Cloud & Networking products include a wide range of components, modules and subsystems to support customers including carrier networks for access (local), metro (intracity), long-haul (city-to-city and worldwide) and submarine (undersea) applications. Our products also address enterprise, cloud and data center applications, including storage-access networks (“SANs”), local-area networks (“LANs”) and wide-area networks (“WANs”), as well as artificial intelligence and machine learning (“AI/ML”).

Our Industrial Tech products include diode laser products such as VCSELs and edge emitting lasers. In the consumer end-market, our laser light sources are integrated into 3D sensing cameras, which are used in applications in mobile devices, gaming, payment kiosks, computers, other consumer electronics devices, and automobiles. Applications include biometric identification, computational photography, virtual and augmented reality, and natural user interfaces, among others. In the industrial end-market, our diode lasers are used primarily as pump sources for pulsed and kilowatt class fiber lasers. Our products also include laser products used in a variety of OEM applications including diode-pumped solid-state, fiber, diode, direct-diode and gas lasers, such as argon-ion and helium-neon lasers.

Basis of Presentation

We have prepared the accompanying condensed consolidated financial statements in accordance with U.S. generally accepted accounting principles (“GAAP”), which requires management to make estimates and assumptions that affect the amounts reported in our condensed consolidated 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 future, actual results may be different from the estimates. Our interim period operating results do not necessarily indicate the results that may be expected for any other interim period or for the full fiscal year. In the opinion of the Company’s management, the information presented herein reflects all normal and recurring adjustments necessary for a fair presentation of our results of operations, financial position, stockholders’ equity, and cash flows. Our critical accounting policies are those that affect our financial statements materially and involve difficult, subjective, or complex judgments by management. Those policies are inventory valuation, revenue recognition, income taxes, goodwill, and business combinations.

Prior to fiscal year 2024, we operated in two reportable segments consisting of Optical Communications (“OpComms”) and Commercial Lasers (“Lasers”). During the fiscal first quarter of 2024, we changed our organizational structure to better align with trends in our markets and our customer and product mix. Our new operating segments are Cloud & Networking and Industrial Tech. The Cloud & Networking segment includes the Telecom and Datacom product lines that were previously part of the OpComms segment. The Industrial Tech segment includes the previous Lasers segment and the Industrial & Consumer product lines that were previously part of the OpComms segment. Comparative prior period segment information has been recast to conform to the new segment structure and measures. The changes in our operating segments had no impact on our previously reported consolidated results of operations, financial condition, or cash flows. Refer to “Note 15. Operating Segments and Geographic Information”**.**

Our business and operating results depend significantly on general market and economic conditions. The current global macroeconomic environment is volatile and continues to be adversely impacted by inflation, a dynamic supply chain and demand environment, and signs of a weaker macroeconomic environment impacting capital expenditures across our served markets. Additionally, instability in the global credit markets, capital expenditure reductions, unemployment and other labor issues, decline in stock markets, the instability in the geopolitical environment in many parts of the world, and the current global economic challenges continue to put pressure on our business and operating results.

We are continuously monitoring both the current developments in the ongoing war between Russia and Ukraine including the related additional export controls and resulting sanctions imposed on Russia and Belarus by the U.S. and other countries, and the war between Israel and Hamas. Additional factors, such as increased inflation, escalating energy costs, constrained raw material availability and the related cost increases, could continue to impact the global economy and our business. Although the global implications of the wars are difficult to predict at this time, we do not presently foresee direct material adverse effects on our business.

LUMENTUM HOLDINGS INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

Business Combinations

On November 7, 2023 (the "Closing date"), we completed the acquisition of Cloud Light Technology Limited ("Cloud Light"). Our condensed consolidated financial statements include the operating results of Cloud Light for the period from the Closing date of the acquisition through December 30, 2023. On August 3, 2022, we completed the acquisition of NeoPhotonics Corporation ("NeoPhotonics"). On August 15, 2022, we completed the acquisition of IPG Photonics' telecom transmission product lines. We have applied the acquisition method of accounting to account for these transactions in accordance with ASC Topic 805, *Business Combinations.* Refer to "Note 4. Business Combinations" for further discussions of these transactions.

Fiscal Years

We utilize a 52-53 week fiscal year ending on the Saturday closest to June 30th. Every fifth or sixth fiscal year will have a 53-week period. The additional week in a 53-week year is added to the third quarter, making such quarter consist of 14 weeks. Our fiscal 2024 is a 52-week year ending on June 29, 2024, with the quarter ended December 30, 2023 being a 13-week quarterly period. Our fiscal 2023 was a 52-week year that ended on July 1, 2023, with the quarter ended December 31, 2022 being a 13-week quarterly period.

Principles of Consolidation

The condensed consolidated financial statements include the accounts of Lumentum Holdings Inc. and its wholly owned subsidiaries. All inter-company transactions and balances are eliminated in consolidation.

Accounting Policies

The condensed consolidated financial statements and accompanying notes should be read in conjunction with the audited consolidated financial statements and accompanying notes included in our Annual Report on Form 10-K for the fiscal year ended July 1, 2023. There were no significant changes to our accounting policies during the six months ended December 30, 2023

Note 2. Recently Issued Accounting Pronouncements

In December 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures". ASU No. 2023-09 requires disaggregated information about a reporting entity's effective tax rate reconciliation as well as information on income tax paid. ASU No. 2023-09 will become effective for us in fiscal 2026, with early adoption permitted. We are currently evaluating the impact of this ASU on our income tax disclosures within the consolidated financial statements.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which updates reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. ASU 2023-07 does not change how a public entity identifies its operating segments, aggregates those operating segments, or applies quantitative thresholds to determine its reportable segments. The update is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The amendments should be applied retrospectively to all prior periods presented in the financial statements. The Company plans to adopt ASU 2023-07 in the fiscal first quarter of 2025. We are currently evaluating the impact of adopting this ASU on our consolidated financial statements and disclosures.

Note 3. Earnings Per Share

The following table sets forth the computation of basic and diluted net loss per share (*in millions, except per share data*):

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Numerator:				
Net loss - basic and diluted	$ (99.1)	$ (31.7)	$ (167.0)	$ (32.1)
Denominator:				
Weighted average common shares outstanding - basic and diluted	67.2	68.3	67.0	68.2
Net loss per share:				
Basic	$ (1.47)	$ (0.46)	$ (2.49)	$ (0.47)
Diluted	$ (1.47)	$ (0.46)	$ (2.49)	$ (0.47)

Shares from stock-based benefit plans and shares issuable assuming conversion of our convertible notes are anti-dilutive for the three and six months ended December 30, 2023 and December 31, 2022, respectively, and are therefore excluded from the calculation of diluted net loss per share as the Company had a net loss for both periods .

Anti-dilutive shares excluded from the calculation of diluted net loss per share for the three months ended December 30, 2023 include 31.2 million shares related to convertible notes, 4.4 million shares issuable under restricted stock units ("RSUs") and performance stock units ("PSUs"), 0.2 million shares issuable under the Employee Stock Purchase Plan (the "2015 Purchase Plan"), and 1.1 million shares outstanding related to stock options. Average anti-dilutive shares excluded from the calculation of diluted net loss per share for the six months ended December 30, 2023 include 31.2 million shares related to convertible notes, 4.5 million shares issuable under RSUs and PSUs, 0.2 million shares issuable under the 2015 Purchase Plan, and 1.1 million shares outstanding related to stock options. Refer to "Note 13. Equity."

Anti-dilutive shares excluded from the calculation of diluted net loss per share for the the three months ended December 31, 2022 include 24.5 million shares related to convertible notes, 3.8 million shares issuable under RSUs and PSUs, and 0.2 million shares issuable under the 2015 Purchase Plan. Average anti-dilutive shares excluded from the calculation of diluted net loss per share for the six months ended December 31, 2022 include 24.5 million shares related to convertible notes, 3.9 million shares issuable under RSUs and PSUs, and 0.1 million shares issuable under the 2015 Purchase Plan.

Potentially dilutive common shares issuable upon conversion of our outstanding convertible notes are determined using the if-converted method.

Note 4. Business Combinations

Cloud Light Acquisition

On October 29, 2023, we entered into a definitive merger agreement (the “Merger Agreement”) with Cloud Light. On November 7, 2023 (the “Closing date”), we completed the acquisition of Cloud Light. Cloud Light designs, markets, and manufactures advanced optical modules for data center interconnect applications. The acquisition enables us to be well-positioned to serve the growing needs of cloud & networking customers, particularly those customers focused on optimizing their data center infrastructure for the demands of AI/ML.

We have applied the acquisition method of accounting in accordance with ASC 805 *Business Combinations*, with respect to the fair value of purchase price consideration and the identifiable assets and liabilities of Cloud Light, which have been measured at estimated fair value as of the Closing date. The following tables summarize the preliminary purchase price consideration (*in millions*):

		Fair Value
Cash consideration (1)	$	705.0
Share-based consideration (2)		23.5
Total purchase price consideration	$	728.5

(1) Under the terms of the Merger Agreement, Cloud Light stockholders received $ 1.69 per share after adjusting for applicable withholding taxes, escrow fund and expense fund contributions, for each of the 409.4 million of shares outstanding at the Closing date. As a result, we transferred $691.7 million of cash consideration on the Closing date. Additionally, each of Cloud Light’s outstanding options was exchanged for a combination of up-front cash consideration and newly issued options (the “replacement options”). As a result, we transferred $13.3 million of cash consideration on the Closing date.

(2) The replacement options have a total fair value of $38.9 million as of the Closing date, of which $ 23.5 million attributed to pre-acquisition service is recorded as part of the purchase price consideration and the remaining $15.4 million is recorded as post-acquisition stock-based compensation expense over the vesting period of three years from the acquisition Closing date. In general, these options expire within 10 years from the acquisition Closing date. Refer to “Note 13. Equity”.

The cash consideration of $705.0 million, which was funded by the cash balances of Lumentum, includes $ 75.8 million of cash held in an escrow fund for a period of 12 months following the Closing date to support Cloud Light’s indemnification obligations under the Merger Agreement. The consideration is subject to customary adjustment for working capital.

We also incurred a total of $9.2 million of merger-related costs, representing professional and other direct acquisition costs, of which $ 2.4 million was incurred during the fiscal first quarter of 2024 and $6.8 million was incurred during the fiscal second quarter of 2024. Merger related costs are recorded as selling, general and administrative expense in the consolidated statement of operations when incurred.

We allocated the fair value of the purchase price consideration to the assets acquired and liabilities assumed as of the Closing date based on their estimated fair values. The excess of purchase price consideration over the fair value of net assets acquired is recorded as goodwill. Our preliminary allocation of the purchase price consideration to the assets acquired and liabilities assumed as of the Closing date is as follows (*in millions*):

		Fair Value
Total purchase price consideration	$	728.5
Assets acquired		
Cash and cash equivalents		4.1
Short-term investments		1.0
Accounts receivable, net		20.9
Inventories		71.5
Prepayments and other current assets		14.3
Property, plant and equipment, net		63.2
Operating lease right-of-use assets, net		3.7
Other intangible assets, net (1)		333.0
Other non-current assets		0.3
Total assets		512.0
Liabilities assumed		
Accounts payable		45.8
Accrued payroll and related expenses		5.9
Accrued expenses		9.8
Operating lease liabilities, current		1.8
Other current liabilities		8.0
Operating lease liabilities, non-current		1.9
Deferred tax liability		60.7
Other non-current liabilities		9.1
Total liabilities		143.0
Goodwill	$	359.5

(1) Other intangible assets include developed technology of $ 170.0 million, customer relationship of $130.0 million, in-process research and development ("IPR&D") of $16.0 million, order backlog of $14.0 million, and trade name and trademarks of $ 3.0 million. Refer to "Note 8. Goodwill and Other Intangible Assets" for more information.

The allocation of the purchase price to the assets acquired and liabilities assumed, including the residual amount allocated to goodwill, is based upon preliminary information and subject to change. The primary areas of the preliminary purchase price allocation that are not yet finalized relate to the working capital adjustments pursuant to the Merger Agreement, the fair value of inventories, property, plant and equipment, intangible assets, deferred tax assets and liabilities, and contingent liabilities, if any. Further adjustments may result before the end of the measurement period, which ends one year from the Closing date. During the measurement period, if new information is obtained about facts and circumstances that existed as of the Closing date that, if known, would have resulted in revised estimated values of assets acquired and liabilities assumed, we will revise the preliminary purchase price allocation. The effect of measurement period adjustments to the estimated fair values will be calculated as if the adjustments had been completed on the acquisition date. The impact of all changes that do not qualify as measurement period adjustments will be included in current period earnings.

Goodwill from the Cloud Light acquisition has been assigned to the Cloud & Networking segment. The preliminary goodwill of $ 359.5 million arising from the acquisition is attributed to the expected revenue growth and synergies, including future cost efficiencies and other benefits that are expected to be generated by combining Lumentum and Cloud Light. None of the goodwill is expected to be deductible for local tax purposes. Refer to "Note 8. Goodwill and Other Intangible Assets."

From the Closing date, Cloud Light contributed $59.5 million of our consolidated net revenue for the three months ended December 30, 2023. Due to the continued integration of the combined businesses, as well as our corporate structure and the allocation of selling, general and administrative costs, it is impracticable to determine Cloud Light's contribution to our earnings.

Supplemental Pro Forma Information

The following supplemental pro forma information presents the combined results of operations for the three and six months ended December 30, 2023 and December 31, 2022, as if the acquisition was completed on July 3, 2022, the first day of the fiscal year 2023. The supplemental pro forma financial information presented below is not necessarily indicative of the financial position or results of operations that would have been realized if the acquisition had been completed on the date indicated. The supplemental pro forma financial information does not reflect synergies that might have been achieved, nor is it indicative of future operating results or financial position.

The pro forma financial information includes adjustments for: (i) amortization expense that would have been recognized related to the acquired intangible assets, (ii) depreciation expense that would have been recognized related to the acquired property, plant, and equipment, (iii) amortization of inventory fair value adjustment, (iv) acquisition related costs, such as third party transaction costs and restructuring costs, (v) stock-based compensation expense and (vi) the estimated income tax effect on the pro forma adjustments.

The supplemental pro forma financial information for the periods presented is as follows (*in millions*):

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Net revenue	$ 386.5	$ 553.2	$ 773.1	$ 1,113.4
Net loss	$ (96.3)	$ (39.9)	$ (159.9)	$ (61.7)

NeoPhotonics Acquisition

On November 3, 2021, we entered into an Agreement and Plan of Merger (the "Merger Agreement") with NeoPhotonics and Neptune Merger Sub, Inc. On August 3, 2022, we completed the acquisition of NeoPhotonics through the consummation of the merger and, accordingly, we acquired all of the issued and outstanding common stock of NeoPhotonics with a total purchase price consideration of $934.4 million, which was funded by the cash balances of the combined company. The addition of NeoPhotonics expands our opportunity in some of the fastest growing markets for optical components used in cloud and telecom network infrastructure.

We have applied the acquisition method of accounting in accordance with ASC Topic 805, *Business Combinations* to account for this transaction and recorded a goodwill of $315.3 million arising from the acquisition, which has been assigned to the Cloud & Networking segment. NeoPhotonics contributed $104.6 million and $177.4 million of our consolidated net revenue for the three and six months ended December 31, 2022, respectively. Due to the integration of the combined businesses, as well as our corporate structure and the allocation of selling, general and administrative costs, it is impracticable to determine NeoPhotonics' contribution to our earnings. As of December 30, 2023, the operation of NeoPhotonics has been fully integrated to the combined business.

We also recorded $28.7 million of merger-related costs, representing professional and other direct acquisition costs, of which $ 8.3 million was incurred in fiscal year 2022 and $20.4 million was incurred in fiscal year 2023, which was recorded as selling, general and administrative expense in the condensed consolidated statements of operations.

The following supplemental pro forma information presents the combined results of operations for the three and six months ended December 31, 2022, as if the acquisition was completed at the first day of fiscal 2022. The supplemental pro forma financial information is not necessarily indicative of the financial position or results of operations that would have been realized if the acquisition had been completed on the date indicated. The supplemental pro forma financial information does not reflect synergies that might have been achieved, nor is it indicative of future operating results or financial position. The pro forma financial information includes adjustments for: (i) amortization expense that would have been recognized related to the acquired intangible assets, (ii) depreciation expense that would have been recognized related to the acquired property, plant, and equipment, (iii) amortization of inventory fair value adjustment, (iv) acquisition related costs, such as third party transaction costs and restructuring costs, (v) stock-based compensation expense and (vi) the estimated income tax effect on the pro forma adjustments.

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The supplemental pro forma financial information for the periods presented is as follows (*in millions*):

	December 31, 2022	
	Three Months Ended	Six Months Ended
Net revenue	$ 506.0	$ 1,036.7
Net income (loss)	(25.8)	6.6

Acquisition of IPG Photonics' Telecom Transmission Product Lines

On August 15, 2022 ("IPG Closing date"), we completed a transaction to acquire IPG Photonics' telecom transmission product lines ("IPG telecom transmission product lines") that are used to develop and market products for use in telecommunications and datacenter infrastructure, including Digital Signal Processors (DSPs), ASICs and optical transceivers with a total purchase price of $55.9 million, which was paid in cash. This acquisition enables us to expand our business in the Cloud & Networking segment.

We have applied the acquisition method of accounting in accordance with ASC Topic 805, *Business Combinations* to account for this transaction and recorded a goodwill of $10.9 million arising from the acquisition, which has been assigned to the Cloud & Networking segment. We recorded $2.0 million of merger-related costs, representing professional and other direct acquisition costs, of which $0.4 million was incurred in fiscal year 2022 and $1.6 million was incurred in fiscal year 2023, which was recorded as selling, general and administrative expense in the consolidated statements of operations.

The pro forma financial information from the acquisition of the IPG telecom transmission product lines, assuming the acquisition had occurred as of the first day of fiscal 2022, as well as revenue and earnings generated during fiscal 2023, were not material for disclosure purposes.

Note 5. Cash, Cash Equivalents and Short-term Investments

The following table summarizes our cash, cash equivalents and short-term investments by category for the periods presented (*in millions*):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
December 30, 2023:				
Cash	$ 235.2	$ —	$ —	$ 235.2
Cash equivalents:				
Commercial paper	5.1	—	—	5.1
Money market funds	206.6	—	—	206.6
U.S. Treasury securities	22.4	—	—	22.4
Total cash and cash equivalents	$ 469.3	$ —	$ —	$ 469.3
Short-term investments:				
Certificates of deposit	$ 13.8	$ —	$ —	$ 13.8
Commercial paper	43.8	—	—	43.8
Corporate debt securities	365.4	0.3	(0.8)	364.9
Municipal bonds	4.6	—	—	4.6
U.S. Agency securities	143.5	0.1	(0.4)	143.2
U.S. Treasury securities	184.9	—	(0.5)	184.4
Total short-term investments	$ 756.0	$ 0.4	$ (1.7)	$ 754.7
July 1, 2023:				
Cash	$ 254.3	$ —	$ —	$ 254.3
Cash equivalents:				
Money market funds	276.1	—	—	276.1
U.S. Agency securities	4.0	—	—	4.0
U.S. Treasury securities	324.6	—	—	324.6
Total cash and cash equivalents	$ 859.0	$ —	$ —	$ 859.0
Short-term investments:				
Certificates of deposit	$ 16.5	$ —	$ —	$ 16.5
Commercial paper	132.9	—	(0.2)	132.7
Corporate debt securities	472.7	—	(3.9)	468.8
U.S. Agency securities	207.9	—	(1.7)	206.2
U.S. Treasury securities	332.4	—	(2.0)	330.4
Total short-term investments	$ 1,162.4	$ —	$ (7.8)	$ 1,154.6

We review our investment portfolio to identify and evaluate investments that have indicators of possible impairment. Factors considered in determining whether a loss is other-than-temporary include, but are not limited to, the length of time and extent a security's fair value has been below its cost, the financial condition and near-term prospects of the investee, the credit quality of the security's issuer, likelihood of recovery and our intent and ability to hold the security for a period sufficient to allow for any anticipated recovery in value. For the debt instruments we own, we also evaluate whether we have the intent to sell the security or whether it is more likely than not that we will be required to sell the security before recovery of its cost basis. We have not recorded our unrealized losses on our short-term investments into income because we do not intend to sell nor is it more likely than not that we will be required to sell these investments prior to recovery of their amortized cost basis.

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We use the specific-identification method to determine any realized gains or losses from the sale of our short-term investments classified as available-for-sale. During the three and six months ended December 30, 2023 and December 31, 2022, we did not realize significant gains or losses on a gross level from the sale of our short-term investments classified as available-for-sale.

During the three and six months ended December 30, 2023, our other income, net was $ 13.4 million, and $34.6 million, respectively, which includes interest and investment income on cash equivalents and short-term investments of $17.1 million and $38.8 million, respectively.

During the three and six months ended December 31, 2022, our other income, net was $ 3.7 million and $17.5 million, respectively, which includes interest and investment income on cash equivalents and short-term investments of $7.7 million and $12.5 million, respectively.

As of December 30, 2023 and July 1, 2023, we recorded interest receivables of $ 7.2 million and $6.7 million, respectively, in prepayments and other current assets within the condensed consolidated balance sheets. We did not recognize an allowance for credit losses against interest receivables in any of the periods presented, as there were no such losses.

The following table summarizes unrealized losses on our cash equivalents and short-term investments by category that have been in a continuous unrealized loss position for more than 12 months and less than 12 months as of the periods presented, respectively (*in millions*):

	Continuous Loss Position for More Than 12 Months		Continuous Loss Position for Less Than 12 Months		Gross Unrealized Losses
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	
December 30, 2023:					
U.S. Agency securities	$ 5.0	$ —	$ 113.5	$ (0.4)	$ (0.4)
Certificates of deposit	—	—	4.0	—	—
Commercial paper	—	—	25.0	—	—
Corporate debt securities	40.8	(0.1)	231.3	(0.7)	(0.8)
U.S. government bonds	4.5	—	167.0	(0.5)	(0.5)
Total	$ 50.3	$ (0.1)	$ 540.8	$ (1.6)	$ (1.7)
July 1, 2023:					
U.S. Agency securities	$ 39.6	$ (0.4)	$ 170.6	$ (1.3)	$ (1.7)
Certificates of deposit	—	—	7.7	—	—
Commercial paper	—	—	128.5	(0.2)	(0.2)
Corporate debt securities	93.6	(1.2)	358.9	(2.7)	(3.9)
U.S. government bonds	50.8	(0.6)	221.4	(1.4)	(2.0)
Total	$ 184.0	$ (2.2)	$ 887.1	$ (5.6)	$ (7.8)

The following table classifies our short-term investments by remaining maturities (*in millions*):

	December 30, 2023		July 1, 2023	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due in 1 year	$ 534.2	$ 533.2	$ 762.9	$ 759.1
Due in 1 year through 5 years	221.8	221.5	399.5	395.5
Total	$ 756.0	$ 754.7	$ 1,162.4	$ 1,154.6

All available-for-sale securities have been classified as current, based on management’s intent and ability to use the funds in current operations.

Note 6. Fair Value Measurements

We determine fair value based on the fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value assumes that the transaction to sell the asset or transfer the liability occurs in the principal or most advantageous market for the asset or liability and establishes that the fair value of an asset or liability shall be determined based on the assumptions that market participants would use in pricing the asset or liability. The classification of a financial asset or liability within the hierarchy is based upon the lowest level input that is significant to the fair value measurement. The fair value hierarchy prioritizes the inputs into three levels that may be used to measure fair value:

Level 1: Inputs are unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3: Inputs are unobservable inputs based on our assumptions.

The fair value of our Level 1 financial instruments, such as money market funds and U.S. Treasury securities, which are traded in active markets, is based on quoted market prices for identical instruments. The fair value of our Level 2 fixed income securities is obtained from an independent pricing service, which may use quoted market prices for identical or comparable instruments or model driven valuations using observable market data or inputs corroborated by observable market data. Our marketable securities are held by custodians who obtain investment prices from a third-party pricing provider that incorporates standard inputs in various asset price models. Our procedures include controls to ensure that appropriate fair values are recorded, including comparing the fair values obtained from our pricing service against fair values obtained from another independent source.

Financial assets measured at fair value on a recurring basis are summarized below (*in millions*):

	Level 1	Level 2	Level 3	Total
December 30, 2023: [1]				
Assets:				
Cash equivalents:				
Commercial paper	$ —	$ 5.1	$ —	$ 5.1
Money market funds	206.6	—	—	206.6
U.S. Treasury securities	22.4	—	—	22.4
Short-term investments:				
Certificates of deposit	—	13.8	—	13.8
Commercial paper	—	43.8	—	43.8
Corporate debt securities	—	364.9	—	364.9
Municipal bonds	—	4.6	—	4.6
U.S. Agency securities	—	143.2	—	143.2
U.S. Treasury securities	184.4	—	—	184.4
Total assets	$ 413.4	$ 575.4	$ —	$ 988.8

[1] Excludes $235.2 million in cash held in our bank accounts as of December 30, 2023.

	Level 1	Level 2	Level 3	Total
July 1, 2023: [1]				
Assets:				
Cash equivalents:				
Money market funds	$ 276.1	$ —	$ —	$ 276.1
U.S. Agency securities	—	4.0	—	4.0
U.S. Treasury securities	324.6	—	—	324.6
Short-term investments:				
Certificates of deposit	—	16.5	—	16.5
Commercial paper	—	132.7	—	132.7
Corporate debt securities	—	468.8	—	468.8
U.S. Agency securities	—	206.2	—	206.2
U.S. Treasury securities	330.4	—	—	330.4
Total assets	$ 931.1	$ 828.2	$ —	$ 1,759.3

[1] Excludes $254.3 million in cash held in our bank accounts as of July 1, 2023.

Financial Instruments Not Recorded at Fair Value on a Recurring Basis

We report our financial instruments at fair value with the exception of our convertible notes, refer to “Note 9. Debt”. The estimated fair value of the convertible notes was determined based on the trading price of the convertible notes as of the last day of trading for the period. We consider the fair value of the convertible notes to be a Level 2 measurement as they are not actively traded in markets.

The carrying amounts and estimated fair values of the convertible notes are as follows for the periods presented (*in millions*):

	December 30, 2023		July 1, 2023	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
2029 Notes	$ 599.0	$ 601.9	$ 598.6	$ 625.2
2028 Notes	856.2	681.3	855.5	677.8
2026 Notes	1,046.5	935.3	1,045.9	933.2
2024 Notes	319.7	325.9	311.6	345.2
	$ 2,821.4	$ 2,544.4	$ 2,811.6	$ 2,581.4

Assets Measured at Fair Value on a Non-Recurring Basis

We periodically review our intangible and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on the lowest level of identifiable estimated undiscounted cash flows resulting from use of the asset and its eventual disposition. If not recoverable, an impairment loss would be calculated based on the excess of the carrying amount over the fair value.

Management utilizes various valuation methods, including an income approach, a market approach and a cost approach, to estimate the fair value of intangibles and other long-lived assets. During the annual impairment testing performed in the fourth quarter of fiscal 2023, we concluded that there was no impairment of our intangible and other long-lived assets. We review our intangible and other long-lived assets for impairment at least annually in the fourth quarter of each fiscal year, absent any interim indicators of impairment. There were no indicators of impairment during the three and six months ended December 30, 2023.

Note 7. Balance Sheet Details

Allowance for Current Expected Credit Losses

We did not have any allowance for credit losses other than our allowance for uncollectible accounts receivable. As of December 30, 2023 and July 1, 2023, the allowance for credit losses on our trade receivables was $0.2 million and less than $0.1 million, respectively.

Inventories

The components of inventories were as follows (*in millions*):

	December 30, 2023	July 1, 2023
Raw materials and purchased parts	$ 206.6	$ 170.5
Work in process	117.4	103.2
Finished goods	147.7	134.9
Inventories	$ 471.7	$ 408.6

The inventory balance as of December 30, 2023 includes $ 63.4 million inventory from the Cloud Light acquisition, net of amortization of fair value step-up of $3.1 million during the three months ended December 30, 2023.

Property, Plant and Equipment, Net

The components of property, plant and equipment, net were as follows (*in millions*):

	December 30, 2023	July 1, 2023
Land	$ 75.2	$ 63.5
Buildings and improvements	189.6	170.3
Machinery and equipment	733.3	657.9
Computer equipment and software	44.2	41.4
Furniture and fixtures	11.0	10.2
Leasehold improvements	44.7	49.6
Construction in progress	102.1	69.2
	1,200.1	1,062.1
Less: Accumulated depreciation	(617.8)	(572.6)
Property, plant and equipment, net	$ 582.3	$ 489.5

In connection with the Cloud Light acquisition, we assumed $63.2 million of property, plant and equipment, net.

Our construction in progress primarily includes machinery and equipment that we expect to place in service in the next 12 months.

In August 2023, we purchased land and buildings that we previously leased in Caswell, United Kingdom for a total purchase price of $ 23.3 million. Additionally, we capitalized $1.8 million of incremental direct costs for fees paid to third parties. We also recorded a $ 0.3 million reduction in the carrying value of buildings purchased related to the termination of leases for the purchased buildings. The total carrying value of assets purchased is $24.8 million at the purchase date, of which $11.8 million was allocated to the land and $ 13.0 million to the buildings.

During the three and six months ended December 30, 2023, we recorded depreciation expense of $ 27.2 million and $55.4 million, respectively. During the three and six months ended December 31, 2022, we recorded depreciation expense of $26.4 million and $50.9 million, respectively.

Operating Lease Right-of-Use Assets

Operating lease right-of-use assets, net were as follows (*in millions*):

	December 30, 2023	July 1, 2023
Operating lease right-of-use assets	$ 109.4	$ 116.5
Less: accumulated amortization	(28.1)	(39.2)
Operating lease right-of-use assets, net	$ 81.3	$ 77.3

In connection with the Cloud Light acquisition, we acquired $ 3.7 million of right-of-use assets related to leases of real estate properties used as our manufacturing and office premises. We accounted for these leases as operating leases and have the remaining lease term ranging from 1.5 to 2.6 years at the acquisition Closing date.

In connection with the purchase of land and buildings in Caswell, United Kingdom in August 2023, we terminated our leases for the purchased buildings and recorded a $0.3 million of reduction in the carrying value of buildings purchased, as a result of derecognizing $ 4.8 million of net operating lease right-of-use asset, $2.4 million of operating lease liabilities, current, and $ 2.7 million of operating lease liabilities, non-current.

Other Current Liabilities

The components of other current liabilities were as follows *(in millions)*:

	December 30, 2023	July 1, 2023
Restructuring accrual and related charges [(1)]	$ 10.2	$ 5.0
Warranty accrual [(2)]	10.1	6.8
Deferred revenue and customer deposits	0.9	2.1
Income tax payable [(3)]	17.7	28.0
Other current liabilities	6.1	5.9
Other current liabilities	$ 45.0	$ 47.8

[(1)] Refer to “Note 11. Restructuring and Related Charges.”

[(2)] Refer to “Note 14. Commitments and Contingencies.”

[(3)] Refer to “Note 12. Income Taxes.”

Other Non-Current Liabilities

The components of other non-current liabilities were as follows (*in millions*):

	December 30, 2023	July 1, 2023
Asset retirement obligations	$ 7.6	$ 8.2
Pension and related accruals [(1)]	11.4	9.6
Unrecognized tax benefit	70.1	64.4
Other non-current liabilities	8.5	9.2
Other non-current liabilities	$ 97.6	$ 91.4

[(1)] We have defined benefit pension plans in Japan, Switzerland, and Thailand. Pension and related accrual of $ 11.4 million as of December 30, 2023 represents the non-current portion of benefit obligation . Pension and related accrual of $ 9.6 million as of July 1, 2023 relates to $ 10.2 million of non-current portion of benefit obligation, offset by $0.6 million of funding for the pension plan in Switzerland. We typically re-evaluate the assumptions related to the fair value of our defined benefit obligations annually in the fiscal fourth quarter and make any updates as necessary.

Note 8. Goodwill and Other Intangible Assets

Goodwill

In November 2023, we completed the acquisition of Cloud Light. As of the acquisition date, we recognized preliminary goodwill of $359.5 million, which was allocated to the Cloud & Networking segment.

The following table presents goodwill by reportable segments as of December 30, 2023 and July 1, 2023 (*in millions)*:

	Cloud & Networking	Industrial Tech	Total
Balances as of July 1, 2023	$ 683.9	$ 11.2	$ 695.1
Acquisition of Cloud Light	359.5	—	359.5
Balance as of December 30, 2023	$ 1,043.4	$ 11.2	$ 1,054.6

Impairment of Goodwill

We review goodwill for impairment during the fourth quarter of each fiscal year or more frequently if events or circumstances indicate that an impairment loss may have occurred. In the fourth quarter of fiscal 2023, we completed the annual impairment test of goodwill, which indicated there was no goodwill impairment. There were no indicators of goodwill impairment during the three and six months ended December 30, 2023.

Other Intangibles

Our intangible assets are amortized on a straight-line basis over the estimated useful lives, except for certain customer relationships, which are amortized using an accelerated method of amortization over the expected customer lives, more accurately reflecting the pattern of realization of economic benefits we expect to derive. Acquired developed technologies are amortized to cost of sales and research and development expenses. Acquired customer relationships are amortized to selling, general and administrative expenses in the consolidated statement of operations.

In-process research and development ("IPR&D") is initially capitalized at fair value as an intangible asset with an indefinite life and assessed for impairment thereafter. When an IPR&D project is completed, the IPR&D is reclassified to an amortizable purchased intangible asset and amortized over the asset's estimated useful life.

During the annual impairment testing performed in the fourth quarter of fiscal 2023, we concluded that our intangible and other long-lived assets were not impaired at the asset group level. We review our intangible and other long-lived assets for impairment at least annually in the fourth quarter of each fiscal year, absent any interim indicators of impairment. There were no indicators of impairment at the asset group level during the three and six months ended December 30, 2023.

In November 2023, we completed the acquisition of Cloud Light. The intangible assets acquired from the acquisition were as follows as of the acquisition date (*in millions, except for weighted average amortization period*):

	Fair Value at the Acquisition Date	Weighted Average Amortization Period (Years)
Acquired developed technologies	$ 170.0	7.0
Customer relationships	130.0	7.0
In-process research and development	16.0	n/a
Order backlog	14.0	1.0
Trade name and trademarks	3.0	1.2
Total intangible assets	$ 333.0	

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In August 2022, we completed the NeoPhotonics acquisition and the acquisition of IPG telecom transmission product lines. The intangible assets acquired from the acquisitions were as follows as of the acquisition date (*in millions, except for weighted average amortization period*):

	Fair Value at the Acquisition Date			Weighted Average Amortization Period (Years)
	NeoPhotonics	IPG Telecom Transmission Product Lines	Total Acquired	
Acquired developed technologies	$ 220.0	$ 8.6	$ 228.6	5.2
Customer relationships	144.5	2.3	146.8	5.9
In-process research and development	48.0	29.1	77.1	n/a
Total intangible assets	$ 412.5	$ 40.0	$ 452.5	

Refer to "Note 4. Business Combinations" for the acquisitions of Cloud Light, NeoPhotonics and IPG telecom transmission product lines.

The following tables present details of all of our intangible assets as of the periods presented (*in millions, except for weighted average remaining amortization period*):

December 30, 2023	Gross Carrying Amounts	Accumulated Amortization	Net Carrying Amounts	Weighted Average Remaining Amortization Period (Years)
Acquired developed technologies	$ 807.8	$ (426.8)	$ 381.0	5.1
Customer relationships	419.8	(139.7)	280.1	2.8
In-process research and development	54.9	—	54.9	n/a
Order backlog	14.0	(2.0)	12.0	—
Trade name and trademarks	3.0	(0.4)	2.6	—
Total intangible assets	$ 1,299.5	$ (568.9)	$ 730.6	

July 1, 2023	Gross Carrying Amounts	Accumulated Amortization	Net Carrying Amounts	Weighted Average Remaining Amortization Period (Years)
Acquired developed technologies	$ 630.9	$ (385.5)	$ 245.4	4.2
Customer relationships	289.7	(116.8)	172.9	3.7
In-process research and development	40.9	—	40.9	n/a
Total intangible assets	$ 961.5	$ (502.3)	$ 459.2	

The following table presents details of amortization for the periods presented *(in millions)*:

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Cost of sales	$ 21.5	$ 24.8	$ 39.5	$ 47.7
Research and development	0.4	—	0.7	—
Selling, general and administrative	15.7	11.3	26.4	20.6
Total amortization of intangibles	$ 37.6	$ 36.1	$ 66.6	$ 68.3

Based on the carrying amount of our acquired developed technologies and customer relationships as of December 30, 2023, and assuming no future impairment of the underlying assets, the estimated future amortization is as follows *(in millions)*:

Fiscal Years		
Remainder of 2024	$	83.8
2025		147.5
2026		131.5
2027		118.7
2028		80.5
Thereafter		113.7
Total future amortization	$	675.7

Note 9. Debt

Convertible Notes

2029 Notes

On June 16, 2023, we issued $603.7 million in aggregate principal amount of 1.50% Convertible Senior Notes due in 2029 ("2029 Notes") in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended. The 2029 Notes are governed by an indenture between the Company and U.S. Bank Trust Company National Association, (as successor in interest to U.S. Bank National Association), as a trustee (the "2029 Indenture"). The 2029 Notes are unsecured and do not contain any financial covenants, restrictions on dividends, incurrence of senior debt or other indebtedness, or the issuance or repurchase of securities by us.

The net proceeds from the sale of the 2029 Notes was $ 599.4 million, after deducting $4.3 million of net issuance costs. In addition, we incurred $0.8 million of professional fees directly related to this transaction. Concurrent with the issuance of the 2029 Notes, we used $ 132.8 million of the net proceeds to repurchase $125.0 million aggregate principal amount of the 2024 Notes and $ 125.0 million of the net proceeds to repurchase our common stock in privately negotiated transactions. We intend to use the remaining net proceeds for general corporate purposes, which may include the repayment of our indebtedness, including any of our existing convertible notes, capital expenditures, working capital and potential acquisitions.

The 2029 Notes bear interest at a rate of 1.50% per year, payable semi-annually in arrears on June 15 and December 15 of each year. The 2029 Notes will mature on December 15, 2029, unless earlier redeemed, repurchased by us, or converted pursuant to their terms.

The initial conversion rate is 14.3808 shares of common stock per $1,000 principal amount of the 2029 Notes (which is equivalent to an initial conversion price of approximately $69.54 per share). The conversion rate is subject to adjustment upon the occurrence of certain events specified in the 2029 Indenture but will not be adjusted for accrued and unpaid interest. In addition, upon the occurrence of a make-whole fundamental change or our issuance of a notice of redemption, we will, in certain circumstances, increase the conversion rate by a number of additional shares for a holder that elects to convert the 2029 Notes in connection with such make-whole fundamental change or notice of redemption.

Prior to the close of business on the business day immediately preceding September 15, 2029, holders of the 2029 Notes may convert their 2029 Notes only under the following circumstances:

- during any fiscal quarter commencing after September 30, 2023 (and only during such fiscal quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% if the applicable conversion price on each applicable trading day;
- during the five consecutive business day period after any five consecutive trading day period (the "2029 measurement period") in which the trading price per $1,000 principal amount of 2029 Notes for each trading day of the 2029 measurement period was less than 98% of the product of the last reported sale price of our common stock and the applicable conversion rate on each such trading day;
- if we call any or all of the 2029 Notes for redemption, at any time prior to the close of business on the second business day immediately preceding the redemption date; or

- upon the occurrence of specified corporate events as specified in the 2029 Indenture.

On or after September 15, 2029 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2029 Notes at any time. Upon conversion, we will satisfy our conversion obligation in cash, shares of common stock or a combination of cash and shares of common stock, at our election.

We may redeem for cash all or any portion of the 2029 Notes, at our option (subject to the partial redemption limitation set forth in the 2029 Indenture), on or after June 22, 2026, if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading-day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption at a redemption price equal to 100% of the principal amount of the 2029 Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. No sinking fund is provided for the 2029 Notes. If we elect to redeem fewer than all of the outstanding 2029 Notes, at least $100.0 million aggregate principal amount of the 2029 Notes must be outstanding and not subject to redemption as of the redemption notice date. Upon the occurrence of a fundamental change (as defined in the 2029 Indenture), holders may require us to repurchase all or a portion of their 2029 Notes for cash at a price equal to 100% of the principal amount of the 2029 Notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The entire 2029 Notes are recorded as convertible notes, non-current in our consolidated balance sheets as of December 30, 2023 and July 1, 2023, measured at amortized cost.

2028 Notes

In March 2022, we issued $861.0 million in aggregate principal amount of 0.50% convertible senior notes due in 2028 (the “2028 Notes”) in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the “Securities Act”). The 2028 Notes are governed by an indenture between the Company and U.S. Bank Trust Company National Association (as successor in interest to U.S. Bank National Association), as trustee (the “2028 Indenture”). The 2028 Notes are unsecured and do not contain any financial covenants, restrictions on dividends, incurrence of senior debt or other indebtedness, or the issuance or repurchase of securities by us.

The net proceeds from the sale of the 2028 Notes was $854.8 million, after deducting $6.2 million in issuance costs. In addition, we incurred $0.7 million in professional fees in connection with this transaction. Concurrent with the issuance of the 2028 Notes, we used $ 200.0 million of the net proceeds to repurchase our common stock in privately negotiated transactions.

The 2028 Notes bear interest at a rate of 0.50% per year, payable semi-annually in arrears on June 15 and December 15 of each year, beginning on June 15, 2022. The 2028 Notes will mature on June 15, 2028, unless earlier redeemed, repurchased by us, or converted pursuant to their terms.

The initial conversion rate is 7.6319 shares of common stock per $1,000 principal amount of the 2028 Notes (which is equivalent to an initial conversion price of approximately $131.03 per share). The conversion rate is subject to adjustment upon the occurrence of certain specified events, but will not be adjusted for accrued and unpaid interest. In addition, upon the occurrence of a make-whole fundamental change (as defined in the 2028 Indenture) or our issuance of a notice of redemption, we will, in certain circumstances, increase the conversion rate by a number of additional shares for a holder that elects to convert the 2028 Notes in connection with such make-whole fundamental change or notice of redemption.

Prior to the close of business on the business day immediately preceding March 15, 2028, holders of the 2028 Notes may convert their 2028 Notes only under the following circumstances:

- during any fiscal quarter (and only during such fiscal quarter), if the last reported sale price of the Company’s common stock for at least 20 trading days (whether or not consecutive) during the 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the applicable conversion price, or $ 170.34, on each applicable trading day;
- during the five consecutive business day period after any five consecutive trading day period (the “measurement period”) in which the trading price per $1,000 principal amount of the 2028 Notes for each trading day of such measurement period was less than 98% of the product of the last reported sale price of the Company’s common stock and the applicable conversion rate on each such trading day;
- if the Company calls any or all of the 2028 Notes for redemption, at any time prior to the close of business on the second business day immediately preceding the redemption date; or
- upon the occurrence of specified corporate events, as specified in the 2028 Indentures.

On or after March 15, 2028 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2028 Notes at any time. Upon conversion, we may satisfy our conversion obligation in cash, shares of common stock or a combination of cash and shares of common stock, at our election.

We may redeem for cash all or any portion of the 2028 Notes, at our option (subject to the partial redemption limitation set forth in the 2028 Indenture), on or after June 20, 2025, if the last reported sale price of its common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading-day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption at a redemption price equal to 100% of the principal amount of the 2028 Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. No sinking fund is provided for the 2028 Notes. If we elect to redeem fewer than all of the outstanding 2028 Notes, at least $100.0 million aggregate principal amount of the 2028 Notes must be outstanding and not subject to redemption as of the redemption notice date. Upon the occurrence of a fundamental change (as defined in the 2028 Indenture), holders may require the Company to repurchase all or a portion of their 2028 Notes for cash at a price equal to 100% of the principal amount of the 2028 Notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

We initially bifurcated the principal amount of the 2028 Notes into liability and equity components. The liability component of the 2028 Notes was initially valued at $629.8 million based on the contractual cash flow discounted at an appropriate comparable market on non-convertible debt borrowing rate at the date of issuance, which was 5.7%, with the equity component representing the residual amount of the proceeds of $ 231.2 million, which was recorded as a debt discount. Upon adoption of ASU 2020-06 in the first quarter of fiscal 2023, our 2028 Notes were accounted for as a single liability measured at amortized cost. The entire 2028 Notes are recorded as convertible notes, non-current in our consolidated balance sheets as of December 30, 2023 and July 1, 2023, measured at amortized cost.

2026 Notes

In December 2019, we issued $1,050.0 million in aggregate principal amount of 0.50% convertible senior notes due in 2026 (the "2026 Notes") in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act. The 2026 Notes are governed by an indenture between the Company and U.S. Bank Trust Company National Association (as successor in interest to U.S. Bank National Association, as trustee (the "2026 Indenture"). We used approximately $196.0 million of the net proceeds of the offering to repay in full all amounts outstanding under our term loan credit facility, and a portion of the net proceeds of the offering to purchase approximately $200.0 million of our common stock concurrently with the pricing of the offering in privately negotiated transactions. The 2026 Notes are unsecured and do not contain any financial covenants, restrictions on dividends, incurrence of senior debt or other indebtedness, or the issuance or repurchase of securities by us.

The 2026 Notes bear interest at a rate of 0.50% per year, payable semi-annually in arrears on June 15 and December 15 of each year. The 2026 Notes will mature on December 15, 2026, unless earlier redeemed, repurchased by us, or converted pursuant to their terms.

The initial conversion rate is 10.0711 shares of common stock per $1,000 principal amount of the 2026 Notes (which is equivalent to an initial conversion price of approximately $99.29 per share). The conversion rate is subject to adjustment upon the occurrence of certain events specified in the 2026 Indenture, but will not be adjusted for accrued and unpaid interest. In addition, upon the occurrence of a make-whole fundamental change (as defined in the 2026 Indenture) or our issuance of a notice of redemption, we will, in certain circumstances, increase the conversion rate by a number of additional shares set forth in the 2026 Indenture or a holder that elects to convert the 2026 Notes in connection with such make-whole fundamental change or notice of redemption.

Prior to the close of business on the business day immediately preceding September 15, 2026, holders of the 2026 Notes may convert their 2026 Notes only under the following circumstances:

- during any fiscal quarter (and only during such fiscal quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the conversion price of the 2026 Notes, or $ 129.08 on each applicable trading day;
- during the five consecutive business day period after any five consecutive trading day period (the "2026 measurement period") in which the trading price per $1,000 principal amount of the 2026 Notes for each trading day of the 2026 measurement period was less than 98% of the product of the last reported sale price of our common stock and the applicable conversion rate for the 2026 Notes on each such trading day;

- if we call any or all of the 2026 Notes for redemption, at any time prior to the close of business on the second business day immediately preceding the relevant redemption date; or
- upon the occurrence of specified corporate events.

On or after September 15, 2026 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2026 Notes at any time. Upon conversion, we may satisfy our conversion obligation in cash, shares of common stock or a combination of cash and shares of common stock, at our election.

We may redeem for cash, all or any portion of the 2026 Notes, at our option, on or after December 20, 2023, if the last reported sale price of its common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading-day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provide a notice of redemption at a redemption price equal to 100% of the principal amount of the 2026 Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. No sinking fund is provided for the 2026 Notes. Upon the occurrence of a fundamental change (as defined in the 2026 Indenture), holders may require us to repurchase all or a portion of the 2026 Notes for cash at a price equal to 100% of the principal amount of the 2026 Notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

We initially bifurcated the principal amount of the 2026 Notes into liability and equity components. The liability component of the 2026 Notes was initially valued at $734.8 million based on the contractual cash flows discounted at an appropriate comparable market non-convertible debt borrowing rate at the date of issuance of 5.8% with the equity component representing the residual amount of the proceeds of $ 315.2 million, which was recorded as a debt discount. Upon adoption of ASU 2020-06 in the first quarter of fiscal 2023, our 2026 Notes were accounted for as a single liability measured at amortized cost. The entire 2026 Notes are recorded as convertible notes, non-current in our consolidated balance sheets as of December 30, 2023 and July 1, 2023, measured at amortized cost.

2024 Notes

In March 2017, we issued $450.0 million in aggregate principal amount of 0.25% convertible senior notes due in 2024 (the “2024 Notes”) in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act. The 2024 Notes are governed by an indenture between the Company, as the issuer, and U.S. Bank Trust Company National Association (as successor in interest to U.S. Bank National Association), as trustee (the “2024 Indenture”). The 2024 Notes are unsecured and do not contain any financial covenants, restrictions on dividends, incurrence of senior debt or other indebtedness, or the issuance or repurchase of securities by us.

The 2024 Notes bear interest at a rate of 0.25% per year. Interest on the 2024 Notes is payable semi-annually in arrears on March 15 and September 15 of each year. The 2024 Notes will mature on March 15, 2024, unless earlier repurchased by us or converted pursuant to their terms.

The initial conversion rate of the 2024 Notes is 16.4965 shares of common stock per $1,000 principal amount of 2024 Notes, which is equivalent to an initial conversion price of approximately $60.62 per share. The conversion rate is subject to adjustment upon the occurrence of certain specified events but will not be adjusted for accrued and unpaid interest. In addition, upon the occurrence of a make-whole fundamental change (as defined in the 2024 Indenture) or our issuance of a notice of redemption, we will, in certain circumstances, increase the conversion rate by a number of additional shares for a holder that elects to convert the 2024 Notes in connection with such make-whole fundamental change or notice of redemption.

Prior to the close of business on the business day immediately preceding December 15, 2023, each holder of the 2024 Notes was able to convert their 2024 Notes only under the following circumstances:

- during any fiscal quarter (and only during such fiscal quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the applicable conversion price, or $ 78.80 on each applicable trading day;
- during the five consecutive business day period after any five consecutive trading day period (the “2024 measurement period”) in which the trading price per $1,000 principal amount of 2024 Notes for each trading day of such 2024 measurement period was less than 98% of the product of the last reported sale price of our common stock and the applicable conversion rate for the 2024 Notes on each such trading day; or
- upon the occurrence of specified corporate events.

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On or after December 15, 2023 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2024 Notes at any time. In addition, upon the occurrence of a make-whole fundamental change (as defined in the 2024 Indenture), we will, in certain circumstances, increase the conversion rate by a number of additional shares set forth in the 2024 Indenture for a holder that elects to convert 2024 Notes in connection with such make-whole fundamental change.

We may not redeem the 2024 Notes prior to their maturity date and no sinking fund is provided for the 2024 Notes. Upon the occurrence of a fundamental change (as defined in the 2024 Indenture), holders may require us to repurchase all or a portion of their 2024 Notes for cash at a price equal to 100% of the principal amount of the 2024 Notes to be repurchased, plus any accrued and unpaid interest.

We considered the features embedded in the 2024 Notes other than the conversion feature, including the holders' put feature, our call feature, and the make-whole feature, and concluded that they are not required to be bifurcated and accounted for separately from the host debt instrument.

Prior to the Tax Matters Agreement settlement condition ("TMA settlement condition"), because we could only settle the 2024 Notes in cash, we determined that the conversion feature met the definition of a derivative liability. We separated the derivative liability from the host debt instrument based on the fair value of the derivative liability. As of the issuance date, March 8, 2017, the derivative liability fair value of $129.9 million was calculated using the binomial valuation approach. The residual principal amount of the 2024 Notes of $320.1 million before issuance costs was allocated to the debt component. We incurred approximately $7.7 million in transaction costs in connection with the issuance of the 2024 Notes. These costs were allocated to the debt component and recognized as a debt discount. We amortize the debt discount, including both the initial value of the derivative liability and the transaction costs, over the term of the 2024 Notes using the effective interest method. The effective interest rate of the 2024 Notes is 5.4% per year.

During fiscal 2017, we satisfied the TMA settlement condition. As such, the value of the conversion option is no longer marked-to-market and was reclassified to additional paid-in capital within stockholders' equity on our condensed consolidated balance sheets. The value of the conversion option at the time of issuance is treated as an original issue discount for purposes of accounting for the debt component of the 2024 Notes. The debt component will accrete up to the original amount over the expected term of the debt. The adoption of ASU 2020-06 did not change the presentation of the 2024 Notes, as the conversion feature associated with the 2024 Notes continues to be classified within stockholders' equity.

Concurrent with the issuance of the 2029 Notes in June 2023, we used $ 132.8 million of the net proceeds to repurchase $125.0 million aggregate principal amount of the 2024 Notes, which we accounted for as an extinguishment of liability. $13.5 million of the $132.8 million repurchase price was allocated to the conversion feature of the repurchased 2024 Notes, representing the fair value of the conversion feature at the date of the repurchase, and was recognized as a reduction of the stockholders' equity. Additionally, since issuing the 2024 Notes, we have converted a total of approximately $1.9 million principal amount of the 2024 Notes. The remaining principal amount was $ 323.1 million as of December 30, 2023 and July 1, 2023, recorded as convertible notes, current in our consolidated balance sheets, as the 2024 Notes will mature on March 15, 2024.

Convertible Notes - Additional Disclosures

Our convertible notes consisted of the following components as of the periods presented (*in millions*):

December 30, 2023	**2024 Notes [1]**	**2026 Notes [2]**	**2028 Notes [3]**	**2029 Notes [4]**	**Total**
Principal	$ 323.1	$ 1,050.0	$ 861.0	$ 603.7	$ 2,837.8
Unamortized debt discount and debt issuance costs	(3.4)	(3.5)	(4.8)	(4.7)	(16.4)
Net carrying amount of the liability component	$ 319.7	$ 1,046.5	$ 856.2	$ 599.0	$ 2,821.4

July 1, 2023	2024 Notes [1]	2026 Notes [2]	2028 Notes [3]	2029 Notes [4]	Total
Principal	$ 323.1	$ 1,050.0	$ 861.0	$ 603.7	$ 2,837.8
Unamortized debt discount and debt issuance costs	(11.5)	(4.1)	(5.5)	(5.1)	(26.2)
Net carrying amount of the liability component	$ 311.6	$ 1,045.9	$ 855.5	$ 598.6	$ 2,811.6

[1] If the closing price of our stock exceeds $78.80 (or 130% of the conversion price of $60.62) for 20 of the last 30 trading days of any future fiscal quarter, our 2024 Notes would become convertible at the option of the holders during the next fiscal quarter. The 2024 Notes are classified as current liabilities as the debt will mature on March 15, 2024.

[2] If the closing price of our stock exceeds $129.08 (or 130% of the conversion price of $99.29) for 20 of the last 30 trading days of any future fiscal quarter, our 2026 Notes would become convertible at the option of the holders during the subsequent fiscal quarter and the debt would be reclassified to current liabilities in our condensed consolidated balance sheet.

[3] If the closing price of our stock exceeds $170.34 (or 130% of the conversion price of $131.03) for 20 of the last 30 trading days of any future fiscal quarter, our 2028 Notes would become convertible at the option of the holders during the subsequent fiscal quarter and the debt would be reclassified to current liabilities in our condensed consolidated balance sheet.

[4] If the closing price of our stock exceeds $90.40 (or 130% of the conversion price of $69.54) for 20 of the last 30 trading days of any future quarter, the 2029 Notes would become convertible at the option of the holders during the subsequent fiscal quarter and the debt would be reclassified to current liabilities in our consolidated balance sheets.

The following table sets forth interest expense information related to the convertible notes for the periods presented *(in millions)*:

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Contractual interest expense	$ 4.9	$ 2.7	$ 9.7	$ 5.4
Amortization of the debt discount and debt issuance costs	4.8	6.2	9.7	11.9
Total interest expense	$ 9.7	$ 8.9	$ 19.4	$ 17.3

The future interest and principal payments related to our convertible notes are as follows as of December 30, 2023 *(in millions)*:

Fiscal Years	2024 Notes	2026 Notes	2028 Notes	2029 Notes	Total
2024	$ 323.7	$ 2.6	$ 2.2	$ 4.5	$ 333.0
2025	—	5.3	4.3	9.1	18.7
2026	—	5.3	4.3	9.1	18.7
2027	—	1,052.5	4.3	9.1	1,065.9
2028	—	—	865.3	9.1	874.4
Thereafter	—	—	—	617.1	617.1
Total payments	$ 323.7	$ 1,065.7	$ 880.4	$ 658.0	$ 2,927.8

The principal balances of our convertible notes are reflected in the payment periods in the table above based on their respective contractual maturities.

Mitsubishi Bank Loans

In connection with the NeoPhotonics acquisition, we assumed several loan agreements with MUFG Bank, Ltd. (the “Mitsubishi Bank Loans”) for an aggregate fair value of approximately $5.9 million, approximately $0.9 million of which was paid in the fiscal first quarter of 2023 and the remaining balance of approximately $5.0 million was fully paid in the fiscal second quarter of 2023.

Note 10. Accumulated Other Comprehensive Income (Loss)

Our accumulated other comprehensive income (loss), net of tax, consists of the accumulated net unrealized gains or losses on foreign currency translation adjustments, the defined benefit obligations and available-for-sale securities.

The changes in accumulated other comprehensive income (loss), net of tax, were as follows for the periods as presented (*in millions*):

	Foreign Currency Translation Adjustments, Net of Tax [1]	Defined Benefit Obligations, Net of Tax [2]	Unrealized Gain (Loss) on Available-for-Sale Securities, Net of Tax [3]	Total
Beginning balance as of July 1, 2023	$ 10.4	$ (0.4)	$ (5.9)	$ 4.1
Other comprehensive gain (loss), net	(0.2)	—	1.3	1.1
Ending balance as of September 30, 2023	$ 10.2	$ (0.4)	$ (4.6)	$ 5.2
Other comprehensive gain, net	0.2	—	3.8	4.0
Ending balance as of December 30, 2023	$ 10.4	$ (0.4)	$ (0.8)	$ 9.2

	Foreign Currency Translation Adjustments, Net of Tax [1]	Defined Benefit Obligations, Net of Tax [2]	Unrealized Gain (Loss) on Available-for-Sale Securities, Net of Tax [3]	Total
Beginning balance as of July 2, 2022	$ 9.7	$ 1.0	$ (10.3)	$ 0.4
Other comprehensive loss, net	—	—	(0.6)	(0.6)
Ending balance as of October 1, 2022	$ 9.7	$ 1.0	$ (10.9)	$ (0.2)
Other comprehensive gain, net	—	—	3.6	3.6
Ending balance as of December 31, 2022	$ 9.7	$ 1.0	$ (7.3)	$ 3.4

[1] In fiscal 2019, we established the functional currency for our worldwide operations as the U.S. dollar. Translation adjustments reported prior to December 10, 2018 remain as a component of accumulated other comprehensive income (loss) in our condensed consolidated balance sheets, until all or a part of the investment in the subsidiaries is sold or liquidated. In fiscal 2023, we acquired IPG telecom transmission product lines. The functional currency of the Brazilian entities acquired as part of this acquisition is the local currency. During the three months ended December 30, 2023, we recorded foreign currency translation adjustments of $0.2 million.

[2] We re-evaluate the assumptions related to the fair value of our defined benefit obligations annually in the fiscal fourth quarter and make any updates as necessary.

[3] For the three and six months ended December 30, 2023, our unrealized loss on available-for-sale securities is presented net of tax of $1.0 million and $1.4 million, respectively. For the three and six months ended December 31, 2022, our unrealized loss on available-for-sale securities is presented net of tax of $1.0 million and $0.8 million, respectively.

Note 11. Restructuring and Related Charges

We have initiated various strategic restructuring actions primarily to reduce costs, consolidate our operations, rationalize the manufacturing of our products and align our business in response to market conditions and as a result of our acquisitions.

The following table summarizes activities of restructuring and related charges for the periods as presented (*in millions*):

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Balance as of beginning of period	$ 9.3	$ 3.1	$ 5.0	$ —
Charges	5.8	13.9	16.8	23.2
Payments	(4.9)	(2.9)	(11.6)	(9.1)
Balance as of end of period	$ 10.2	$ 14.1	$ 10.2	$ 14.1

During the three and six months ended December 30, 2023, we recorded restructuring and related charges of $ 5.8 million and $16.8 million, respectively, primarily due to company-wide cost reduction initiatives, as well as our integration efforts as a result of the NeoPhotonics acquisition in August 2022.

During the three months ended December 31, 2022, we recorded restructuring and related charges of $ 13.9 million, primarily due to our integration efforts as a result of the NeoPhotonics acquisition, as well as company-wide cost reduction initiatives. During the six months ended December 31, 2022, we recorded restructuring and related charges of $23.2 million, primarily due to our integration efforts as a result of the NeoPhotonics acquisition, company-wide cost reduction initiatives, as well as severance and employee-related benefits associated with NeoPhotonics' executive severance and retention agreements. These agreements provide for payments and benefits upon an involuntary termination of employment under certain circumstances.

Any changes in the estimates of executing our restructuring activities will be reflected in our future results of operations.

Note 12. Income Taxes

Our tax provision for interim periods is determined using an estimate of our annual effective tax rate, adjusted for discrete items, if any, that arise during the period. Each quarter, we update our estimate of the annual effective tax rate, and if the estimated annual effective tax rate changes, we make a cumulative adjustment in such period. Our quarterly tax provision and estimate of our annual effective tax rate are subject to variation due to several factors, including variability in pre-tax income (or loss), the mix of jurisdictions to which such income relates, changes in how we do business, and tax law developments.

We recorded a tax benefit of $2.4 million and $3.8 million for the three and six months ended December 30, 2023, respectively. Our tax benefit for the three months ended December 30, 2023 includes a discrete tax expense of $3.4 million , primarily related to a shortfall in connection with stock-based compensation vested during the quarter, interest on uncertain tax positions and currency re-measurements. Our tax benefit for the six months ended December 30, 2023 includes a discrete tax expense of $1.6 million, primarily related to a shortfall in connection with stock-based compensation vested during the quarter, foreign return to provision differences and interest on unrecognized tax positions, partially offset by the tax benefit from changes in prior year uncertain tax positions.

We recorded a tax provision of $4.6 million and $23.8 million for the three and six months ended December 31, 2022, respectively. Our tax provision for the three months ended December 31, 2022 includes a discrete tax expense of $4.0 million primarily related to the U.S. return to provision differences for transaction costs, currency re-measurements. Our tax provision for the six months ended December 31, 2022 includes a discrete tax expense of $17.1 million, primarily related to the international restructuring, currency re-measurements and U.S. return to provision differences for transaction costs, partially offset by the tax benefit from tax rate changes.

Our estimated effective tax rate for fiscal 2024 differs from the 21% U.S. statutory rate primarily due to the income tax expense from foreign rate differential, non-deductible stock-based compensation and foreign inclusions in the U.S., partially offset by the income tax benefit from various income tax credits.

As of December 30, 2023, we had $ 70.1 million of unrecognized tax benefits, which, if recognized, would affect the effective tax rate. We are subject to examination of income tax returns by various domestic and foreign tax authorities. The timing of resolution and closure of these tax examinations is highly unpredictable. Although it is possible that certain ongoing tax examinations may be concluded within the next 12 months, we cannot reasonably estimate the impact to tax expense and net income from tax examinations that could be resolved or closed within the next 12 months. Subject to audit timing and uncertainty, we expect the amount of unrecognized tax benefit that would become recognized due to expiration of the statute of limitations and affect the effective tax rate to decrease by $2.1 million over the next 12 months.

Note 13. Equity

Description of Lumentum Stock-Based Compensation Plans

Equity Incentive Plan

On November 28, 2023, our board of directors authorized 1.5 million shares of common stock reserved for issuance in connection with the adoption of the Cloud Light Share Option Scheme as a result of the Cloud Light acquisition.

On November 17, 2023, our stockholders approved amendments to the Amended and Restated Equity Incentive Plan (the “2015 Plan”) to increase the number of shares of common stock reserved for issuance by an additional 3.0 million shares.

As of December 30, 2023, we had 5.5 million shares subject to stock options, restricted stock units, restricted stock awards, and performance stock units issued and outstanding under the 2015 Plan. Restricted stock units, restricted stock awards, and performance stock units are performance-based, time-based or a combination of both and are expected to vest within four years. The fair value of these grants is based on the closing market price of our common stock on the date of grant. The exercise price for stock options is equal to the fair value of the underlying stock at the date of grant. We issue new shares of common stock upon exercise of stock options. Options generally have vesting period of three years. As of December 30, 2023, 3.8 million shares of common stock under the 2015 Plan were available for grant.

Stock Options

In connection with the acquisition of Cloud Light, each of Cloud Light’s outstanding options was exchanged for a combination of cash and options to acquire Lumentum common stock having equivalent value (the “replacement options”) using an exchange ratio of 0.04375 according to the terms in the Merger Agreement. At the acquisition Closing date, the replacement options consisted of 1.1 million options with a weighted average grant date fair value of $34.63. These replacement options have a total fair value o f $38.9 million as of the Closing date, of which $ 23.5 million attributed to pre-acquisition service was recorded as part of purchase price consideration and the remaining $15.4 million will be recorded as post-acquisition stock-based compensation expense over the vesting period of three years from the acquisition Closing date. Refer to “Note 4. Business Combinations.”

We estimate the fair value of the replacement options on the date of grant using the Black-Scholes option-pricing model. The assumptions used to estimate the fair value of the replacement options are as follows:

	At the Acquisition Date
Expected terms (years)	3.0
Expected volatility	45.0 %
Risk-free interest rate	5.0 %
Dividend yield	— %

Restricted Stock Units

Restricted stock units (“RSUs”) under the 2015 Plan are grants of shares of our common stock, the vesting of which is based on the requisite service requirement. Generally, our RSUs are subject to forfeiture and are expected to vest within four years. For annual grants to existing employees, RSUs generally vest ratably on an annual basis, or combination of annual and quarterly basis, over three years.

During the six months ended December 30, 2023, our board of directors approved grants of 1.9 million RSUs, which primarily vest over three years.

In connection with the NeoPhotonics acquisition, we issued equity awards to certain NeoPhotonics employees, consisting of restricted stock units (the “replacement awards”) in exchange for their NeoPhotonics equity awards. The terms of these replacement awards are substantially similar to the original NeoPhotonics equity awards. The replacement awards consisted of 0.4 million restricted stock units with a grant date fair value of $ 93.4 per share, which represents our closing stock price on August 3, 2022, the acquisition closing date. The total fair value of these replacement awards is $40.2 million, $3.5 million of which is attributable to employee services rendered through the acquisition Closing date and was recognized as a component of the purchase consideration. The remaining $36.7 million of the replacement awards is recorded as stock-based compensation over the remaining vesting period. Refer to “Note 4. Business Combinations.”

Performance Stock Units

Performance stock units ("PSUs") under the 2015 Plan are grants of shares of our common stock that vest upon the achievement of certain performance and service conditions. We begin recognizing compensation expense when we conclude that it is probable that the performance conditions will be achieved. We reassess the probability of vesting at each reporting period and adjust our compensation cost based on this probability assessment. Our PSUs are subject to risk of forfeiture until performance and service conditions are satisfied and generally vest within three years.

During the six months ended December 30, 2023, our board of directors approved a grant of 0.3 million PSUs with an aggregate grant date fair value of $16.0 million to executive and non-executive employees as part of our revised Annual Incentive Plan. These PSUs are subject to performance targets and service conditions, with a vesting period of one year. The board of directors also approved a grant of 0.4 million PSUs with an aggregate grant date fair value of $19.3 million to certain executive officers and senior management. These PSUs will vest subject to the achievement of revenue targets and certain non-financial performance measurements, as well as service conditions, over three years.

Employee Stock Purchase Plan

Our 2015 Purchase Plan provides eligible employees with the opportunity to acquire an ownership interest in the Company through periodic payroll deductions and provides a 15% purchase price discount as well as a 6-month look-back period. The 2015 Purchase Plan is structured as a qualified employee stock purchase plan under Section 423 of the Internal Revenue Code of 1986, as amended. The 2015 Purchase Plan will terminate upon the date on which all shares available for issuance have been sold. Of the 3.0 million shares authorized under the 2015 Purchase Plan, 0.9 million shares remained available for issuance as of December 30, 2023.

Stock-Based Compensation

The impact on our results of operations of recording stock-based compensation by function for the periods presented was as follows *(in millions)*:

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Cost of sales	$ 9.0	$ 6.7	$ 15.0	$ 12.2
Research and development	10.0	10.6	20.3	20.2
Selling, general and administrative	15.6	19.3	31.4	50.8
Total stock-based compensation	$ 34.6	$ 36.6	$ 66.7	$ 83.2

Stock-based compensation for the six months ended December 31, 2022 includes $11.9 million of expenses related to the acceleration of certain equity awards in connection with the NeoPhotonics acquisition.

During the three months ended December 30, 2023, we recorded $ 0.2 million of net reversal of stock-based compensation related to PSUs due to decline in the anticipated achievement of performance conditions. During the six months ended December 30, 2023, we recorded $ 4.5 million of stock-based compensation related to PSUs. During the three and six months ended December 31, 2022, we recorded $ 6.2 million and $15.0 million of stock-based compensation related to PSUs, respectively. The amount of stock-based compensation expense recognized in any one period related to PSUs can vary based on the achievement or anticipated achievement of the performance conditions. If the performance conditions are not met or not expected to be met, no compensation cost would be recognized on the underlying PSUs, and any previously recognized compensation expense related to those PSUs would be reversed.

Total income tax benefit associated with stock-based compensation recognized in our condensed consolidated statements of operations during the periods presented was as follows *(in millions)*:

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Income tax benefit associated with stock-based compensation	$ 0.6	$ 6.4	$ 2.5	$ 11.5

Approximately $16.8 million and $14.2 million of stock-based compensation was capitalized to inventory as of December 30, 2023 and July 1, 2023, respectively.

As of December 30, 2023, $187.3 million of stock-based compensation cost related to RSU awards remains to be amortized, which is expected to be recognized over an estimated amortization period of 2.1 years.

Stock Award Activity

The following table summarizes our award activities for the six months ended December 30, 2023 *(in millions)*:

	Stock Options				Restricted Stock Units				Performance Stock Units			
	Number of Shares		Weighted-Average Exercise Price per Share		Number of Shares		Weighted-Average Grant Date Fair Value per Share		Number of Shares		Weighted-Average Grant Date Fair Value per Share	
Balance as of July 1, 2023	—	$	—		2.6	$	85.0		0.6	$	89.1	
Replacement options in connection with Cloud Light acquisition	1.1		34.6		—		—		—		—	
Granted	—		—		1.9		52.6		0.7		53.2	
Vested/Exercised [1]	—		8.0		(1.0)		87.4		(0.1)		89.5	
Canceled	—		—		(0.2)		78.5		(0.1)		88.9	
Balance as of December 30, 2023	1.1	$	34.6		3.3	$	66.2		1.1	$	65.9	

[1] Vested/exercised number of shares related to stock options is less than 0.1 million.

A summary of awards available for grant is as follows *(in millions)*:

	Awards Available for Grant
Balance as of July 1, 2023	2.7
Authorized in connection with Cloud Light acquisition	1.5
Replacement options in connection with Cloud Light acquisition	(1.1)
Authorized	3.0
Granted	(2.6)
Canceled	0.3
Balance as of December 30, 2023	3.8

Employee Stock Purchase Plan Activity

The 2015 Purchase Plan expense for the three and six months ended December 30, 2023 was $ 1.0 million and $2.2 million, respectively. The 2015 Purchase Plan expense for the three and six months ended December 31, 2022 was $0.8 million and $2.0 million, respectively. The expense related to the 2015 Purchase Plan is recorded on a straight-line basis over the relevant subscription period.

During the six months ended December 30, 2023, there were 0.2 million shares issued to employees through the 2015 Purchase Plan. During the six months ended December 31, 2022, there were 0.1 million shares issued to employees through the 2015 Purchase Plan.

Repurchase and Retirement of Common Stock

Share Buyback Program

We have a share buyback program that authorizes us to utilize up to an aggregate amount of $ 1.2 billion to purchase our own shares of common stock through May 2025. During the six months ended December 30, 2023, we did not repurchase any shares of our common stock. During the six months ended December 31, 2022, we repurchased 0.3 million shares of our common stock at an average price of $ 89.80 per share for an aggregate purchase price of $25.7 million. Since the board of directors initially approved the share buyback program, we have repurchased 7.7 million shares in aggregate at an average price of $81.66 per share for a total purchase price of $ 630.4 million. We recorded the $630.4 million aggregate purchase price as a reduction of retained earnings within our condensed consolidated balance sheet and immediately retired all repurchased shares. As of December 30, 2023, we have $569.6 million remaining under the share buyback program.

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The price, timing, amount, and method of future repurchases will be determined based on the valuation of market conditions and other factors, at prices determined to be attractive and in the best interests of both the Company and our stockholders. The stock repurchase program may be suspended or terminated at any time.

Note 14. Commitments and Contingencies

Purchase Obligations

Our purchase obligations of $423.8 million as of December 30, 2023 represent legally binding commitments to purchase inventory and other commitments made in the normal course of business to meet operational requirements. Although open purchase orders are considered enforceable and legally binding, the terms generally allow the option to cancel, reschedule and adjust the requirements based on our business needs prior to the delivery of goods or performance of services. Obligations to purchase inventory and other commitments are generally expected to be fulfilled within one year.

We depend on a limited number of contract manufacturers, subcontractors and suppliers for raw materials, packages and standard components. We generally purchase these single or limited source products through standard purchase orders or one-year supply agreements and have no significant long-term guaranteed supply agreements with these vendors. While we seek to maintain a sufficient safety stock of such products and maintain on-going communications with our suppliers to guard against interruptions or cessation of supply, our business and results of operations could be adversely affected by a stoppage or delay of supply, substitution of more expensive or less reliable products, receipt of defective parts or contaminated materials, increases in the price of such supplies, or our inability to obtain reduced pricing from our suppliers in response to competitive pressures.

Product Warranties

We provide reserves for the estimated costs of product warranties at the time revenue is recognized. We typically offer a twelve-month warranty for most of our products. However, in some instances depending upon the product, product components or application of our products by the end customer, our warranties can vary and generally range from six months to five years. We estimate the costs of our warranty obligations on an annualized basis based on our historical experience of known product failure rates, use of materials to repair or replace defective products, and service delivery costs incurred in correcting product failures. In addition, from time-to-time, specific warranty accruals may be made if unforeseen technical problems arise with specific products. We assess the adequacy of our recorded warranty liabilities and adjust the amounts as necessary.

The following table presents the changes in our warranty reserve for the periods presented (*in millions*):

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Balance as of beginning of period	$ 5.5	$ 10.1	$ 6.8	$ 10.0
Warranty assumed from Cloud Light	5.2	—	5.2	—
Provision for warranty	0.8	2.8	1.0	5.0
Utilization of reserve, net	(1.4)	(4.5)	(2.9)	(6.6)
Balance as of end of period	$ 10.1	$ 8.4	$ 10.1	$ 8.4

Environmental Liabilities

Our research and development, manufacturing and distribution operations involve the use of hazardous substances and are regulated under international, federal, state and local laws governing health and safety and the environment. We apply strict standards for protection of the environment and occupational health and safety to sites inside and outside the United States, even if not subject to regulations imposed by foreign governments. We believe that our properties and operations at our facilities comply in all material respects with applicable environmental laws and occupational health and safety laws. However, the risk of environmental liabilities cannot be completely eliminated and there can be no assurance that the application of environmental and health and safety laws will not require us to incur significant expenditures. We are also regulated under a number of international, federal, state and local laws regarding recycling, product packaging and product content requirements. The environmental and product content/disposal and recycling laws are gradually becoming more stringent and may cause us to incur significant expenditures in the future.

Legal Proceedings

We are subject to a variety of claims and suits that arise from time-to-time in the ordinary course of our business. While management currently believes that resolving claims against us, individually or in the aggregate, will not have a material adverse impact on our financial position, results of operations or statements of cash flows, these matters are subject to inherent uncertainties and management's view of these matters may change in the future. We accrue for loss contingencies when it is both probable that we will incur the loss and when we can reasonably estimate the amount of the loss or range of loss. During the year ended July 1, 2023, we recorded $7.8 million with respect to the pending settlement of certain non-ordinary course litigation matters under accrued expenses in our consolidated balance sheet, which has not been settled as of December 30, 2023.

Oclaro Merger Litigation

In connection with our acquisition of Oclaro in 2018, seven lawsuits were filed by purported stockholders of Oclaro challenging the proposed merger (the "Merger"). All but one was voluntarily dismissed after the Oclaro Merger closed. The remaining lawsuit, SaiSravan B. Karri v. Oclaro, Inc., et al., No. 3:18-cv-03435-JD (the "Karri Lawsuit"), was filed in the United States District Court for the Northern District of California and is styled as a class action.

The Karri Lawsuit alleges, among other things, that Oclaro and its directors violated Section 14(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 14a-9 promulgated thereunder by disseminating an incomplete and misleading Form S-4, including proxy statement/prospectus. The Karri Lawsuit further alleged that Oclaro's directors violated Section 20(a) of the Exchange Act by failing to exercise proper control over the person(s) who violated Section 14(a) of the Exchange Act. The plaintiff in the Karri Lawsuit seeks, among other things, damages to be awarded to the plaintiff and any class, if a class is certified, and litigation costs, including attorneys' fees.

After the plaintiff in the Karri Lawsuit was appointed as lead plaintiff and his counsel as lead counsel, the plaintiff filed a first amended complaint on April 15, 2019. The first amended complaint, also named Lumentum as a defendant but Lumentum has since been dismissed from the action. On October 8, 2020, the court granted in part and denied in part the defendant's motion to dismiss the first amended complaint. On December 1, 2020, defendants answered the first amended complaint. On September 17, 2021, lead plaintiff filed a second amended complaint. Defendants moved to stay discovery in light of the second amended complaint. On January 11, 2022, the Court struck the second amended complaint as untimely, terminated defendants' motions to dismiss as moot, and lifted the stay. The case proceeded through fact and expert discovery.

On August 16, 2022, the lead plaintiff moved for class certification and to be appointed class representative. Defendants opposed the motion. The action subsequently was stayed while the parties participated in a mediation. On January 18, 2023, the lead plaintiff filed a Notice of Settlement informing the court of an agreement in principle between the parties for a class-wide settlement of the Karri Lawsuit. On January 24, 2023, in light of the potential settlement, the court vacated all pretrial and trial dates and ordered the lead plaintiff to file a motion for preliminary approval of the settlement by March 17, 2023. The lead plaintiff filed his motion for preliminary approval of the settlement on March 16, 2023, and defendants filed a statement of non-opposition on March 30, 2023. On April 20, 2023, the court held a hearing on lead plaintiff's motion for preliminary approval of the settlement. The court declined to grant lead plaintiff's motion for preliminary approval and ordered lead plaintiff to file a revised motion by May 22, 2023. Lead plaintiff filed his Revised Motion for Preliminary Approval of Settlement (the "Amended Motion") on May 22, 2023, defendants filed a response in support of the Amended Motion on June 5, 2023, and the lead plaintiff submitted his reply on June 12, 2023. The hearing on the Amended Motion took place on August 17, 2023 and the court preliminarily approved the settlement. In the event that the settlement does not go forward for any reason, the defendants intend to continue to defend the Karri Lawsuit vigorously.

Indemnifications

In the normal course of business, we enter into agreements that contain a variety of representations and warranties and provide for general indemnification. Exposure under these agreements is unknown, because claims may be made against us in the future, and we may record charges in the future as a result of these indemnification obligations. As of December 30, 2023, we did not have any material indemnification claims that were probable or reasonably possible.

Audit Proceedings

We are under audit by various domestic and foreign tax authorities with regards to income tax and indirect tax matters. In some, although not all cases, we have reserved for potential adjustments to our provision for income taxes and accrual of indirect taxes that may result from examinations by these tax authorities or final outcomes in judicial proceedings, and we believe that the final outcome of these examinations, agreements or judicial proceedings will not have a material effect on our results of operations. If events occur which indicate payment of these amounts is unnecessary, the reversal of the liabilities would result in the recognition of benefits in the period when we determine the liabilities are no longer necessary. If our estimates of the federal, state, and foreign income tax liabilities and indirect tax liabilities are less than the ultimate assessment, it could result in a further charge to expense.

Note 15. Operating Segments and Geographic Information

Prior to fiscal year 2024, we operated in two reportable segments consisting of Optical Communications (“OpComms”) and Commercial Lasers (“Lasers”). During the fiscal first quarter of 2024, our chief operating decision maker (“CODM”) implemented changes in how he organizes the business, allocates resources, and assesses performance. We changed our organizational structure to better align with trends in our markets and our customer and product mix. Our new operating segments are Cloud & Networking and Industrial Tech. The Cloud & Networking segment includes the Telecom & Datacom product lines that were previously part of the OpComms segment. The Industrial Tech segment includes previous Lasers segment and the Industrial & Consumer product lines that were previously part of the OpComms segment. The two operating segments were primarily determined based on how the CODM views and evaluates our operations. The CODM regularly reviews operating results to make decisions about resources to be allocated to the segments and to assess their performance.

In conjunction with this change, our CODM now evaluates each segment’s performance and allocates resources based on segment revenue and segment profit, instead of gross profit, as our CODM believes segment profit is a more comprehensive profitability measure for each operating segment. Segment profit includes operating expenses directly managed by operating segments, including research and development, and direct sales and marketing expenses. Segment profit does not include stock-based compensation, acquisition or integration related costs, amortization and impairment of acquisition-related intangible assets, restructuring and related charges, and certain other charges. Additionally, we do not allocate corporate marketing and strategic marketing expenses and general and administrative expenses, as these expenses are not directly attributable to our operating segments.

Comparative prior period segment information has been recast to conform to the new segment structure and segment profitability measure. The change in our operating segments had no impact on our previously reported consolidated results of operations, financial condition, or cash flows.

We do not track all of our property, plant and equipment by operating segments. The geographic identification of these assets is set forth below.

Cloud & Networking

Our Cloud & Networking products include a wide range of components, modules, and subsystems to support customers including carrier networks for access (local), metro (intracity), long-haul (city-to-city and worldwide) and submarine (undersea) applications. Additionally, our products address enterprise, cloud, and data center applications, including SANs, LANs and WANs, as well as AI/ML. These products enable the transmission and transport of video, audio, and data over high-capacity fiber-optic cables. We maintain leading positions in these fast-growing cloud & networking markets through our extensive product portfolio, including reconfigurable optical add/drop multiplexers (“ROADMs”), coherent dense wavelength division multiplexing (“DWDM”) pluggable transceivers, and tunable small form-factor pluggable transceivers. We also sell laser chips for use in manufacturing of high-speed ethernet transceivers for use primarily inside data centers.

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Industrial Tech

Our Industrial Tech products include diode laser products such as VCSELs and edge emitting lasers. In the consumer end-market, our laser light sources are integrated into 3D sensing cameras which are used in applications in mobile devices, gaming, payment kiosks, computers, other consumer electronics devices, and automobiles. Applications include biometric identification, computational photography, virtual and augmented reality, and natural user interfaces. Emerging applications for our lasers include automotive safety systems, LiDAR for advanced driver assistance systems in automobiles and autonomous vehicles, self-navigating robotics and drones in industrial applications, and 3D capture of objects coupled with 3D imaging or printing. In the industrial end market, our diode lasers are used primarily as pump sources for pulsed and kilowatt class fiber lasers.

Industrial Tech products also include laser products used in a variety of OEM applications including diode-pumped solid-state, fiber, diode, direct-diode and gas lasers such as argon-ion and helium-neon lasers. Fiber lasers provide kW-class output powers combined with excellent beam quality and are used in sheet metal processing and metal welding applications. These applications range in output power from milliwatts to kilowatts and include ultraviolet, visible and infrared wavelengths. Our laser products serve our customers in markets and applications such as sheet metal processing, general manufacturing, solar cell processing, biotechnology, graphics and imaging, remote sensing, and precision machining such as drilling in printed circuit boards, wafer singulation, glass cutting and solar cell scribing. We also provide high-powered and ultrafast lasers for the industrial and scientific markets. Manufacturers use high-power, ultrafast lasers to create micro parts for consumer electronics and to process semiconductor, LED, solar cells, and other types of chips. Use of ultrafast lasers for micromachining applications is being driven primarily by the increasing use of renewable energy, consumer electronics and connected devices globally.

Reportable Segments

The two operating segments, Cloud & Networking and Industrial Tech, also represent our two reportable segments. Our CODM allocates resources and evaluates segment performance based on segment revenue and segment profit. The following table summarizes segment profit and a reconciliation to the consolidated income (loss) before income taxes for the periods presented (*in millions*). Comparative prior period segment information has been recast to conform to the new segment structure.

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	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Net revenue:				
Cloud & Networking	$ 286.7	$ 382.9	$ 516.4	$ 743.0
Industrial Tech	80.1	123.1	168.0	269.8
Net revenue	$ 366.8	$ 506.0	$ 684.4	$ 1,012.8
Segment profit:				
Cloud & Networking	$ 29.1	$ 99.9	$ 53.0	$ 201.6
Industrial Tech	12.7	49.7	28.0	118.5
Total segment profit	41.8	149.6	81.0	320.1
Unallocated corporate items:				
Selling, general and administrative [1]	(28.8)	(32.9)	(57.4)	(66.0)
Stock-based compensation	(34.6)	(36.6)	(66.7)	(71.3)
Stock-based compensation - acquisition related	—	—	—	(11.9)
Amortization of acquired intangibles	(37.6)	(36.1)	(66.6)	(68.3)
Amortization of acquired inventory fair value adjustments	(3.4)	(9.6)	(3.4)	(14.2)
Acquisition related costs	(9.0)	—	(13.0)	(16.2)
Integration related costs	(11.6)	(8.0)	(22.9)	(8.6)
Restructuring and related charges	(5.8)	(13.9)	(16.8)	(23.2)
Abnormal excess capacity	(1.8)	—	(1.8)	—
Litigation matters	—	(7.8)	—	(7.8)
Other charges, net [2]	(14.4)	(26.6)	(18.4)	(41.0)
Interest expense	(9.7)	(8.9)	(19.4)	(17.4)
Other income, net [3]	13.4	3.7	34.6	17.5
Consolidated loss before income taxes	$ (101.5)	$ (27.1)	$ (170.8)	$ (8.3)

[1] We do not allocate selling, general and administrative expenses that are not directly attributable to our operating segments.

[2] Other charges, net for the three months ended December 30, 2023 primarily relate to $9.5 million of net excess and obsolete inventory, $4.6 million of non-recurring legal and tax related fees, and $1.0 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand. The excess and obsolete inventory charges relate to charges that are not attributable to our operating segments due to their unusual nature, primarily those charges driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of our customers.

Other charges, net for the six months ended December 30, 2023 primarily relate to $ 9.2 million of net excess and obsolete inventory, $5.4 million of non-recurring legal and tax related fees, and $3.9 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand. The excess and obsolete inventory charges relate to charges that are not attributable to our operating segments due to their unusual nature, primarily those charges driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of our customers.

Other charges, net for the three months ended December 31, 2022 primarily relate to $ 11.7 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand, $4.5 million of non-recurring charges on legal matters, and $5.4 million of excess and obsolete inventory charges primarily driven by U.S. trade restrictions.

Other charges, net for the six months ended December 31, 2022 primarily relate to $ 19.0 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand, $4.5 million of non-recurring charges on legal matters, and $5.5 million of excess and obsolete inventory charges primarily driven by U.S. trade restrictions.

(3) Other income, net for the three months ended December 30, 2023 includes interest and investment income of $17.1 million, offset by foreign exchange and other loss, net of $3.7 million. Other income, net for the six months ended December 30, 2023 includes interest and investment income of $38.8 million, offset by foreign exchange and other loss, net of $ 4.2 million.

Other income, net for the three months ended December 31, 2022 primarily relates to $ 7.7 million of interest and investment income, offset by $4.1 million of net foreign exchange losses. Other income, net for the six months ended December 31, 2022 primarily relates to $ 12.5 million of interest and investment income and $4.9 million of net foreign exchange gains.

Concentrations

We operate in three geographic regions: Americas, Asia-Pacific, and EMEA (Europe, Middle East, and Africa). Net revenue is assigned to the geographic region and country where our product is initially shipped. For example, certain customers may request shipment of our product to a contract manufacturer in one country, which may differ from the location of their end customers.

The following table presents net revenue by the three geographic regions we operate in and net revenue from countries that generally represented 10% or more of our total net revenue *(in millions, except percentage data):*

	Three Months Ended				Six Months Ended			
	December 30, 2023		December 31, 2022		December 30, 2023		December 31, 2022	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Net revenue:								
Americas:								
United States	$ 103.0	28.1 %	$ 65.5	12.9 %	$ 144.1	21.0 %	$ 127.7	12.6 %
Mexico	31.4	8.6	59.5	11.8	55.1	8.1	117.0	11.6
Other Americas	0.8	0.2	3.8	0.8	2.0	0.3	6.1	0.6
Total Americas	$ 135.2	36.9 %	$ 128.8	25.5 %	$ 201.2	29.4 %	$ 250.8	24.8 %
Asia-Pacific:								
Hong Kong	$ 65.7	17.9 %	$ 65.9	13.0 %	$ 130.6	19.1 %	$ 143.5	14.2 %
South Korea	20.8	5.7	52.0	10.3	45.8	6.7	119.7	11.8
Japan	25.9	7.1	50.8	10.0	51.3	7.5	95.6	9.4
Thailand	39.3	10.7	77.9	15.4	103.5	15.1	135.4	13.4
Other Asia-Pacific	49.5	13.4	84.7	16.7	89.0	13.0	173.6	17.1
Total Asia-Pacific	$ 201.2	54.8 %	$ 331.3	65.4 %	$ 420.2	61.4 %	$ 667.8	65.9 %
EMEA	$ 30.4	8.3 %	$ 45.9	9.1 %	$ 63.0	9.2 %	$ 94.2	9.3 %
Total net revenue	$ 366.8	100.0 %	$ 506.0	100.0 %	$ 684.4	100.0 %	$ 1,012.8	100.0 %

During the three months ended December 30, 2023, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with three customers, who individually accounted for 19%, 13% and 11% of our total net revenue, respectively. During the six months ended December 30, 2023, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with three customers, who individually accounted for 14%, 12% and 12% of our total net revenue, respectively.

During the three months ended December 31, 2022, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with two customers, who individually accounted for 19% and 12% of our total net revenue, respectively. During the six months ended December 31, 2022, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with two customers, who individually accounted for 18% and 15% of our total net revenue, respectively.

As of December 30, 2023, our accounts receivable from a single customer that represented 10% or greater of the total accounts receivable was concentrated with one customer, who accounted for 20% of the total accounts receivable. As of July 1, 2023, our accounts receivable from a single customer that represented 10% or greater of the total accounts receivable was concentrated with three customers, who individually accounted for 14%, 12% and 12% of the total accounts receivable, respectively.

Long-lived assets, namely property, plant and equipment, net, were identified based on the physical location of the assets in the corresponding geographic areas as of the periods indicated *(in millions)*:

	December 30, 2023	July 1, 2023
Property, plant and equipment, net		
United States	$ 136.1	$ 134.7
Thailand	134.3	132.0
Japan	84.3	93.0
United Kingdom	76.6	38.2
China	94.0	42.1
Other countries	57.0	49.5
Total property, plant and equipment, net	$ 582.3	$ 489.5

We purchase a portion of our inventory from contract manufacturers and vendors located primarily in Taiwan, Thailand and Malaysia. During the three and six months ended December 30, 2023, our net inventory purchases from a single contract manufacturer that represented 10% or greater of our total net inventory purchases were concentrated with two contract manufacturers, who collectively accounted for 33% and 43% of the total net inventory purchases, respectively. During the three and six months ended December 31, 2022, our net inventory purchases from a single contract manufacturer, which represented 10% or greater of our total net inventory purchases, were concentrated with one and two contract manufacturers, who collectively accounted for 43% and 52% of total net inventory purchases, respectively.

Note 16. Revenue Recognition

Disaggregation of Revenue

We disaggregate revenue by segment and by geography. We do not present other levels of disaggregation, such as by type of products, customer, markets, contracts, duration of contracts, timing of transfer of control and sales channels, as this information is not used by our CODM to manage the business.

The table below discloses our total net revenue attributable to each of our two reportable segments (*in millions, except percentage data*):

	Three Months Ended				Six Months Ended			
	December 30, 2023		December 31, 2022		December 30, 2023		December 31, 2022	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Cloud & Networking	$ 286.7	78.2 %	$ 382.9	75.7 %	$ 516.4	75.5 %	$ 743.0	73.4 %
Industrial Tech	80.1	21.8 %	123.1	24.3 %	168.0	24.5 %	269.8	26.6 %
Net revenue	$ 366.8	100.0 %	$ 506.0	100.0 %	$ 684.4	100.0 %	$ 1,012.8	100.0 %

Contract Balances

The following table reflects the changes in contract balances for the periods presented (*in millions, except percentages*):

Contract balances	Balance sheet location	December 30, 2023	July 1, 2023	Change	Percentage Change
Accounts receivable, net	Accounts receivable, net	$ 248.3	$ 246.1	$ 2.2	0.9 %
Deferred revenue and customer deposits	Other current liabilities	$ 0.9	$ 2.1	$ (1.2)	(57.1) %

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion in conjunction with the unaudited condensed consolidated financial statements and the corresponding notes included elsewhere in this Quarterly Report on Form 10-Q (this "Quarterly Report"). This Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements. The matters discussed in these forward-looking statements are subject to risk, uncertainties and other factors that could cause actual results to differ materially from those made, projected or implied in the forward-looking statements. Please see "Risk Factors" and "Forward-Looking Statements" for a discussion of the uncertainties, risks and assumptions associated with these statements.

Forward-Looking Statements

This Quarterly Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements relate to, among other things, our markets and industry, products and strategy, the impact of export regulation changes, macroeconomic conditions, including supply chain conditions, the impact of the COVID-19 pandemic and related responses of business and governments to the pandemic, instability and uncertainty in the banking and financial services markets, and tightening credit markets on our business and results of operations, sales, gross margins, operating expenses, capital expenditures and requirements, liquidity, product development and research and development efforts, manufacturing plans, litigation, effective tax rates and tax reserves, our corporate and financial reporting structure, our plans for growth and innovation, our expectations regarding U.S.-China relations, market and regulatory conditions, trends and uncertainties in our business and financial results and the successful integration of business of NeoPhotonics and our recently completed acquisition of Cloud Light (including personnel), and are often identified by the use of words such as, but not limited to, "anticipate," "believe," "can," "continue," "could," "estimate," "expect," "intend," "may," "might," "plan," "project," "seek," "should," "target," "will," "would," "contemplate," "believe," "predict," "potential" and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management, which are in turn based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section entitled "Risk Factors" included under Part II, Item 1A of this Quarterly Report. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We are an industry-leading provider of optical and photonic products defined by revenue and market share, addressing a range of end-market applications for manufacturing, inspection and life-science applications.

We believe the global markets in which Lumentum participates have fundamentally robust, long-term trends that will increase the need for our photonics products and technologies. We believe the world is becoming more reliant on ever-increasing amounts of data flowing through optical networks and data centers. Lumentum’s products and technology enable the scaling of these optical networks and data centers to higher capacities. We expect that the accelerating shift to digital and virtual approaches to many aspects of work and life will continue into the future. Virtual meetings, video calls, and hybrid in-person and virtual environments for work and other aspects of life will continue to drive strong needs for bandwidth growth and present dynamic new challenges that our technology addresses. As manufacturers demand higher levels of precision, new materials, and factory and energy efficiency, suppliers of manufacturing tools globally are turning to laser-based approaches, including the types of lasers Lumentum supplies. Laser-based 3D sensing and LiDAR for security, industrial and automotive applications are rapidly developing markets. The technology enables computer vision applications that enhance security, safety, and new functionality in the electronic devices that people rely on every day. The use of LiDAR and in-cabin 3D sensing in automobile and delivery vehicles over time significantly adds to our long-term market opportunity. Frictionless and contactless biometric security and access control is of increasing focus globally given the world’s experience with the COVID-19 pandemic. Additionally, we expect 3D-enabled machine vision solutions to expand significantly in industrial applications in the coming years.

To maintain and grow our market and technology leadership positions, we are continually investing in new and differentiated products and technologies and customer programs that address both nearer-term and longer-term growth opportunities, both organically and through acquisitions, as well as continually improving and optimizing our operations. Over many years, we have developed close relationships with market leading customers. We seek to use our core optical and photonic technology and our volume manufacturing capability to expand into attractive emerging markets that benefit from advantages that optical or photonics-based solutions provide.

Prior to fiscal year 2024, we operated in two reportable segments consisting of Optical Communications (“OpComms”) and Commercial Lasers (“Lasers”). During the fiscal first quarter of 2024, our chief operating decision maker (“CODM”) implemented changes in how he organizes the business, allocates resources, and assesses performance. We changed our organizational structure to better align with trends in our markets and our customer and product mix. Our new operating segments are Cloud & Networking and Industrial Tech. The Cloud & Networking segment includes the Telecom & Datacom product lines that were previously part of the OpComms segment. The Industrial Tech segment includes previous Lasers segment and the Industrial & Consumer product lines that were previously part of the OpComms segment. The two operating segments were primarily determined based on how the CODM views and evaluates our operations. The CODM regularly reviews operating results to make decisions about resources to be allocated to the segments and to assess their performance.

In conjunction with this change, our CODM now evaluates each segment’s performance and allocates resources based on segment revenue and segment profit, instead of gross profit, as our CODM believes segment profit is a more comprehensive profitability measure for each operating segment. Segment profit includes operating expenses directly managed by operating segments, including research and development, and direct sales and marketing expenses. Segment profit does not include stock-based compensation, acquisition or integration related costs, amortization and impairment of acquisition-related intangible assets, restructuring and related charges, and certain other charges. Additionally, we do not allocate corporate marketing and strategic marketing expenses and general and administrative expenses, as these expenses are not directly attributable to our operating segments.

Comparative prior period segment information has been recast to conform to the new segment structure and segment profitability measure. The change in our operating segments had no impact on our previously reported consolidated results of operations, financial condition, or cash flows.

Cloud & Networking

Our Cloud & Networking products include a wide range of components, modules, and subsystems to support customers including carrier networks for access (local), metro (intracity), long-haul (city-to-city and worldwide) and submarine (undersea) applications. Additionally, our products address enterprise, cloud, and data center applications, including storage-access networks (“SANs”), local-area networks (“LANs”) and wide-area networks (“WANs”), as well as artificial intelligence and machine learning (“AI/ML”). These products enable the transmission and transport of video, audio, and data over high-capacity fiber-optic cables. We maintain leading positions in these fast-growing cloud & networking markets through our extensive product portfolio, including reconfigurable optical add/drop multiplexers (“ROADMs”), coherent dense wavelength division multiplexing (“DWDM”) pluggable transceivers, and tunable small form-factor pluggable transceivers. We also sell laser chips for use in manufacturing of high-speed ethernet transceivers for use primarily inside data centers.

Industrial Tech

Our Industrial Tech products include diode laser products such as VCSELs and edge emitting lasers. In the consumer end-market, our laser light sources are integrated into 3D sensing cameras which are used in applications in mobile devices, gaming, payment kiosks, computers, other consumer electronics devices, and automobiles. Applications include biometric identification, computational photography, virtual and augmented reality, and natural user interfaces. Emerging applications for our lasers include automotive safety systems, LiDAR for advanced driver assistance systems in automobiles and autonomous vehicles, self-navigating robotics and drones in industrial applications, and 3D capture of objects coupled with 3D imaging or printing. In the industrial end market, our diode lasers are used primarily as pump sources for pulsed and kilowatt class fiber lasers.

Industrial Tech products also include laser products used in a variety of OEM applications including diode-pumped solid-state, fiber, diode, direct-diode and gas lasers such as argon-ion and helium-neon lasers. Fiber lasers provide kW-class output powers combined with excellent beam quality and are used in sheet metal processing and metal welding applications. These applications range in output power from milliwatts to kilowatts and include ultraviolet, visible and infrared wavelengths. Our laser products serve our customers in markets and applications such as sheet metal processing, general manufacturing, solar cell processing, biotechnology, graphics and imaging, remote sensing, and precision machining such as drilling in printed circuit boards, wafer singulation, glass cutting and solar cell scribing. We also provide high-powered and ultrafast lasers for the industrial and scientific markets. Manufacturers use high-power, ultrafast lasers to create micro parts for consumer electronics and to process semiconductor, LED, solar cells, and other types of chips. Use of ultrafast lasers for micromachining applications is being driven primarily by the increasing use of renewable energy, consumer electronics and connected devices globally.

Acquisition of Cloud Light

On October 29, 2023, Lumentum and Cloud Light Technology Limited (“Cloud Light”) entered into a definitive merger agreement (the “Merger Agreement”). On November 7, 2023 (the “Closing date”), we completed the acquisition of Cloud Light. Cloud Light designs, markets, and manufactures advanced optical modules for data center interconnect applications. The acquisition enables us to be well-positioned to serve the growing needs of cloud & networking customers, particularly those focused on optimizing their data center infrastructure for the demands of AI/ML. On the Closing date, we paid $705.0 million of total cash consideration to Cloud Light. Additionally, each of Cloud Light’s outstanding options was exchanged for a combination of cash and options to acquire Lumentum common stock having equivalent value (the “replacement options”). These replacement options have a total fair value of $38.9 million as of the Closing date, of which $23.5 million attributed to pre-acquisition service is recorded as part of purchase price consideration and the remaining $15.4 million is recorded as post-acquisition stock-based compensation expense over the vesting period of three years from the acquisition Closing date. We also incurred $6.8 million of merger-related costs during the fiscal second quarter of 2024, representing professional and other direct acquisition costs, which was recorded as general and administrative expense in the consolidated statement of operations. Refer to “Note 4. Business Combinations” in the notes to condensed consolidated financial statements.

We evaluate strategic opportunities regularly and, where appropriate, may acquire additional businesses, products, or technologies that are complementary to, or broaden the markets for our products. We believe we have strengthened our business model by expanding our addressable markets, customer base and expertise, diversifying our product portfolio and fortifying our core businesses from acquisitions as well as through organic initiatives.

Supply Chain Constraints and Inventory Management

Our business and our customers' businesses have been negatively impacted by worldwide logistics and supply chain issues, including constraints on available cargo capabilities and limited availability of once broadly available supplies of both raw materials and finished components. COVID-19 also created dynamics in the semiconductor component supply chains that have led to shortages of the types of components we and our customers require in our products. Although the supply chain constraints improved in the latter half of fiscal 2023, they may impact our ability to supply our products to our customers and may reduce our revenue and profit margin if these shortages happen again in the future. In addition, if our customers are unable to procure needed semiconductor components, their demand for our products will decrease. Due to the global supply chain constraints, we had to incur incremental supply and procurement costs in order to increase our ability to fulfill demands from our customers.

In addition, in response to component shortages, certain of our customers accumulated inventory that they are now managing down as supply conditions improve. Accordingly, customer orders have declined in recent periods and certain customers have not taken the shipments we had originally projected due to their inventory management. As customers manage their inventory down, our revenue has declined and our margins are adversely impacted as we are not able to fully recover costs, such as underutilized manufacturing capacity, associated with the forecasted demand and we may incur excess and obsolescence charges from unsold inventory. We expect this trend to continue to impact our business during the calendar year 2024.

For more information on risks associated with supply chain constraints and customer inventory management, see the section titled "Risk Factors" in Item 1A of Part II of this report.

Critical Accounting Policies and Estimates

Our condensed and consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles ("GAAP") as set forth in the Financial Accounting Standards Board's Accounting Standards Codification ("ASC"). We also consider the various staff accounting bulletins and other applicable guidance issued by the United States Securities and Exchange Commission ("SEC"). GAAP, as set forth within the ASC, requires us to make certain estimates, judgments and assumptions. We believe that the estimates, judgments and assumptions upon which we rely are reasonable based upon information available to us at the time that these estimates, judgments and assumptions are made. These estimates, judgments and assumptions can affect the reported amounts of assets and liabilities as of the date of the financial statements as well as the reported amounts of revenues and expenses during the periods presented. To the extent there are differences between these estimates, judgments or assumptions and actual results, our financial statements will be affected. The accounting policies that reflect our more significant estimates, judgments and assumptions and which we believe are the most critical to aid in fully understanding and evaluating our reported financial results include the following:

- Inventory Valuation
- Revenue Recognition
- Income Taxes
- Business Combinations
- Goodwill and Intangible Assets - Impairment Assessment

Management's Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, Item 7 of our Annual Report on Form 10-K for our fiscal year ended July 1, 2023 provides a complete discussion of our critical accounting policies and estimates. There have been no changes to these policies during the three and six months ended December 30, 2023.

Recently Issued Accounting Pronouncements

Refer to “Note 2. Recently Issued Accounting Pronouncements” in the notes to condensed consolidated financial statements.

Results of Operations

Comparative prior period segment information has been recast to conform to the new segment structure and segment profitability measure. The change in our operating segments had no impact on our previously reported consolidated results of operations, financial condition, or cash flows.

The results of operations for the periods presented are not necessarily indicative of results to be expected for future periods. The following table summarizes selected unaudited condensed consolidated statements of operations items as a percentage of net revenue:

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Segment net revenue:				
Cloud & Networking	78.2 %	75.7 %	75.5 %	73.4 %
Industrial Tech	21.8	24.3	24.5	26.6
Net revenue	100.0	100.0	100.0	100.0
Cost of sales	76.7	62.3	73.6	59.0
Amortization of acquired developed intangibles	5.9	4.9	5.8	4.7
Gross profit	17.4	32.8	20.6	36.3
Operating expenses:				
Research and development	21.3	15.0	22.2	14.7
Selling, general and administrative	23.2	19.4	23.1	20.2
Restructuring and related charges	1.6	2.7	2.5	2.3
Total operating expenses	46.1	37.2	47.8	37.1
Loss from operations	(28.7)	(4.3)	(27.2)	(0.8)
Interest expense	(2.7)	(1.8)	(2.8)	(1.7)
Other income, net	3.7	0.7	5.0	1.7
Loss before income taxes	(27.7)	(5.4)	(25.0)	(0.8)
Income tax provision (benefit)	(0.7)	0.9	(0.6)	2.3
Net loss	(27.0) %	(6.3) %	(24.4) %	(3.2) %

Financial data for the three and six months ended December 30, 2023

The following table summarizes selected unaudited condensed consolidated statements of operations items for the periods presented (*in millions, except for percentages*):

	Three Months Ended				Six Months Ended			
	December 30, 2023	December 31, 2022	Change	Percentage Change	December 30, 2023	December 31, 2022	Change	Percentage Change
Segment net revenue:								
Cloud & Networking	$ 286.7	$ 382.9	$ (96.2)	(25.1) %	$ 516.4	$ 743.0	$ (226.6)	(30.5) %
Industrial Tech	80.1	123.1	(43.0)	(34.9) %	168.0	269.8	(101.8)	(37.7) %
Net revenue	$ 366.8	$ 506.0	$ (139.2)	(27.5) %	$ 684.4	$ 1,012.8	$ (328.4)	(32.4) %
Gross profit	$ 64.0	$ 166.2	$ (102.2)	(61.5) %	$ 140.7	$ 367.4	$ (226.7)	(61.7) %
Gross margin	17.4 %	32.8 %			20.6 %	36.3 %		
Research and development	$ 78.3	$ 75.8	$ 2.5	3.3 %	$ 151.8	$ 148.5	$ 3.3	2.2 %
Percentage of net revenue	21.3 %	15.0 %			22.2 %	14.7 %		
Selling, general and administrative	$ 85.1	$ 98.4	$ (13.3)	(13.5) %	$ 158.1	$ 204.1	$ (46.0)	(22.5) %
Percentage of net revenue	23.2 %	19.4 %			23.1 %	20.2 %		
Restructuring and related charges	$ 5.8	$ 13.9	$ (8.1)	(58.3) %	$ 16.8	$ 23.2	$ (6.4)	(27.6) %
Percentage of net revenue	1.6 %	2.7 %			2.4 %	2.3 %		

Net Revenue

Net revenue decreased by $139.2 million, or 27.5%, during the three months ended December 30, 2023 compared to the three months ended December 31, 2022, driven by a $96.2 million decrease in Cloud & Networking revenue and a $43.0 million decrease in Industrial Tech revenue. The decrease in Cloud & Networking net revenue is primarily due to reduction in demand associated with a build-up of inventory and resulting inventory management actions by our customers, offset by $59.5 million of revenue generated by Cloud Light. The decrease in Industrial Tech net revenue is primarily due to higher market competition, which reflects share normalization in the market, as well as reduction in demand associated with a build-up of inventory and resulting inventory management actions by our customers.

Net revenue decreased by $328.4 million, or 32.4%, during the six months ended December 30, 2023 compared to the six months ended December 31, 2022, driven by a $226.6 million decrease in Cloud & Networking revenue and a $101.8 million decrease in Industrial Tech revenue. The decrease in Cloud & Networking net revenue is primarily due to reduction in demand associated with a build-up of inventory and resulting inventory management actions by our customers, offset by $59.5 million of revenue generated by Cloud Light. The decrease in Industrial Tech net revenue is primarily due to higher market competition, which reflects share normalization in the market, as well as reduction in demand associated with a build-up of inventory and resulting inventory management actions by our customers.

During the three months ended December 30, 2023, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with three customers, who individually accounted for 19%, 13% and 11% of our total net revenue, respectively. During the six months ended December 30, 2023, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with three customers, who individually accounted for 14%, 12% and 12% of our total net revenue, respectively.

During the three months ended December 31, 2022, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with two customers, who individually accounted for 19% and 12% of our total net revenue, respectively. During the six months ended December 31, 2022, our net revenue from a single customer that represented 10% or greater of the total net revenue was concentrated with two customers, who individually accounted for 18% and 15% of our total net revenue, respectively.

Revenue by Region

We operate in three geographic regions: Americas, Asia-Pacific, and EMEA (Europe, Middle East, and Africa). Net revenue is assigned to the geographic region and country where our product is initially shipped. For example, certain customers may request shipment of our product to a contract manufacturer in one country, which may differ from the location of their end customers.

The following table presents net revenue by the three geographic regions we operate in and net revenue from countries that generally represented 10% or more of our total net revenue *(in millions, except percentage data):*

	Three Months Ended				Six Months Ended			
	December 30, 2023		December 31, 2022		December 30, 2023		December 31, 2022	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Americas:								
United States	$ 103.0	28.1 %	$ 65.5	12.9 %	$ 144.1	21.0 %	$ 127.7	12.6 %
Mexico	31.4	8.6	59.5	11.8	55.1	8.1	117.0	11.6
Other Americas	0.8	0.2	3.8	0.8	2.0	0.3	6.1	0.6
Total Americas	$ 135.2	36.9 %	$ 128.8	25.5 %	$ 201.2	29.4 %	$ 250.8	24.8 %
Asia-Pacific:								
Hong Kong	$ 65.7	17.9 %	$ 65.9	13.0 %	$ 130.6	19.1 %	$ 143.5	14.2 %
South Korea	20.8	5.7	52.0	10.3	45.8	6.7	119.7	11.8
Japan	25.9	7.1	50.8	10.0	51.3	7.5	95.6	9.4
Thailand	39.3	10.7	77.9	15.4	103.5	15.1	135.4	13.4
Other Asia-Pacific	49.5	13.4	84.7	16.7	89.0	13.0	173.6	17.1
Total Asia-Pacific	$ 201.2	54.8 %	$ 331.3	65.4 %	$ 420.2	61.4 %	$ 667.8	65.9 %
EMEA	$ 30.4	8.3 %	$ 45.9	9.1 %	$ 63.0	9.2 %	$ 94.2	9.3 %
Total net revenue	$ 366.8	100.0 %	$ 506.0	100.0 %	$ 684.4	100.0 %	$ 1,012.8	100.0 %

For the three and six months ended December 30, 2023, net revenue from customers outside the United States, based on customer shipping location, represented 71.9% and 79.0% of net revenue, respectively.

For the three and six months ended December 31, 2022, net revenue from customers outside the United States, based on customer shipping location, represented 87.1% and 87.4% of net revenue, respectively.

Our net revenue is primarily denominated in U.S. dollars, including our net revenue from customers outside the United States as presented above. We expect revenue from customers outside of the United States to continue to be an important part of our overall net revenue and an increasing focus for net revenue growth opportunities. However, regulatory and enforcement actions by the United States and other governmental agencies, as well as changes in tax and trade policies and tariffs, have impacted and may continue to impact net revenue from customers outside the United States.

Gross Margin

Gross margin for the three months ended December 30, 2023 decreased to 17.4% from 32.8% for the three months ended December 31, 2022. The decrease in gross margin was primarily driven by lower revenue as discussed above, a less profitable mix of products, and $7.9 million of incremental excess and obsolete inventory charges primarily driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of customers. Additionally, gross margin was negatively impacted by factory underutilization as a result of a drop in demand as customers continue to work to reduce their elevated inventory levels. This decrease in gross margin was partially offset by lower amortization of acquired inventory resulting from our acquisitions of NeoPhotonics in August 2022 and Cloud Light in November 2023.

Gross margin for the six months ended December 30, 2023 decreased to 20.6% from 36.3% for the six months ended December 31, 2022. The decrease was primarily driven by lower revenue as discussed above, a less profitable mix of products, and $19.2 million of incremental inventory excess and obsolescence charges primarily driven by U.S trade restrictions whereby we are no longer able to sell certain products to one of customers, customer demand change and transitions to the next generation of products. Additionally, gross margin was negatively impacted by factory underutilization as a result of a drop in demand as customers work to reduce their elevated inventory levels. This was partially offset by lower amortization of acquired inventory resulting from our acquisitions of NeoPhotonics in August 2022 and Cloud Light in November 2023.

The markets in which we sell products are consolidating, undergoing product, architectural and business model transitions, have high customer concentrations, are highly competitive, are price sensitive and/or are affected by customer seasonal and variants in buying patterns. We expect these factors to result in variability of our gross margin.

Segment Profit

The following table summarizes segment profit and a reconciliation to the consolidated income (loss) before income taxes for the periods presented (*in millions*). Comparative prior period segment information has been recast to conform to the new segment structure.

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Net revenue:				
Cloud & Networking	$ 286.7	$ 382.9	$ 516.4	$ 743.0
Industrial Tech	80.1	123.1	168.0	269.8
Net revenue	$ 366.8	$ 506.0	$ 684.4	$ 1,012.8
Segment profit:				
Cloud & Networking	$ 29.1	$ 99.9	$ 53.0	$ 201.6
Industrial Tech	12.7	49.7	28.0	118.5
Total segment profit	41.8	149.6	81.0	320.1
Unallocated corporate items:				
Selling, general and administrative [1]	(28.8)	(32.9)	(57.4)	(66.0)
Stock-based compensation	(34.6)	(36.6)	(66.7)	(71.3)
Stock-based compensation - acquisition related	—	—	—	(11.9)
Amortization of acquired intangibles	(37.6)	(36.1)	(66.6)	(68.3)
Amortization of acquired inventory fair value adjustments	(3.4)	(9.6)	(3.4)	(14.2)
Acquisition related costs	(9.0)	—	(13.0)	(16.2)
Integration related costs	(11.6)	(8.0)	(22.9)	(8.6)
Restructuring and related charges	(5.8)	(13.9)	(16.8)	(23.2)
Abnormal excess capacity	(1.8)	—	(1.8)	—
Litigation matters	—	(7.8)	—	(7.8)
Other charges, net [2]	(14.4)	(26.6)	(18.4)	(41.0)
Interest expense	(9.7)	(8.9)	(19.4)	(17.4)
Other income, net [3]	13.4	3.7	34.6	17.5
Consolidated loss before income taxes	$ (101.5)	$ (27.1)	$ (170.8)	$ (8.3)

[1] We do not allocate selling, general and administrative expenses that are not directly attributable to our operating segments.

[2] Other charges, net for the three months ended December 30, 2023 primarily relate to $9.5 million of net excess and obsolete inventory, $4.6 million of non-recurring legal and tax related fees, and $1.0 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand. The excess and obsolete inventory charges relate to charges that are not attributable to our operating segments due to their unusual nature, primarily those charges driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of our customers.

Other charges, net for the six months ended December 30, 2023 primarily relate to $9.2 million of net excess and obsolete inventory, $5.4 million of non-recurring legal and tax related fees, and $3.9 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand. The excess and obsolete inventory charges relate to charges that are not attributable to our operating segments due to their unusual nature, primarily those charges driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of our customers.

Other charges, net for the three months ended December 31, 2022 primarily relate to $11.7 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand, $4.5 million of non-recurring charges on legal matters, and $5.4 million of excess and obsolete inventory charges primarily driven by U.S. trade restrictions.

Other charges, net for the six months ended December 31, 2022 primarily relate to $19.0 million of incremental costs of sales related to components previously acquired from various brokers to satisfy customer demand, $4.5 million of non-recurring charges on legal matters, and $5.5 million of excess and obsolete inventory charges primarily driven by U.S. trade restrictions.

[3] Other income, net for the three months ended December 30, 2023 includes interest and investment income of $17.1 million, offset by foreign exchange and other loss, net of $3.7 million. Other income, net for the six months ended December 30, 2023 includes interest and investment income of $38.8 million, offset by foreign exchange and other loss, net of $4.2 million.

Other income, net for the three months ended December 31, 2022 primarily relates to $7.7 million of interest and investment income, offset by $4.1 million of net foreign exchange losses. Other income, net for the six months ended December 31, 2022 primarily relates to $12.5 million of interest and investment income and $4.9 million of net foreign exchange gains.

Total segment profit decreased b y $107.8 million, or 72.1%, during the three months ended December 30, 2023. Cloud & Networking segment profit decreased by $70.8 million, or 70.9%, primarily due to lower revenue and the negative impact from factory under-utilization as a result of a drop in demand as customers actively work to reduce their elevated inventory levels, as well as higher excess and obsolete charges primarily driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of our customers. This is partially offset by segment profit generated by our acquisition of Cloud Light. Industrial Tech segment profit decreased by $37.0 million, or 74.4%, primarily due to a less profitable mix of products, including lower sales of higher margin imaging and sensing products.

Total segment profit decreased by $239.1 million, or 74.7%, during the six months ended December 30, 2023. Cloud & Networking segment profit decreased by $148.6 million, or 73.7%, primarily due to lower revenue and the negative impact from factory under-utilization as a result of a drop in demand as customers actively work to reduce their elevated inventory levels as well as higher excess and obsolete charges driven by U.S. trade restrictions whereby we are no longer able to sell certain products to one of our customers and customer demand changes as a result of product transitions. This is partially offset by segment profit generated by our recent acquisition of Cloud Light. Industrial Tech segment profit decreased by $90.5 million, or 76.4%, primarily due to less profitable mix of products, including lower sales of higher margin imaging and sensing products due to share normalization.

Research and Development (“R&D”)

R&D expense increased $2.5 million, or 3.3% for the three months ended December 30, 2023 compared to the three months ended December 31, 2022. The increase in R&D expense for the three months ended December 30, 2023 was primarily driven by an increase in project spend, offset by a slight decrease in payroll and other compensation related expenses. Although we received benefits from restructuring actions taken in fiscal 2023 and in the first quarter of fiscal 2024, this savings was substantially offset by the additional headcount costs from our recent acquisition of Cloud Light.

R&D expense increased by $3.3 million, or 2.2% for the six months ended December 30, 2023 compared to the six months ended December 31, 2022. The increase in R&D expense for the six months ended December 30, 2023 was primarily driven by an increase in project spend and lower funding from customers, offset by a slight decrease in payroll and other compensation related expenses. Although we received benefits from restructuring actions taken in fiscal 2023 and in the first quarter of fiscal 2024 , this saving was offset by the additional headcount costs from our recent acquisition of Cloud Light.

We believe that continuing our investments in R&D is critical to attaining our strategic objectives. Despite signs of a challenging macroeconomic environment, we plan to continue to invest in R&D and new products that we believe will further differentiate us in the marketplace.

Selling, General and Administrative (“SG&A”)

SG&A expense decreased by $13.3 million, or 13.5%, during the three months ended December 30, 2023 compared to the three months ended December 31, 2022, primarily driven by lower payroll related expenses due to headcount reductions as a result of restructuring actions taken in fiscal 2023 and in the first quarter of fiscal 2024, partially offset by compensation expenses related to additional headcount from our recent acquisition of Cloud Light. In addition, we reduced our outside consultant costs as a result of business and system integrations efforts. During the three months ended December 31, 2022, we incurred a $7.8 million expense with respect to the settlement of certain non-ordinary course litigation matters.

SG&A expense decreased by $46.0 million, or 22.5%, during the six months ended December 30, 2023 compared to the six months ended December 31, 2022. The decrease in SG&A expense for the six months ended December 30, 2023 was primarily driven by lower stock-based compensation of $19.5 million, lower acquisition related costs of $3.6 million as a result of the timing of our recent acquisitions, and lower legal costs of $7.8 million as a result of non-recurring litigation matters discussed above. In connection with the merger with NeoPhotonics that occurred in August 2022, certain equity awards for NeoPhotonics employees were accelerated, resulting in $11.9 million of stock-based compensation recognized during the six months ended December 31, 2022. In addition, we reduced our outside consultant costs as a result of business and system integrations efforts. These amounts were partially offset by the additional headcount costs and other expenses from our recent acquisition of Cloud Light.

From time-to-time, we incur expenses that are not part of our ordinary operations, such as mergers and acquisition-related and litigation expenses, which generally increase our SG&A expenses and potentially impact our profitability expectations in any particular period.

Restructuring and Related Charges

We have initiated various strategic restructuring events primarily intended to reduce costs, consolidate our operations, rationalize the manufacturing of our products, and align our business in response to market conditions. We also took certain actions in connection with the integration of NeoPhotonics business.

During the three and six months ended December 30, 2023, we recorded restructuring and related charges of $5.8 million and $16.8 million, respectively, primarily due to company-wide cost reduction initiatives, as well as our integration efforts as a result of the NeoPhotonics acquisition in August 2022.

During the three months ended December 31, 2022, we recorded restructuring and related charges of $13.9 million, primarily due to our integration efforts as a result of the NeoPhotonics acquisition, as well as company-wide cost reduction initiatives. During the six months ended December 31, 2022, we recorded restructuring and related charges of $23.2 million, primarily due to our integration efforts in connection with the NeoPhotonics acquisition, company-wide cost reduction initiatives, as well as severance and employee-related benefits associated with NeoPhotonics' executive severance and retention agreements. These agreements provide for payments and benefits upon an involuntary termination of employment under certain circumstances.

Interest Expense

For the three months ended December 30, 2023 and December 31, 2022, we recorded interest expense of $9.7 million and $8.9 million, respectively. For the six months ended December 30, 2023 and December 31, 2022, we recorded interest expense of $19.4 million and $17.4 million, respectively. Interest expense relates to the amortization of the debt discount and issuance costs of our convertible notes. The increase in interest expense for the three and six months ended December 30, 2023 is due to our 2029 Notes (as defined below) issued in June 2023.

Other Income, Net

The components of other income, net are as follows (*in millions*):

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Foreign exchange and other gains (losses), net	$ (3.7)	$ (4.1)	$ (4.2)	$ 4.9
Interest and investment income, net	17.1	7.7	38.8	12.5
Total other income, net	$ 13.4	$ 3.6	$ 34.6	$ 17.4

Other income, net for the three months ended December 30, 2023 increased by $9.8 million from the three months ended December 31, 2022 primarily due to $9.4 million increase in interest and investment income driven by an increase in interest rates on our fixed income securities.

Other income, net for the six months ended December 30, 2023 increased by $17.2 million from the six months ended December 31, 2022 due to $26.3 million of increase in interest and investment income driven by an increase in interest rates on our fixed income securities, offset by a decrease in income from foreign exchange of $9.1 million as a result of the weakening of other foreign currencies relative to the U.S. dollar during the six months ended December 31, 2022.

Provision (Benefit) for Income Taxes

The following table summarizes provision (benefit) for income taxes for the periods presented (*in millions*):

	Three Months Ended		Six Months Ended	
	December 30, 2023	December 31, 2022	December 30, 2023	December 31, 2022
Income tax provision (benefit)	$ (2.4)	$ 4.6	$ (3.8)	$ 23.8

We recorded a tax benefit of $2.4 million and $3.8 million for the three and six months ended December 30, 2023, respectively. Our tax benefit for the three months ended December 30, 2023 includes a discrete tax expense of $3.4 million primarily related to a shortfall in connection with stock-based compensation vested during the quarter, interest on uncertain tax positions and currency re-measurements. Our tax benefit for the six months ended December 30, 2023 includes a discrete tax expense of $1.6 million, primarily related to a shortfall in connection with stock-based compensation vested during the quarter, foreign return to provision differences and interest on unrecognized tax positions, partially offset by the tax benefit from changes in prior year uncertain tax positions.

We recorded a tax provision of $4.6 million and $23.8 million for the three and six months ended December 31, 2022 , respectively. Our tax provision for the three months ended December 31, 2022 includes a discrete tax expense of $4.0 million primarily related to the U.S. return to provision differences for transaction costs, currency re-measurements. Our tax provision for the six months ended December 31, 2022 includes a discrete tax expense of $17.1 million, primarily related to the international restructuring, currency re-measurements and U.S. return to provision differences for transaction costs, partially offset by the tax benefit from tax rate changes.

Our estimated effective tax rate for fiscal 2024 differs from the 21% U.S. statutory rate primarily due to the income tax expense from foreign rate differential, non-deductible stock-based compensation and foreign income inclusions in the U.S., partially offset by the income tax benefit from various income tax credits.

Our provision for incomes taxes may be impacted by changes in the geographic mix of earnings, acquisitions, changes in the realizability of deferred tax assets, changes in our uncertain tax positions, the results of income tax audits, settlements with tax authorities, the expiration of statutes of limitations, the implementation of tax planning strategies, tax rulings, court decisions, and changes in tax laws and regulations. It is also possible that significant negative or positive evidence may become available that causes us to change our conclusion regarding whether a valuation allowance is needed on certain of our deferred tax assets, which would affect our income tax provision in the period of such change.

We also evaluate changes to regulations and requirements in the international jurisdictions where we conduct our business. For additional information, refer to Part II Item 1A “Risk Factors”.

Financial Condition

Liquidity and Capital Resources

As of December 30, 2023 and July 1, 2023, our cash and cash equivalents were $469.3 million and $859.0 million, respectively. As of December 30, 2023 and July 1, 2023, our short-term investments of $754.7 million and $1,154.6 million, respectively, were all held in the United States. Cash equivalents and short-term investments are primarily comprised of money market funds, treasuries, agencies, high quality investment grade fixed income securities, certificates of deposit and commercial paper. Our investment policy and strategy provide for diversification of investments and is focused on the preservation of capital and supporting our liquidity requirements.

The total amount of cash held by the non-United States entities as of December 30, 2023 and July 1, 2023 was $260.8 million and $298.4 million, respectively, which was primarily held by entities incorporated in the United Kingdom, the British Virgin Islands, Japan, Hong Kong, China, Switzerland, the Cayman Islands, Thailand and Brazil. Although cash currently held in the United States, as well as cash generated in the United States from future operations, is expected to cover our normal operating requirements, a substantial amount of additional cash could be required for other purposes, such as capital expenditures to support our business and growth, including costs associated with increasing internal manufacturing capabilities, strategic transactions and partnerships, and future acquisitions.

Our intent is to indefinitely reinvest funds held outside the United States. Except for the funds held in the Cayman Islands, the British Virgin Islands, and Hong Kong, as well as certain subsidiaries in China and Japan, our current plans do not demonstrate a need to repatriate them to fund our domestic operations. However, if in the future, we encounter a significant need for liquidity domestically or at a particular location that we cannot fulfill through borrowings, equity offerings, or other internal or external sources, or the cost to bring back the money is not significant from a tax perspective, we may determine that cash repatriations are necessary or desirable. Repatriation could result in additional material taxes. These factors may cause us to have an overall tax rate higher than other companies or higher than our tax rates in the past. Additionally, if conditions warrant, we may seek to obtain additional financing through debt or equity sources. To the extent we issue additional shares, it may create dilution to our existing stockholders. However, any such financing may not be available on terms favorable to us or may not be available at all.

Liquidity and Capital Resources Requirements

We believe that our cash and cash equivalents as of December 30, 2023 and cash flows from our operating activities will be sufficient to meet our liquidity and capital spending requirements for at least the next 12 months, including the repayment of our 2024 Notes when they become due.

There are a number of factors that could positively or negatively impact our liquidity position, including:

- global economic conditions which affect demand for our products and services and impact the financial stability of our suppliers and customers, including the impact of uncertainty in the banking and financial services industries;
- fluctuations in demand for our products as a result of changes in regulations, tariffs or other trade barriers, and trade relations in general;
- changes in accounts receivable, inventory or other operating assets and liabilities, which affect our working capital;
- increase in capital expenditures to support our business and growth, including increases in manufacturing capacity;
- the tendency of customers to delay payments or to negotiate favorable payment terms to manage their own liquidity positions;
- timing of payments to our suppliers;
- volatility in fixed income and credit, which impact the liquidity and valuation of our investment portfolios;
- cost and availability of credit, which may impact available financing for us, our customers or others with whom we do business;
- volatility in foreign exchange markets, which impacts our financial results;
- possible investments or acquisitions of complementary businesses, products or technologies, or other strategic transactions or partnerships;
- issuance of debt or equity securities, or other financing transactions, including bank debt;
- potential funding of pension liabilities either voluntarily or as required by law or regulation;
- acquisitions or strategic transactions, in particular our recently completed acquisition of Cloud Light;
- the settlement of any conversion or redemption of our convertible notes in cash; and
- common stock repurchases under the share buyback program.

Contractual Obligations

The following table summarizes our contractual obligations as of December 30, 2023, and the effect such obligations are expected to have on our liquidity and cash flow (*in millions*):

	Payments Due		
	Total	Less Than 1 Year	More Than 1 Year
Contractual Obligations			
Asset retirement obligations	$ 7.6	$ —	$ 7.6
Operating lease liabilities, including imputed interest [1]	79.4	18.8	60.6
Pension plan contributions [2]	2.2	2.2	—
Purchase obligations [3]	423.8	372.1	51.7
Convertible notes - principal [4]	2,837.8	323.1	2,514.7
Convertible notes - interest [4]	90.0	19.3	70.7
Total	$ 3,440.8	$ 735.5	$ 2,705.3

[1] The amounts of operating lease liabilities do not include any sublease income amounts nor do they include payments for short-term leases or variable lease payments. As of December 30, 2023, we expect to receive sublease income of approximately $4.0 million over the sublease periods.

[2] The amount of pension plan contributions represents planned contributions to our defined benefit plans. Although additional future contributions will be required, the amount and timing of these contributions will be affected by actuarial assumptions, the actual rate of returns on plan assets, the level of market interest rates, legislative changes, and the amount of voluntary contributions to the plan. Any contributions for the following fiscal year and later will depend on the value of the plan assets in the future and thus are uncertain. As such, we have not included any amounts beyond one year in the table above.

[3] Purchase obligations represent legally binding commitments to purchase inventory and other commitments made in the normal course of business to meet operational requirements. Refer to “Note 14. Commitments and Contingencies” in the notes to condensed consolidated financial statements.

[4] The amounts related to convertible notes include principal and interest on our 0.25% Convertible Senior Notes due 2024 (the “2024 Notes”), principal and interest on our 0.50% Convertible Senior Notes due 2026 (the “2026 Notes”), principal and interest on our 0.50% Convertible Senior Notes due 2028 (the “2028 Notes”), and principal and interest on our 1.50% Convertible Senior Notes due 2029 (the “2029 Notes”). The 2024 Notes have a maturity date of March 15, 2024, the 2026 Notes have a maturity date of December 15, 2026, the 2028 Notes have a maturity date of June 15, 2028, and the 2029 Notes have a maturity date of December 15, 2029. The principal balances of our convertible notes are reflected in the payment periods in the table above based on their respective contractual maturities assuming no conversions. Refer to “Note 9. Debt” in the notes to condensed consolidated financial statements.

We do not have any off-balance sheet arrangements, as such term is defined in rules promulgated by the SEC, which have or are reasonably likely to have a current or future effect on our liquidity or capital resources that are material to investors.

Indebtedness

As of December 30, 2023, the net carrying amount of our 2029 Notes of $599.0 million (principal balance of $603.7 million maturing in 2029) is presented in non-current liabilities. If the closing price of our stock exceeds $90.40 (or 130% of the conversion price of $69.54) for 20 of the last 30 trading days of any future quarter, the 2029 Notes would become convertible at the option of the holders during the subsequent fiscal quarter and the debt would be reclassified to current liabilities in our consolidated balance sheets.

As of December 30, 2023, our 2028 Notes of $856.2 million (which have an aggregate principal amount of $861.0 million outstanding that matures in 2028) is presented in non-current liabilities in our condensed consolidated balance sheets. If the closing price of our stock exceeds $170.34 (or 130% of the conversion price of $131.03) for 20 of the last 30 trading days of any future fiscal quarter, our 2028 Notes would become convertible at the option of the holders during the subsequent fiscal quarter and the debt would be reclassified to current liabilities in our condensed consolidated balance sheet.

As of December 30, 2023, our 2026 Notes of $1,046.5 million (which have an aggregate principal amount of $1,050.0 million outstanding that matures in 2026) is presented in non-current liabilities in our condensed consolidated balance sheets. If the closing price of our stock exceeds $129.08 (or 130% of the conversion price of $99.29) for 20 of the last 30 trading days of any future fiscal quarter, our 2026 Notes would become convertible at the option of the holders during the subsequent fiscal quarter and the debt would be reclassified to current liabilities in our condensed consolidated balance sheet.

As of December 30, 2023, our 2024 Notes of $319.7 million (which have an aggregate principal amount of $323.1 million outstanding) is presented in current liabilities in our condensed consolidated balance sheets, as the debt will mature on March 15, 2024. Since issuing the 2024 Notes, we have converted a total of approximately $1.9 million principal amount of the 2024 Notes.

Share Buyback Program

We have a share buyback program that authorizes us to utilize up to an aggregate amount of $1.2 billion to purchase our own shares of common stock through May 2025. During the six months ended December 30, 2023, we did not repurchase any shares of our common stock. During the six months ended December 31, 2022, we repurchased 0.3 million shares of our common stock at an average price of $89.80 per share for an aggregate purchase price of $25.7 million. Since the board of directors initially approved the share buyback program, we have repurchased 7.7 million shares in aggregate at an average price of $81.66 per share for a total purchase price of $630.4 million. We recorded the $630.4 million aggregate purchase price as a reduction of retained earnings within our condensed consolidated balance sheet. All repurchased shares were retired immediately. As of December 30, 2023, we have $569.6 million remaining under the share buyback program.

The price, timing, amount, and method of future repurchases will be determined based on the valuation of market conditions and other factors, at prices determined to be attractive and in the best interests of both the Company and our stockholders. The stock repurchase program may be suspended or terminated at any time.

Unrecognized Tax Benefits

As of December 30, 2023 and July 1, 2023, our other non-current liabilities includ e unrecognized tax benefit for uncertain tax positions of $70.1 million and $64.4 million, respectively. We are unable to reliably estimate the timing of future payments related to un certain tax positions.

Cash Flows

Our balance of cash and cash equivalents decreased by $389.7 million from $859.0 million as of July 1, 2023 to $469.3 million as of December 30, 2023. The decrease in cash and cash equivalents during the six months ended December 30, 2023 was due to cash used in investing activities of $377.1 million and cash used in financing activities of $8.8 million, offset by cash used in operating activities of $3.8 million.

Operating Cash Flow

Cash used in operating activities was $3.8 million during the six months ended December 30, 2023, which reflects a net loss of $167.0 million and non-cash items of $194.7 million, offset by $31.5 million of changes in our operating assets and liabilities. Changes in our operating assets and liabilities were primarily driven by a decrease in accounts payable of $51.1 million primarily due to lower purchases from our contract manufactures and linearity of payments, and a decrease in income taxes of $26.6 million primarily due annual income tax payable in Japan, offset by a decrease in accounts receivable of $18.7 million due to lower revenue and a decrease in inventories of $7.5 million primarily due to reduced inventory level in our Cloud & Networking business.

Cash provided by operating activities was $115.7 million during the six months ended December 31, 2022, which reflects a net loss of $32.1 million and non-cash items of $240.2 million, offset by $92.4 million of changes in our operating assets and liabilities. Changes in our operating assets and liabilities were primarily driven by an increase in inventory by $36.4 million mainly attributable to prebuild inventory and safety stock as a result of supply constraints and a decrease in accounts payable of $45.0 million primarily due to lower purchases, offset by an increase in accrued expenses and other current and non-current liabilities of $37.1 million primarily due to $7.8 million of legal expense with respect to the pending settlement of certain non-ordinary course litigation matters and $24.8 million of acquisition and integration related costs primarily related to the NeoPhotonics acquisition and the acquisition of IPG telecom transmission product lines.

Investing Cash Flow

Cash used in investing activities of $377.1 million during the six months ended December 30, 2023 was attributable to cash used in the acquisition of Cloud Light of $700.9 million, net of cash acquired, capital expenditures of $88.8 million, and an intangible asset acquisition of $3.0 million, offset by net proceeds from sales or maturities of short-term investments of $415.4 million and proceeds from sales of property and equipment of $0.2 million.

Cash used in investing activities of $751.1 million during the six months ended December 31, 2022 was attributable to cash used the acquisition of NeoPhotonics and IPG product lines of $861.6 million, net of cash acquired, and capital expenditures of $62.8 million, offset by net proceeds from sales or maturities of short-term investments of $173.2 million.

Financing Cash Flow

Cash used in financing activities of $8.8 million during the six months ended December 30, 2023 was attributable to tax payments related to net share settlement of restricted stock of $16.1 million, offset by $7.3 million of proceeds from employee stock plans.

Cash used in financing activities of $62.7 million during the six months ended December 31, 2022 was driven by the repurchase of shares of our common stock of $35.8 million, tax payments related to net share settlement of restricted stock of $26.7 million, and $5.9 million payments of all the term loans that we assumed in connection with our merger with NeoPhotonics offset by $5.7 million proceeds from employee stock plans.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Exchange Risk

We conduct our business and sell our products to customers primarily in Asia, Europe and North America. Due to the impact of changes in foreign currency exchange rates between the U.S. Dollar and foreign currencies, we recorded a net foreign exchange loss of $3.7 million and $4.2 million, respectively, in the condensed consolidated statements of operations for the three and six months ended December 30, 2023.

Although we sell primarily in the U.S. Dollar, we have foreign currency exchange risks related to our expenses denominated in currencies other than the U.S. Dollar, principally the Chinese Yuan, Canadian Dollar, Thai Baht, Japanese Yen, UK Pound, Swiss Franc, Euro and Brazilian Real. The volatility of exchange rates depends on many factors that we cannot forecast with reliable accuracy. In the event our foreign currency denominated monetary assets and liabilities, sales or expenses increase, our operating results may be affected to a greater extent by fluctuations in the exchange rates of the currencies in which we do business as compared with the U.S. dollar.

Equity Price Risk

We are exposed to equity price risk related to the conversion options embedded in our convertible notes.

We issued the 2029 Notes in June 2023, the 2028 Notes in March 2022, the 2026 Notes in December 2019 and the 2024 Notes in March 2017. As of December 30, 2023, the aggregate principal amount of the 2029 Notes, 2028 Notes, 2026 Notes and 2024 Notes is $603.7 million, $861.0 million, $1,050.0 million and $323.1 million, respectively, and bear interest at a rate of 1.50%, 0.50%, 0.50% and 0.25% per year, respectively. Since the convertible notes bear interest at fixed rates, we have no financial statement risk associated with changes in market interest rates. However, the potential value of the shares to be distributed to the holders of our convertible notes changes when the market price of our stock fluctuates. The 2029 Notes, 2028 Notes, 2026 Notes and 2024 Notes will mature on December 15, 2029, June 15, 2028, December 15, 2026 and March 15, 2024, respectively, unless earlier repurchased by us or converted pursuant to their terms, at a conversion price of approximately $69.54 per share for the 2029 Notes, $131.03 per share for the 2028 Notes, $99.29 per share for the 2026 Notes, and $60.62 per share for the 2024 Notes.

Interest Rate Fluctuation Risk

As of December 30, 2023, we had cash, cash equivalents, and short-term investments of $1,224.0 million. Cash equivalents and short-term investments are primarily comprised of money market funds, treasuries, agencies, high quality investment grade fixed income securities, certificates of deposit and commercial paper. Our investment policy and strategy is focused on the preservation of capital and supporting our liquidity requirements. We do not enter into investments for trading or speculative purposes. As of December 30, 2023, the weighted-average life of our investment portfolio was less than seven months.

Our fixed-income portfolio is subject to fluctuations in interest rates, which could affect our results of operations. Based on our investment portfolio balance as of December 30, 2023, a hypothetical increase or decrease in interest rates of 1% (100 basis points) would have resulted in a decrease or an increase in the fair value of our portfolio of approximately $4.5 million, and a hypothetical increase or decrease in interest rates of 0.50% (50 basis points) would have resulted in a decrease or an increase in the fair value of our portfolio of approximately $2.3 million.

Bank Liquidity Risk

As of December 30, 2023, we had approximately $235.2 million of unrestricted cash (excluding cash equivalents) in operating accounts that are held with domestic and international financial institutions. These cash balances could be lost or become inaccessible if the underlying financial institutions fail or if they are unable to meet the liquidity requirements of their depositors and if they are not supported by the national government of the country in which such financial institution is located. Notwithstanding, we have not incurred any losses to date and have had full access to our operating accounts. We believe any failures of domestic and international financial institutions could impact our ability to fund our operations in the short term. The value of our investment portfolio could also be impacted if we hold debt instruments which were issued by any institutions that fail or become illiquid. Our ability to obtain raw materials for our supply chain and collections of cash from sales may be unduly impacted if any of our vendors or customers are affected by illiquidity events.

ITEM 4. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

Our management (with the participation of our Principal Executive Officer and Principal Financial Officer), as of the end of the period covered by this Quarterly Report, evaluated the effectiveness of our disclosure controls and procedures. Based on this evaluation, our Principal Executive Officer and Principal Financial Officer concluded that our “disclosure controls and procedures” (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) were effective to provide reasonable assurance that the information required to be disclosed by us in our reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms and is accumulated and communicated to our management as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control over Financial Reporting

On November 7, 2023, we completed the acquisition of Cloud Light. We are in the process of integrating the acquired business into our existing operations and evaluating the internal controls over financial reporting of the acquired businesses. We believe that we have taken the necessary steps to monitor and maintain appropriate internal control over financial reporting during this integration. Other than the impact of this acquisition, there were no changes in our internal control over financial reporting identified in connection with the evaluation required by Exchange Act Rules 13a-15(d) or 15d-15(d) that occurred during the quarter ended December 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

(c) Inherent Limitations on Effectiveness of Controls

Our management, including the CEO and CFO, recognizes that our disclosure controls and procedures or our internal control over financial reporting cannot prevent or detect all possible instances of errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are subject to a variety of claims and suits that arise from time-to-time in the ordinary course of our business. As such, we regularly evaluate developments in legal matters that could affect the amount of the previously accrued liability and record adjustments as appropriate. While management currently believes that resolving claims against us, individually or in the aggregate, will not have a material adverse impact on our financial position, results of operations or cash flows, these matters are subject to inherent uncertainties and management's view of these matters may change in the future. Should we experience an unfavorable final outcome, there exists the possibility of a material adverse impact on our financial position, results of operations or cash flows for the period in which the effect becomes reasonably estimable. For a description of our material pending legal proceedings, refer to "Note 14. Commitments and Contingencies" in the condensed consolidated financial statements included in Part I, Item 1 of this Form 10-Q.

the ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q, including the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes, before making a decision to invest in our common stock. Our business, financial condition, results of operations or prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe are material. If any of the risks actually occur, our business, financial condition, results of operations and prospects could be adversely affected. In that event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risk Factor Summary

Our business operations are subject to numerous risks, factors and uncertainties, including those outside of our control, which could cause our actual results to be harmed, including risks regarding the following:

Risks Related to our Business

- unfavorable economic and market conditions;
- our reliance on a limited number of suppliers and customers;
- order cancellations, reductions or delays in delivery schedules by our customers or distributors;
- failure of banking institutions and liquidity concerns at other financial institutions;
- our backlog may not be an accurate indicator of our level and timing of future revenue;
- our gross margins and operating margins may vary overtime;
- challenges relating to supply chain constraints;
- changes in technology and intense competition;
- our ability to sell to a significant customer, as well as tariffs and other trade restrictions between the U.S. and China;
- the impact of a widespread health crisis, including the COVID-19 pandemic and responsive measures;
- our international operations structure;
- volatility and maintenance of our real property portfolio;
- our ability to timely procure components needed to manufacture our products;
- our ability to manufacture our products;
- our leverage in negotiations with large customers;
- defects in our products;
- changes in laws and the adoption and interpretation of administrative rules and regulations, including U.S. and international customs and export regulations;
- our strategic transactions and implementation strategy for our acquisitions, including the recently completed acquisition of Cloud Light;
- restructuring and related charges;
- changes in spending levels, demand and customer requirements for our products;
- changes in tax laws;
- fluctuations in foreign currency;
- our future capital requirements;

- actual or perceived security or privacy breaches or incidents, as well as defects, errors or vulnerabilities in our technology and that of third-party providers;
- the unpredictability of our results of operations;
- our ability to protect our product and proprietary rights;
- factors relating to our intellectual property rights as well as the intellectual property rights of others; and
- litigation risks, including intellectual property litigation;
- our reliance on licensed third-party technology; and
- our ability to maintain an effective system of disclosure controls and internal control over financial reporting

Risks Related to Human Capital

- our ability to hire and retain key personnel; and
- the effects of immigration policy on our ability to hire and retain employees

Risks Related to Legal, Regulatory and Compliance

- our ability to obtain government authorization to export our products; and
- changes in social and environmental responsibility regulations, policies and provisions, as well as customer and investor demand

Risks Related to Our Common Stock

- the volatility of the trading price of our common stock;
- our ability to service our current and future debt;
- dilution related to our convertible notes;
- our intention not to pay dividends for the foreseeable future;
- provisions of Delaware law and our certificate of incorporation and bylaws that may make a merger, tender offer or proxy contest difficult; and
- exclusive forum provisions in our bylaws

Risks Related to our Cloud Light Acquisition

- risks related to integration of Cloud Light's business, our use of cash and financial results, undisclosed liabilities and employee and customer retention

Risks Related to Our Business

Our operating results may be adversely affected by unfavorable changes in macroeconomics and market conditions and the uncertain geopolitical environment.

Current and future conditions in the global economy have an inherent degree of uncertainty. As a result, it is difficult to estimate the level of growth or contraction of the global economy as a whole. It is even more difficult to estimate growth or contraction in various parts, sectors, and regions of the economy, including the markets in which we participate. All aspects of our forecasts depend on estimates of growth or contraction in the markets we serve. Our business and operating results depend significantly on general market and economic conditions. The current global macroeconomic environment is volatile and continues to be significantly and adversely impacted by inflation and a dynamic demand environment. Additionally, instability in the global credit markets, the impact of uncertainty regarding inflation, banking instability, capital expenditure reductions, unemployment, stock market volatility, the instability in the geopolitical environment in many parts of the world (including as a result of the on-going Russia-Ukraine war, Israel-Hamas war, and China-Taiwan relations), the current economic challenges in China, including global economic ramifications of Chinese economic difficulties, and other disruptions may continue to put pressure on global economic conditions.

Adverse changes to and uncertainty in the global economy has affected industries in which our customers operate and has resulted in decreases in the rate of demand, consumption or use of certain of our customers' products which, in turn, has resulted in, and may continue to result in decreased demand for our products, revenue fluctuations, increased price competition for our products, and increased the risk of excess and obsolete inventories as well as higher overhead costs as a percentage of revenue. Additionally, customers who had built up large inventories when supply chains were tight are now bringing down inventories as supply constraints are easing and in some cases these customers have delayed projected shipments. These losses or delays of orders have harmed our revenue and profitability and future losses or delays may further harm our results of operations. The impact of economic challenges on the global financial markets could further negatively impact our operations by affecting the solvency of our customers, the solvency of our key suppliers or the ability of our customers to obtain credit to finance purchases of our products. Further, supply chain disruptions have led and may continue to lead to increased costs and have harmed and may continue to harm our ability to meet customer demand, adversely affecting our revenue and profitability. If global economic and market conditions, or economic conditions in key markets, remain uncertain or deteriorate further, our prospects for growth may be negatively impacted, and we may experience material and adverse impacts on our business, operating results, and financial condition.

We depend on a limited number of suppliers for raw materials, packages and components, and any failure or delay by these suppliers in meeting our requirements could have an adverse effect on our business and results of operations.

We purchase raw materials, packages and components from a limited number of suppliers, who are often small and specialized. Additionally, some of our suppliers are our sole sources for certain materials, equipment and components. We depend on the timely and continued supply and quality of the materials, packages and components that our suppliers supply to us. We have not entered into long-term agreements with many of these suppliers. We do not have a guarantee of supply from these suppliers and as a result, there is no assurance that we would be able to secure the equipment or components that we require, in sufficient quantity, quality and on reasonable terms. Our business and results of operations have been, and could continue to be, adversely affected by this dependency. Alternative sources to mitigate the risk that the failure of any sole supplier will adversely affect our business are not feasible in all circumstances. If we were to lose any one of these or other critical sources, or there is as an industry-wide increase in demand for, or the discontinuation of, raw materials used in our products, it could be difficult for us, or we may be unable, to find an alternative supplier or raw material, in which case our operations could be adversely affected.

Specific concerns we periodically encounter with our sole suppliers or limited number of suppliers include receipt of defective parts or contaminated materials, stoppages or delays of supply, insufficient resources to supply our requirements, substitution of more expensive or less reliable materials, increases in the price of supplies, and an inability to obtain reduced pricing from our suppliers in response to competitive pressures. Furthermore, the COVID-19 pandemic and related supply chain disruptions and labor market constraints have created heightened risk that sole suppliers or limited number of suppliers may be unable to meet their obligations to us. Difficulties in obtaining the materials, or services used in the conduct of our business or additional fees or higher prices to do so, have adversely affected our revenue and results of operations, and further challenges or decisions to seek alternate suppliers to secure supply in order to meet demand would increase our costs and reduce our profitability.

Our financial results may be adversely affected due to changes in product demand impacted by recessions, increases in interest rates, stagflation and other economic conditions.

Customer demand for our products may be impacted by weak economic conditions, inflation, stagflation, recessionary or lower-growth environments, rising interest rates, tightening credit markets, equity market volatility or other negative economic factors in the U.S. or other countries. For example, under these conditions or expectation of such conditions, our customers may cancel orders, delay purchasing decisions or reduce their use of our services. In addition, these economic conditions could result in higher inventory levels and the possibility of resulting excess capacity charges from our contract manufacturers if we need to slow production to reduce inventory levels. Further, in the event of a recession or threat of a recession our contract manufacturers, suppliers and other third-party partners may suffer their own financial and economic challenges and as a result they may demand pricing accommodations, delay payment, or become insolvent, which could harm our ability to meet our customer demands or collect revenue or otherwise could harm our business. Similarly, disruptions in financial and/or credit markets may impact our ability to manage normal commercial relationships with our contract manufacturers, customers, suppliers and creditors and could cause us to not be able to continue to access preferred sources of liquidity when we would like, and our borrowing costs could increase. Thus, if the current economic conditions continue to deteriorate or experience a sustained period of weakness or slower growth, our business and financial results could be materially and adversely affected.

Inflation and increased borrowing costs could impact our cash flows and profitability.

Prolonged periods of inflation may continue to adversely affect our business, results of operations, financial condition and liquidity by increasing our overall cost structure, particularly if we are unable to achieve commensurate increases in the prices we charge our customers. Inflation has resulted in and may continue to result in higher interest rates and capital costs, supply shortages, increased costs of labor and other similar effects. As a result of inflation, we are subject to risk from increasing market prices of certain components, supplies, and raw materials, which are incorporated into our products or used by our manufacturing partners or suppliers to manufacture our products. These components, supplies and commodities have from time-to-time become restricted, or general market factors and conditions have affected pricing of such components, supplies and raw materials (such as inflation or supply chain constraints), and future restrictions or market conditions impacting pricing may adversely affect our business and results of operations. In addition, higher interest rates and tightening credit markets may impact our customers and partners and their ability to purchase products or pay in a timely manner may be adversely impacted.

Unstable market and economic conditions and adverse developments with respect to financial institutions and associated liquidity risk may have serious adverse consequences on our business and financial condition.

Disruptions in access to bank deposits or lending commitments due to bank failures could materially and adversely affect our liquidity, our business and financial condition. Even with our continued effort to mitigate counterparty risk by working with highly liquid, well capitalized counterparties, the failure of any bank in which we deposit our funds could reduce the amount of cash we have available for our operations or delay our ability to access such funds. Any such failure may increase the possibility of a sustained deterioration of financial market liquidity. The value of our investment portfolio could also be impacted if we hold debt instruments which were issued by any institutions that fail or become illiquid. Our ability to obtain raw materials for our supply chain and collections of cash from sales may be unduly impacted if any of our vendors or customers are affected by illiquidity events.

Our backlog may not be an accurate indicator of our level and timing of future revenues.

Our backlog may not be a reliable indicator of future operating results. For example, as a result of product order volume growth in prior periods and industry-wide supply challenges due to both constrained manufacturing capacity as well as shortages of component parts, our backlog grew and remained elevated in fiscal 2022 and 2023. As customer buying patterns normalize, order growth moderates, and supply chain conditions improve, we expect our backlog to reduce to a level generally in line with historical levels. Further, customer behaviors have been changing as a result of worldwide macroeconomic factors, which has reduced demand and may continue to reduce demand for certain of our products and services. If we are not able to respond to and manage the impact of these supply challenges and behavioral changes effectively, or if general macroeconomic conditions or conditions in the industries in which we operate deteriorate, our business, operating results, financial condition, and cash flows could be adversely affected.

We expect our gross margins, operating margins and segment profit to vary over time.

Our gross margins, operating margins and segment profit are expected to vary, and may be adversely affected in the future by numerous factors, including, but not limited to:

- an increase or decrease in demand of our products;

- changes in product mix;
- increased price competition in one or more of the markets in which we compete;
- modifications to our pricing strategy to gain or retain footprint in markets or with customers;
- currency fluctuations that impact our costs or the cost of our products to our customers;
- inflation;
- increases in material, labor, manufacturing, logistics, warranty costs, or inventory carrying costs;
- issues with manufacturing or component availability;
- issues relating to the distribution of our products, quality or efficiencies;
- increased costs due to changes in component pricing or charges incurred due to the inaccurately forecasting product demand or underutilization of manufacturing capacity;
- warranty related issues;
- factors beyond our control such as natural disasters, climate change, acts of war or terrorism, and public health emergencies, such as the COVID-19 pandemic;
- changing market, economic, and political conditions, including the impact of tariffs and other trade restrictions, regulatory restrictions on imports or exports or efforts to withdraw from or materially modify international trade agreement, or
- our introduction of new products and enhancements, or entry into new markets with different pricing and cost structures.

We have also seen, and may continue to see, our gross margins negatively impacted by increases in component costs, logistics costs, elevated inventory balances, and inflationary pressures, as well as pricing pressure. Failure to sustain or improve our gross margins reduces our profitability and may materially and adversely affect our business, financial condition and results of operations.

Challenges relating to supply chain constraints, including semiconductor components, could adversely impact our business, results of operations and financial condition.

Due to increased demand across a range of industries, our business and customers' businesses have experienced and could experience supply constraints due to both constrained manufacturing capacity, as well as component parts shortages. These supply constraints have adversely affected and could further affect availability, lead-times and cost of components, and could increase the likelihood of unexpected cancellations or delays of previously committed supply of key components. These challenges have resulted in extended lead-times to our customers and have had a negative impact on our ability to recognize associated revenue and have resulted in and may continue to result in an increase in accelerated ordering for certain of our products. As a result of accelerated ordering, our customers have had inventory backlog that they are now managing down, resulting in reduced ordering as compared to recent levels. Ordering patters may be difficult to predict and we have experienced and may continue to experience negative impacts to our revenue and profitability as well as our ability to achieve our forecasts.

We continue to work with our suppliers to ensure that we are able to continue manufacturing and distributing our products, and in the quantities requested by our customers; however, if we continue to experience disruption to our supply chain, it could impact our operations. For example, in the first half of fiscal year 2023, we incurred incremental supply and procurement costs in order to increase our ability to fulfill demands from our customers. Continued disruption in the supply of the raw materials, packaging or components used in the manufacture and delivery of our products could have a material adverse impact on our business, financial condition and results of operations. Limits on manufacturing availability or capacity or delays in production or delivery of components or raw materials could further delay or inhibit our ability to obtain supply of components and produce finished goods inventory. Although the impact of the COVID-19 pandemic is lessening, there can be no assurance that the supply chain impacts will not occur in the future. These supply chain constraints and their related challenges could result in shortages, increased material costs or use of cash, engineering design changes, and delays in new product introductions, each of which could adversely impact our business, results of operations and financial condition.

Changing technology and intense competition require us to continuously innovate while controlling product costs, and our failure to do so may result in decreased revenues and profitability.

The markets in which we operate are dynamic and complex, and our success depends upon our ability to deliver both our current product offerings and new products and technologies on time and at acceptable prices to our customers. The markets for our products are characterized by rapid technological change, frequent new product introductions and enhancements, substantial capital investment, changes in customer requirements, continued price pressures and a constantly evolving industry. Historically, these pricing pressures have led to a continued decline of average selling prices across our business, and we expect that these historical trends will continue. The development of new, technologically advanced products is a complex and uncertain process requiring high levels of innovation and the accurate prediction of technology and market trends. The introduction of new products also often requires significant investment to ramp up production capacity, the benefit of which may not be realized if we are not successful in the production of such products or if customer demand does not develop as expected. Ramping of production capacity also entails risks of delays which can limit our ability to realize the full benefit of new product introductions. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully, if at all, or on a timely basis. We also cannot assure you that potential markets for our new products will materialize on the timelines we anticipate, or at all, or that our technology will meet our customers' specifications. Our future performance will depend on the successful development, introduction, deployment and market acceptance of new and enhanced features and products that meet our customers' current and future needs. Future demand for our products is uncertain and will primarily depend on continued technological development and the introduction of new or enhanced products. If this demand does not continue, sales of our products may decline which could adversely impact our business, results of operations and financial condition.

The market for optical communications products in particular has matured over time and these products have increasingly become subject to commoditization. Both legacy competitors as well as new entrants, predominantly Asia-based competitors, have intensified market competition in recent years leading to pricing pressure. To preserve our revenues and product margin structures, we remain reliant on an integrated customer and market approach that anticipates end customer needs as requirements evolve. We also must continue to develop more advanced, differentiated products that command a premium with customers, while conversely continuing to focus on streamlining product costs for established legacy products. If we fail to continue to develop enhanced or new products that enable us to increase revenues while maintaining consistent margins, or over time are unable to adjust our cost structure to continue to competitively price more mature products, our financial condition and results of operations could be materially and adversely affected.

We rely on a limited number of customers for a significant portion of our sales; and the majority of our customers do not have contractual purchase commitments.

We have consistently relied on a small number of customers for a significant portion of our sales, and in certain of our markets, such as imaging and sensing and commercial lasers, this customer concentration is particularly acute. We expect that this customer concentration will continue in the future, and we expect that our financial performance in certain business lines and growth prospects will continue to depend in part on a small number of customers. Many of our customers purchase products under purchase orders or under contracts that do not contain volume or long-term purchase commitments. Therefore, these customers may alter their purchasing behavior with little or no notice to us for various reasons, including developing, or, in the case of our distributors, their customers developing, their own product solutions; choosing to purchase or distribute product from our competitors; incorrectly forecasting end market demand for their products; or experiencing a reduction in their market share in the markets for which they purchase our products. Additionally, increased inventory at our customers has impacted our revenue, as our customers have decided to lower their inventory levels and these impacts are expected to continue in the near term and in future periods. As a result, it is difficult to forecast our revenues and to determine the appropriate levels of inventory required to meet future demand. For example, we have from time-to-time experienced excess and obsolete charges due to customer transitions to the next generation of products. We may also experience increased inventory levels and increased carrying costs and risk of excess or obsolete inventory or underutilization costs due to unanticipated reductions in purchases by our customers or we may not recover costs we had incurred in anticipation of such purchases. In addition, customers provide us with their expected forecasts for our products several months in advance, but these customers may decrease, cancel or delay purchase orders already in place, including on short notice, or may experience financial difficulty which affects their ability to pay for products, particularly in light of the global macroeconomic uncertainty, and have done so from time-to-time, and the impact of any such actions may be intensified given our dependence on a limited number of large customers. We cannot accurately predict what or how many products our customers will need in the future. Anticipating demand is difficult because our customers face unpredictable demand for their own products and in recent periods have become increasingly focused on cash preservation and tighter inventory management.

In addition, changes in the business requirements, vendor selection, project prioritization, financial prospects, capital resources, and expenditures, or purchasing behavior (including product mix purchased or timing of purchases) of our key customers, or any real or perceived quality issues related to the products that we sell to such customers, have led to decreased sales to such customers or delays or cancellations of planned purchases of our products or services, which has unfavorably impacted our revenues and operating results, and may continue to impact our business and results of operations. We may also experience pricing pressure with certain of our customers that may adversely affect our revenue and margins, or, if the ongoing relationship no longer benefits us, we may decide to suspend or terminate our relationship with such customers. There are also continuing trade tensions, including an uncertain regulatory environment, in the U.S. and countries in Asia, which have impacted and could continue to materially impact our sales to key customers in these regions. Further, we may be required to purchase raw materials, increase production capacity or make other changes to our business to accommodate certain large customers. If forecasted orders do not materialize, we may need to reduce investment in R&D activities, we may fail to optimize our manufacturing capacity and incur charges for such underutilization, we may incur liabilities with our suppliers for reimbursement of capital expenditures, or we may have excess inventory. In addition, if we incur expenses in response to forecasted demand and do not have a corresponding increase in revenue, our profitability may suffer. Any of these factors could adversely affect our business, financial condition and results of operations.

Our ability to sell our products to a significant customer has been restricted.

In August 2020, the Bureau of Industry and Security of the U.S. Department of Commerce ("BIS") issued final rules that further restricted access by Huawei Technologies Co. Ltd. to items produced domestically and abroad from U.S. technology and software. The final rules prevent us from selling certain products subject to the Export Administration Regulations ("EAR") to identified Huawei entities without a license issued by BIS. Further, even if there are products unaffected by the rule or for which we are able to obtain an export license, Huawei may not be able to source products from other suppliers due to the final rules, which could impact Huawei's demand for our products. We are dependent upon our ability to obtain export licenses or use exceptions to export license requirements, from U.S. and other foreign regulatory agencies. In certain cases, the exceptions are technical and fact specific and may be open to interpretation. There is no assurance that we will be issued these licenses or be able to make use of these exceptions, and failure to obtain such licenses or exceptions could limit our ability to sell our products into certain countries and negatively impact our business, financial condition and operating results. In the event that we are found to have violated the EAR, even inadvertently, we may be subject to significant monetary and non-monetary penalties, criminal proceedings or a denial of export privileges.

Under the current regulatory regime, our business with Huawei has been and will continue to be more limited than it was in the past. For example, we have been unable to supply certain additional products and may be limited or unable to work with Huawei on future product developments while Huawei remains on the Entity List, which has negatively impacted our revenue from Huawei and may further negatively impact our financial condition and results of operations. Huawei may seek to obtain similar or substitute products from our competitors that are not subject to these restrictions, or to develop similar or substitute products themselves.

We cannot be certain what additional actions the U.S. government may take with respect to Huawei or other entities in China or other countries, including additional changes to the Entity List restrictions, export regulations, tariffs or other trade restrictions. We are unable to predict the duration of the restrictions enacted in May 2019 and thereafter, including the restrictions on Huawei's access to foreign-made chips made using U.S. technology which could have a long-term adverse effect on our business. The U.S. government also added other customers of ours to the Entity List, such as FiberHome Technologies Group in May 2020, and may continue to do so or otherwise restrict our ability to ship products which may harm our business, financial condition and results of operations. BIS has continued to add other China-based technology companies to the Entity List, including those tied to super computing and artificial intelligence, further expanding the scope of companies subject to trade restrictions.

We also manufacture customized products for Huawei, and therefore may be unable to sell certain finished goods inventory to alternative customers or may be unable to utilize such manufacturing capabilities for products for alternative customers, which may result in further excess and obsolete inventory charges and/or underutilized capacity charges in future periods. In addition, we sell various non-customized products to Huawei in which Huawei represents a significant portion of the related products' demand. We have taken charges, and may have significant future charges, for common components which become excess as a result of the inability to sell to Huawei. Future charges related to trade restrictions could be caused by either additional regulatory restrictions enacted with respect to Huawei, or revisions to our estimates of the impact from already-enacted restrictions or changes in the EAR and related interpretations and their applicability to our products. Additional charges may also occur with respect to customized products that we manufacture for other customers in the event that such customers were to be added to the Entity List or otherwise if our ability to sell to such customers were restricted. We believe this trade uncertainty has caused and may in the future cause delays or cancellations, which could adversely affect our business, financial conditions and operating results. For example, in December 2023, we were notified by certain critical IC suppliers that service the industry broadly that their products do not comply with the latest export regulations. Consequently, we stopped the majority of our product shipments to our historically largest networking customer in China in the beginning of calendar year 2024. Our assumption is that these export restrictions will continue, resulting in a reduction of revenue for the calendar year 2024. In addition, we recorded excess and obsolete inventory charges during the fiscal second quarter of 2024 as a result of the export restrictions.

Intense competition in our markets may lead to an accelerated reduction in our prices, revenues, margins and market share.

The end markets for optical products have experienced significant industry consolidation during the past few years. We expect this trend to continue as companies attempt to strengthen or hold their market positions in an evolving industry and as companies are acquired or are unable to continue operations. As a result, the markets for optical subsystems, components and laser diodes are highly competitive and the intensity of such competition is increasing. Our current competitors include a number of domestic and international public and private companies, many of which may have substantially greater financial, technical, marketing and distribution resources and brand name recognition than we have. As we expand into new markets, we face competition not only from our existing competitors, but also from new competitors, including existing companies with strong technological and sales positions in those markets. We may not be able to compete successfully against either current or future competitors, particularly, in light of increasing consolidation. Our competitors may continue to enter markets or gain or retain market share through introduction of new or improved products or with aggressive low pricing strategies that may impact the efficacy of our approach. These competitors may be able to devote greater resources than we can to the development, promotion, sale and support of their products. Additionally, the merger or consolidation of significant competitors, for example, II-VI's acquisition of Finisar in September of 2019 and its acquisition of Coherent in July, 2022, the acquisition of Acacia Communications by Cisco in March 2021, and the acquisition of OSRAM by AMS in December 2019, have resulted in competitors with greater resources, which may enable them to offer a different market approach, or a lower cost structure through economies of scale or other efficiencies that we may be unable to match and which may intensify competition in the various markets. Further, our competitors may seek to vertically integrate by buying suppliers that also supply products or components to us, which could enable them to further reduce prices, or could increase our costs. Our current or potential customers may also determine to develop and produce products for their own use which may be competitive to our products. Such vertical integration could reduce the market opportunity for our products. Increased competition could result in significant price erosion, reduced revenue, lower margins or loss of market share, any of which would significantly harm our business.

We are subject to risks arising from our international operations, which may adversely affect our business, financial condition, and results of operations.

We derive a majority of our revenue from our international operations, and we plan to continue expanding our business in international markets in the future. In addition, we have extensive international manufacturing capabilities through third-party contract manufacturers, as well as through our own international facilities, with employees engaged in R&D, administration, manufacturing, support and sales and marketing activities.

As a result of our international operations, in addition to similar risks we face in our U.S. operations, we are affected by economic, business, regulatory, social, and political conditions in foreign countries, including the following:

- adverse social, political and economic conditions, such as inflation, rising interest rates and risk of global or regional recession;
- effects of adverse changes in currency rates;

- impacts related to business disruptions and restrictions related to COVID-19, including supply chain disruptions and labor shortages and differential impacts in different regions and geographies;
- changes in general IT spending;
- less effective protection of intellectual property;
- the imposition of government controls, inclusive of critical infrastructure protection;
- changes in or limitations imposed by trade protection laws or other regulatory orders or requirements in the United States or in other countries, including tariffs, sanctions, or other costs or requirements which may affect our ability to import or export our products from various countries or increase the cost to do so, including government action to restrict our ability to sell to foreign customers where sales of products may require export licenses (such as the U.S. Department of Commerce's addition of Huawei to the Entity List in May 2019, the addition of FiberHome in May 2020, and amendments to the Foreign-Produced Direct Product Rule in August 2020); the restrictions in China on the export of gallium and germanium; and increased tariffs on various products that have been proposed and implemented by the U.S. government and other non-U.S. governments;
- the imposition of sanctions or other trade-related restrictions on customers in China may cause those customers to seek domestic alternatives to our products, including developing alternatives internally, and our customers demand for our products could be impacted by their inability to obtain other materials subject to sanctions. For example, sanctions on sales to certain parties of U.S. semiconductors and semiconductor equipment has caused a delay in 5G deployment in China while the affected companies seek alternative solutions, which has reduced the demand for our products from some of our Chinese customers;
- varying and potentially conflicting laws and regulations;
- overlapping, differing or more burdensome tax structure and laws;
- markets for 5G infrastructure not developing in the manner or in the time periods we anticipate, including as a result of unfavorable developments with evolving laws and regulations worldwide;
- wage inflation or a tightening of the labor market;
- the impact of recessions and other economic conditions in economies outside the United States, including, for example, dips in the manufacturing Purchasing Managers Index as well as the Institute for Supply Management data in the Eurozone;
- tax and customs changes that adversely impact our global sourcing strategy, manufacturing practices, transfer-pricing, or competitiveness of our products for global sales;
- volatility in oil prices and increased costs, or limited supply of other natural resources;
- political developments, geopolitical unrest or other conflicts in foreign nations, including Brexit, the war in Ukraine and political developments in Hong Kong and Taiwan and the potential impact such developments or further actions could have on our customers in the markets in which we operate; and
- the impact of the following on service provider and government spending patterns as well as our contract and internal manufacturing: political considerations, changes in or delays in government budgeting processes, unfavorable changes in tax treaties or laws, unfavorable events that affect foreign currencies on an absolute or relative basis, natural disasters, epidemic disease, labor unrest, earnings expatriation restrictions, misappropriation of intellectual property, military actions, acts of terrorism, political and social unrest and difficulties in staffing and managing international operations.

Additionally, our business is impacted by fluctuations in local economies and currencies. Global economic volatility has significantly impacted the foreign exchange markets, and the currencies of various countries in which we operate and have significant volume of local-currency denominated expenses have seen significant volatility. We expect such volatility to continue, which could negatively impact our results by making our non-U.S. operations more expensive when reported in U.S. dollars, primarily due to the costs of payroll.

Moreover, local laws and customs in many countries differ significantly from or conflict with those in the United States or other countries in which we operate. In many foreign countries, particularly in those with developing economies, it is common for others to engage in business practices that are prohibited by our internal policies and procedures or U.S. regulations applicable to us. There can be no assurance that our employees, contractors, channel partners and agents will not take actions in violation of our policies and procedures, which are designed to ensure compliance with U.S. and foreign laws and policies. Violations of laws or key control policies by our employees, contractors, channel partners, or agents could result in termination of our relationships with customers and suppliers, financial reporting problems, fines and/or penalties for us, or prohibition on the importation or exportation of our products, and could have a material adverse effect on our business, financial condition and results of operations.

Like most other multinational companies, we are also highly dependent upon the ability to ship products to customers and to receive shipments from our suppliers. In the event of a disruption in the worldwide or regional shipping infrastructure, our access to supplies and our ability to deliver products to customers would correspondingly be negatively impacted. As a result of shipping disruptions, we have experienced among other things, increased costs to ship products and delays in receiving components and any disruption in the future would likely materially and adversely affect our operating results and financial condition.

In addition to the above risks related to our international operations, we also face risks related to health epidemics, such as the COVID-19 pandemic. An outbreak of a contagious disease, and other adverse public health developments, particularly in Asia, could have a material and adverse effect on our business operations. The effects could include restrictions on our ability to travel to support our sites in Asia or our customers located there, disruptions in our ability to distribute products, and/or temporary closures of our facilities in Asia or the facilities of our suppliers or customers and their contract manufacturers.

In the past, these and similar risks have disrupted our operations and the operations of our suppliers, customers and contract manufacturers and increased our costs, and we expect that they may do so in the future. Any or all of these factors could have a material and adverse impact on our business, financial condition, and results of operations.

We are subject to the risks of owning real property.

Our buildings subject us to the risks of owning real property, which include, but are not limited to:

- adverse changes in the value of these properties due to economic conditions, the movement by many companies to a hybrid work environment, interest rate changes, changes in the neighborhood in which the property is located, or other factors;
- the possible need for structural improvements in order to comply with zoning, seismic and other legal or regulatory requirements;
- the potential disruption of our business and operations arising from or connected with a relocation due to moving or to renovating the facility;
- increased cash commitments for improvements to the buildings or the property, or both;
- increased operating expenses for the buildings or the property, or both; and
- the risk of financial loss in excess of amounts covered by insurance, or uninsured risks, such as the loss caused by damage to the buildings as a result of earthquakes, floods and/or other natural disasters.

The manufacturing of our products may be adversely affected if we are unable to manufacture certain products in our manufacturing facilities or if our contract manufacturers and suppliers fail to meet our production requirements.

We manufacture some of our finished good products as well as some of the components that we provide to our contract manufacturers in our China, Japan, Thailand, United Kingdom, and San Jose, California manufacturing facilities. For some of the components and finished good products, we are the sole manufacturer. Our manufacturing processes are highly complex, and issues are often difficult to detect and correct. From time-to-time we have experienced problems achieving acceptable yields in our manufacturing facilities, resulting in delays in the availability of our products and inability to meet customer demand. In addition, if we experience problems with our manufacturing facilities or are unable to continue operations at any of these sites, including as a result of social, geopolitical, environmental or health factors, damage caused by natural disasters, or other problems or events beyond our control, including pandemics or widespread health epidemics such as COVID-19, it would be costly and require a long period of time to move the manufacture of these components and finished good products to a different facility or contract manufacturer which could then result in interruptions in supply, and would likely materially impact our financial condition and results of operations. Our manufacturing is heavily concentrated in regions in Asia, and we would be severely impacted if there were further escalation of COVID-19 or related restrictions imposed by governments or private industry in that region. For example, in the third quarter of fiscal 2022, we experienced a temporary factory closure in China as a result of an increase in the number of COVID-19 cases, as required by local government mandates.

We also rely on several independent contract manufacturers to supply us with certain products. For many products, a particular contract manufacturer may be the sole source of the finished good products. We depend on these manufacturers to meet our production and capacity requirements and to provide quality products to our customers. There are a number of risks associated with our reliance on contract manufacturers including:

- reduced control over delivery schedules and planning;
- availability of manufacturing capability and capacity, particularly during periods of high demand;
- reliance on the quality assurance procedures of third parties;
- risks associated with data security breaches or cyber-attacks targeting our contract manufacturers, including manufacturing disruptions or unauthorized access to information; and
- potential misappropriation of our intellectual property.

Additionally, if operations at these contract manufacturers are adversely impacted, such as by natural disasters, or restrictions due to COVID-19 disruptions or any resulting economic impact to their business, this would likely materially impact our financial condition and results of operations. Our ability to control the quality of products produced by contract manufacturers has and may in the future be impaired by pandemics or widespread health epidemics disruptions, and quality issues might not be resolved in a timely manner. Additionally, if our contract manufacturers continue experiencing disruptions or discontinue operations, we may be required to identify and qualify alternative manufacturers, which is expensive and time consuming. If we are required to change or qualify a new contract manufacturer, this would likely cause business disruptions and adversely affect our results of operations and could harm our existing customer relationships.

Despite rigorous testing for quality, both by us and the contract manufacturers to whom we sell products, we may receive and ship defective products. We may incur significant costs to correct defective products which could result in the loss of future sales and revenue, indemnification costs or costs to replace or repair the defective products, litigation and damage to our reputation and customer relations. Defective products may also cause diversion of management attention from our business and product development efforts.

Our manufacturing operations and those of our contract manufacturers may be affected by natural disasters such as earthquakes, typhoons, tsunamis, fires and public health crises, including a global pandemic such as COVID-19, changes in legal requirements, labor strikes and other labor unrest and economic, political or other forces that are beyond our control. For example, in the past one of our former contract manufacturers experienced a labor strike which threatened the contract manufacturer’s ability to fulfill its product commitments to us and, in turn, our ability to fulfill our obligations to our customers. We are heavily dependent on a small number of manufacturing sites. Our business and operations would be severely impacted by any significant business disruptions for which we may not receive adequate recovery from insurance. There is also an increased focus on corporate social and environmental responsibility in our industry. As a result, a number of our customers may adopt policies that include social and environmental responsibility provisions that their suppliers should comply with. These provisions may be difficult and expensive to comply with, given the complexity of our supply chain. We may be unable to cause our suppliers or contract manufacturers to comply with these provisions which may adversely affect our relationships with customers.

In addition, for a variety of reasons, including changes in circumstances at our contract manufacturers, restrictions or inability to operate, or regarding our own business strategies, we may choose or be required to transfer the manufacturing of certain products to other manufacturing sites, including to our own manufacturing facilities. As a result of such transfers, our contract manufacturers may prioritize other customers or otherwise be unable or unwilling to meet our demand. There also may be delays with the transfer of manufacturing equipment and successfully setting up that equipment at the transfer sites and training new operators. If such transfers are unsuccessful or take a longer period of time than expected, it could result in interruptions in supply and supply chain and would likely impact our financial condition and results of operations.

Some of our purchase commitments with contract manufacturers are not cancellable which may impact our results of operations if customer forecasts driving these purchase commitments do not materialize and we are unable to sell the products to other customers. We may also incur charges if we do not utilize our allocated manufacturing capacity which would increase our costs and decrease our margins. Alternatively, our contract manufacturers may not be able to meet our demand which would inhibit our ability to meet our customers’ demands and maintain or grow our revenues. Furthermore, it could be costly and require a long period of time to move products from one contract manufacturer to another which could result in interruptions in supply and adversely impact our financial condition and results of operations.

Further, certain of our suppliers are located in China, which exposes us to risks associated with Chinese laws and regulations and U.S. laws, regulations and policies with respect to China, such as those related to import and export policies, tariffs, taxation and intellectual property. Chinese laws and regulations are subject to frequent change, and if our suppliers are unable to obtain or retain the requisite legal permits or otherwise to comply with Chinese legal requirements, we may be forced to obtain products from other manufacturers or to make other operational changes, including transferring our manufacturing to another manufacturer or to our own manufacturing facilities. In addition, many of our products are sourced from suppliers based outside of the United States, primarily in Asia. Uncertainty with respect to our suppliers’ abilities due to COVID-19 impacts, tax and trade policies, tariffs and government regulations affecting trade between the United States and other countries has recently increased. Major developments in tax policy or trade relations, such as the imposition of tariffs on imported products, for example, tariffs on the import of certain products manufactured in China, could increase our product and product-related costs or require us to seek alternative suppliers, either of which could result in decreased sales or increased product and product-related costs. Any such developments could have a material impact on our ability to meet our customers’ expectations and may materially impact our operating results and financial condition.

If our customers do not qualify our manufacturing lines or the manufacturing lines of our subcontractors for volume shipments, our operating results could suffer.

Certain of our customers do not purchase products, other than limited numbers of evaluation units, prior to qualification of the manufacturing line for volume production. Our existing manufacturing lines, as well as each new manufacturing line, must pass through varying levels of qualification with certain of our customers. Some of our customers require that our manufacturing lines pass their specific qualification standards and that we, and any subcontractors that we may use, be registered under international quality standards. We may encounter quality control issues as a result of setting up new manufacturing lines in our facilities, relocating our manufacturing lines or introducing new products to fill production. We may be unable to obtain, or we may experience delays in obtaining, customer qualification of our manufacturing lines. If we introduce new contract manufacturing partners and move any production lines from existing internal or external facilities, the new production lines will likely need to be re-qualified with our customers. Any delays or failure to obtain qualifications would harm our reputation, operating results, and customer relationships.

We contract with a number of large OEM and end-user service providers and product companies that have considerable bargaining power, which may require us to agree to terms and conditions that could have an adverse effect on our business or ability to recognize revenues.

Large OEM and end-user service providers and product companies comprise a significant portion of our customer base. In general, these customers have greater purchasing power than smaller entities and, accordingly, often request and receive more favorable terms from suppliers, including us. As we seek to expand our sales to existing customers and acquire new customers, we may be required to agree to terms and conditions that are favorable to our customers and that may affect the timing of our ability to recognize revenue, increase our costs and have an adverse effect on our business, financial condition, and results of operations. Furthermore, large customers have increased buying power and ability to require onerous terms in our contracts with them, including pricing, warranties, and indemnification terms. If we are unable to satisfy the terms of these contracts, it could result in liabilities of a material nature, including litigation, damages, additional costs, loss of market share and loss of reputation. Additionally, the terms these large customers require, such as most-favored nation or exclusivity provisions, may impact our ability to do business with other customers and generate revenues from such customers.

Our products may contain defects that could cause us to incur significant costs, divert our attention from product development efforts and result in loss of customers.

Our products are complex, and defects and quality issues are found from time-to-time. Networking products in particular frequently contain undetected software or hardware defects when first introduced or as new versions are released. In addition, our products are often embedded in or deployed in conjunction with our customers’ products which incorporate a variety of components produced by third parties, which may contain defects. As a result, when problems occur, it may be difficult to identify the source of the problem. These problems may cause us to incur significant damages or warranty and repair costs, divert the attention of our engineering personnel from our product development efforts and manufacturing resources, and cause significant customer relation problems or loss of customers, or risk exposure to product liability suits, all of which would harm our business. In addition, changes in our or our suppliers' manufacturing processes or the inadvertent use of defective materials by us or our suppliers could result in a material and adverse effect on our ability to achieve acceptable manufacturing yields and product reliability. To the extent that we do not achieve and maintain our projected yields or product reliability, our business, operating results, financial condition and customer relationships would be adversely affected.

Adverse changes in political, regulatory and economic policies, including the threat of increasing tariffs, particularly to goods traded between the United States and China, could materially and adversely affect our business and results of operations.

Regulatory activity, such as tariffs, export controls, and economic sanctions laws have in the past and may continue to materially limit our ability to make sales to customers in China, which has in the past and may continue to harm our results of operations and financial condition. Since 2018, the United States and China have proposed and applied tariffs to certain of each other’s exports, and we expect these actions to continue for the foreseeable future. Adverse regulatory activity, such as export controls, economic sanctions and the institution of trade tariffs both globally and between the United States and China specifically carries the risk of negatively impacting overall economic conditions, which could have negative repercussions on our industry and our business. Moreover, to the extent the governments of China, the United States or other countries seek to promote use of domestically produced products or to reduce the dependence upon or use of products from another (sometimes referred to as “decoupling”), they may adopt or apply regulations or policies that have the effect of reducing business opportunities for us. Such actions may take the form of specific restrictions on particular customers, products, technology areas, or business combinations. For example, in the area of investments and mergers and acquisitions, the United States has recently announced new requirements for approval by the United States government of outbound investments; and the approval by China regulatory authorities is required for business combinations of companies that conduct business in China over specific thresholds, regardless of where those businesses are based. Restrictions may also be imposed based on whether the supplier is considered unreliable or a security risk. For example, the Chinese government adopted a law that would restrict purchases from suppliers deemed to be “unreliable suppliers”. In May 2023, the Cyberspace Administration of China banned the sale of Micron's products to certain entities in China and stated that such products pose significant security risks to China's critical information infrastructure supply chain and national security. Furthermore, imposition of tariffs or new or revised export, import or doing-business regulations, including trade sanctions, could cause a decrease in the demand for, or sales of our products to customers located in China or other customers selling to Chinese end users or increase the cost for our products, which would directly impact our business and results of operations.

We face a number of risks related to our strategic transactions.

We continuously monitor the marketplace for strategic opportunities, which includes expanding our product lines and markets through both internal product development and acquisitions. Consequently, we expect to continue to expand and diversify our operations with additional acquisitions and strategic transactions, such as our recently completed acquisition of Cloud Light, the NeoPhotonics acquisition and the acquisition of IPG telecom transmission product lines in August 2022, as well as acquire complementary technologies, products, assets and businesses. We may be unable to identify or complete prospective acquisitions for many reasons, including competition from other potential acquirers, the effects of consolidation in our industries and potentially high valuations of acquisition candidates. Even if we do identify acquisitions or enter into agreements with respect to such acquisitions, we may not be able to complete the acquisition due to competition, regulatory requirements or restrictions or other reasons, as occurred with the termination of our merger agreement with Coherent in March 2021. In addition, applicable antitrust laws and other regulations may limit our ability to acquire targets or force us to divest an acquired business. If we are unable to identify suitable targets or complete acquisitions, our growth prospects may suffer, and we may not be able to realize sufficient scale and technological advantages to compete effectively in all markets.

In connection with acquisitions, risks to us and our business include:

- diversion of management’s attention from normal daily operations of the business;
- failure to achieve the anticipated transaction benefits or the projected financial results and operational synergies;
- unforeseen expenses, delays or conditions imposed upon the acquisition or transaction, including due to required regulatory approvals or consents, or fees that may be triggered upon a failure to consummate an acquisition or transaction for certain reasons;
- unanticipated changes in the combined business due to potential divestitures or other requirements imposed by antitrust regulators;
- unanticipated changes in the acquired business, including due to regulatory action or changes in the operating results or financial condition of the business;
- the inability to retain and obtain required regulatory approvals, licenses and permits;
- difficulties and costs in integrating the operations, technologies, products, IT and other systems, assets, facilities and personnel of the purchased businesses;
- disruption due to the integration and rationalization of operations, products, technologies and personnel;
- loss of customers, suppliers or partners; and
- failure to consummate an acquisition resulting in negative publicity and/or negative impression of us in the investment community that could impact on our stock price.

Further, an acquisition or strategic transaction may not further our business strategy as we expected or we may overpay for, or otherwise not realized the expected return on, our investments. We have also faced litigation in connection with acquisitions, some of which continues following the consummation of the acquisition. Such litigation may be costly and diverts management time and attention.

We have in the past, and may in the future, divest or reduce our investment in certain businesses or product lines from time-to-time. For example, in the fiscal year 2019, we completed the divestiture of our Datacom module business in Japan, and in fiscal year 2020 we sold the assets associated with certain Lithium Niobate product lines manufactured by our San Donato, Italy site. Such divestitures involve risks, such as difficulty separating portions from our other businesses, distracting employees, incurring potential loss of revenue, negatively impacting margins, and potentially disrupting customer relationships. We may also incur significant costs associated with exit or disposal activities, related impairment charges, or both.

If we are unable to successfully manage any of these risks in relation to any future acquisitions or divestitures, our business, financial condition and results of operations could be adversely impacted.

We may be unable to successfully implement our acquisitions strategy or integrate acquired companies and personnel with existing operations.

To the extent we are successful in making acquisitions, such as the NeoPhotonics acquisition and the acquisition of IPG telecom transmission product lines, as well as the recently completed acquisition of Cloud Light, we may be unsuccessful in implementing our acquisitions strategy, or integrating acquired companies, businesses or product lines and personnel with existing operations, or the integration may be more difficult or more costly than anticipated. Some of the challenges involved integrating businesses and acquisitions include:

- difficulty preserving relationship with customers, suppliers or partners;
- potential difficulties in completing projects associated with in-process R&D;
- unanticipated liabilities or our exposure for known contingencies and liabilities may exceed our estimates;
- insufficient net revenue or unexpected expenses that negatively impact our margins and profitability;
- unexpected losses of key employees of the acquired company, or inability to maintain our company culture;
- unexpected expenses for cost of litigation against us or our directors and officers, or against the acquired company;
- potential adverse effects on our ability to attract, recruit, retain, and motivate current and prospective employees;
- conforming the acquired company's standards, processes, procedures and controls with our operations, including integrating Enterprise Resource Planning ("ERP") systems and other key business applications;
- coordinating new product and process development;
- increasing complexity from combining operations, including administrative functions, finance and human resources;
- increasing the scope, geographic diversity and complexity of our operations;
- difficulties in integrating operations across diverse cultures and languages and to address the particular economic, currency, political, and regulatory risks associated with specific countries;
- difficulties in integrating acquired technology;
- difficulties in coordinating and integrating geographically separated personnel, organizations, systems and facilities;
- difficulty managing customer transitions or entering into new markets;
- difficulties in consolidating facilities and transferring processes and know-how;
- diversion of management's attention from other business concerns;
- temporary loss of productivity or operational efficiency;
- dilution of our current stockholders as a result of any issuance of equity securities as acquisition consideration;
- adverse tax or accounting impact;
- expenditure of cash that would otherwise be available to operate our business; and
- indebtedness on terms that are unfavorable to us, limit our operational flexibility or that we are unable to repay.

In addition, following an acquisition, we may have difficulty forecasting the financial results of the combined company and the market price of our common stock could be adversely affected if the effect of any acquisitions on our consolidated financial results is dilutive or is below the market's or financial analysts' expectations, or if there are unanticipated changes in the business or financial performance of the target company or the combined company. Any failure to successfully integrate acquired businesses may disrupt our business and adversely impact our business, financial condition and results of operations.

We may not realize the expected benefits of our acquisitions or strategic transactions or be able to retain those benefits even if realized.

The success of our acquisitions will depend in large part on our success in integrating the acquired operations, strategies, technologies, and personnel. We may fail to realize some or all of the anticipated benefits of an acquisition if the integration process takes longer than expected or is more costly than expected. If we fail to meet the challenges involved in successfully integrating any acquired operations or to otherwise realize any of the anticipated benefits of an acquisition, including any expected cost savings and synergies, our operations could be impaired. In addition, the overall integration of an acquired business can be a time-consuming and expensive process that, without proper planning and effective and timely implementation, could significantly disrupt our business.

Changes in demand and customer requirements for our products may reduce manufacturing yields, which could negatively impact our profitability.

Manufacturing yields depend on a number of factors, including the volume of production due to customer demand and the nature and extent of changes in specifications required by customers for which we perform design-in work. Changes in manufacturing processes required as a result of changes in product specifications, changing customer needs, introduction of new product lines and changes in contract manufacturers may reduce manufacturing yields, resulting in low or negative margins on those products. Moreover, an increase in the rejection rate of products during the quality control process, before, during or after manufacturing, results in lower gross margins from lower yields and additional rework costs. Any reduction in our manufacturing yields will adversely affect our gross margins and could have a material impact on our operating results.

Restructuring activities could disrupt our business and affect our results of operations.

We have taken steps, including implementing reductions in force and internal reorganizations to reduce the cost of our operations, improve efficiencies, or realign our organization and staffing to better match our market opportunities and our technology development initiatives. We may take similar steps in the future as we seek to realize operating synergies, to achieve our target operating model and profitability objectives, or to reflect more closely changes in the strategic direction of our business or the evolution of our site strategy and workplace. These changes could be disruptive to our business, including our research and development efforts, and may result in the recording of special charges, including workforce reduction or restructuring costs. Substantial expense or charges resulting from restructuring activities could adversely affect our results of operations and use of cash in those periods in which we undertake such actions.

We may not be able to realize tax savings from our international structure, which could materially and adversely affect our operating results.

During fiscal 2023, the Company completed an international restructuring that included the intra-entity transfer of certain intellectual property and other assets used in the business among various subsidiaries. This structure may be challenged by tax authorities, and if such challenges are successful, the tax consequence we expect to realize could be adversely impacted. If substantial modifications to our international structure or the way we operate our business are made, such as if future acquisitions or divestitures occur, if changes in domestic and international tax laws negatively impact the structure, if we do not operate our business consistent with the structure and applicable tax provisions, if we fail to achieve our revenue and profit goals, or if the international structure or our application of arm’s-length principles to intercompany arrangements is successfully challenged by the U.S. or foreign tax authorities, our effective tax rate may increase, which could have a material adverse effect on our operating and financial results.

Changes in tax laws could have a material adverse effect on our business, cash flow, results of operations or financial conditions.

As a multinational corporation, we are subject to income taxes as well as non-income based taxes, in both the U.S. and various foreign jurisdictions. Significant uncertainties exist with respect to the amount of our tax liabilities, including those arising from potential changes in laws in the countries in which we do business and the possibility of adverse determinations with respect to the application of existing laws. Many judgments are required in determining our worldwide provision for income taxes and other tax liabilities, and we are under audit by various tax authorities, which often do not agree with positions taken by us on our tax returns. Any unfavorable resolution of these uncertainties may have a significant adverse impact on our tax rate.

Increasingly, countries around the world are actively considering or have enacted changes in relevant tax, accounting and other laws, regulations and interpretations. In August 2022, President Biden signed into law the Inflation Reduction Act of 2022 (the “IRA”) and the CHIPS and Science Act of 2022. These laws introduce new tax provisions and provide for various incentives and tax credits. The IRA applies to tax years beginning after December 31, 2022 and introduces a 15% corporate alternative minimum tax and a 1% excise tax on certain stock repurchases made by publicly traded U.S. corporations. While we are not currently expecting a material impact to our provision for income taxes by the 15% corporate alternative minimum tax under the IRA, it could materially affect our financial results, including our earnings and cash flow, if we become subject to this tax in the future.

Many countries, and organizations such as the Organization for Economic Cooperation and Development (the “OECD”) have proposed implementing changes to existing tax laws, including a proposed global minimum tax of 15%, also known as Pillar Two, which was agreed to by more than 140 member jurisdictions in 2021 and adopted by European Union member states on December 12, 2022 to go into effect in 2024. Many countries have made changes to their tax laws to adopt certain parts of the OECD’s proposals. Some of these changes will be effective for us in fiscal 2025. Any of these developments or changes in federal, state, or international tax laws or tax rulings could adversely affect our effective tax rate and our operating results. There can be no assurance that our effective tax rates, tax payments, or incentives will not be adversely affected by these or other developments or changes in law.

Other countries also continue to enact and consider enacting new laws, which could increase our tax obligations, cause us to change the way we do business or our operations or otherwise adversely affect us. The foregoing items could increase our future tax expense, could change our future intentions regarding reinvestment of foreign earnings, and could have a material adverse effect on our business, financial condition and results of operations.

Our subsidiary in Thailand has been granted certain tax holidays by the Thailand government. As we do not currently meet the tax holiday requirements, income earned in Thailand is subject to the regular statutory income tax rate.

We are also subject to the continuous examination of our income tax and other returns by the Internal Revenue Service and other tax authorities globally, and we have a number of such reviews underway at any time. It is possible that tax authorities may disagree with certain positions we have taken, and an adverse outcome of such a review or audit could have a negative effect on our financial position and operating results. There can be no assurance that the outcomes from such examinations, or changes in tax law or regulation impacting our effective tax rates, will not have an adverse effect on our business, financial condition and results of operations.

Our operating results may be subject to volatility due to fluctuations in foreign currency.

We are exposed to foreign exchange risks with regard to our international operations which may affect our operating results. Since we conduct business in currencies other than U.S. dollars but report our financial results in U.S. dollars, we face exposure to fluctuations in currency exchange rates. Due to these fluctuations, operating results may differ materially from expectations, and we may record significant gains or losses on the remeasurement of intercompany balances. Although we price our products primarily in U.S. dollars, a portion of our operating expenses are incurred in foreign currencies. For example, a portion of our expenses are denominated in the U.K. pound sterling, Chinese yuan and Thai baht. Fluctuations in the exchange rate between these currencies and other currencies in which we collect revenues and/or pay expenses could have a material effect on our future operating results. Recently, our exposure to foreign currencies has increased with the expansion of our non-U.S. manufacturing footprint. We continue to look for opportunities to leverage the lower cost of non-U.S. manufacturing, including the United Kingdom, Thailand, and Japan. While these geographies are lower cost than the U.S. and such concentration will in general lower our total cost to manufacture, this increase in concentration in non-U.S. manufacturing will also increase the volatility of our results. If the value of the U.S. dollar depreciates relative to certain other foreign currencies, it would increase our costs including the cost of local operating expenses and procurement of materials or services that we purchase in foreign currencies, as expressed in U.S. dollars. Conversely, if the U.S. dollar strengthens relative to other currencies, such strengthening could raise the relative cost of our products to non-U.S. customers, especially as compared to foreign competitors, and could reduce demand. Global economic volatility has had a significant impact on the exchange markets, which heightened this risk, and we expect the higher level of volatility in foreign exchange markets will likely continue.

We may require additional capital to support business growth, and this capital might not be available on acceptable terms, if at all.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including supporting the development and introduction of new products, addressing new markets, engaging in strategic transactions and partnerships, improving or expanding our operating infrastructure or acquiring complementary businesses and technologies. Investments, partnerships and acquisitions involve risks and uncertainties which could materially and adversely affect our operating and financial results. In March 2017, we issued and sold a total of $450 million in aggregate principal amount of 2024 Notes, which will mature on March 15, 2024. In December 2019, we issued and sold a total of $1,050 million in aggregate principal amount of 2026 Notes. In March 2022, we issued and sold a total of $861 million aggregate principal amount of 2028 Notes. In June 2023, we issued and sold a total of $603.7 million aggregate principal amount of 2029 Notes. We may in the future engage in additional equity or debt financings to secure additional funds. If we raise additional funds through future issuances of equity, equity-linked or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock. Any debt financing we may secure in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, uncertainty in the macroeconomic environment, increasing interest rates and other factors have resulted in volatility in the capital markets and less favorable financing terms. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business may be harmed.

If we fail to effectively manage our growth or, alternatively, our spending during downturns, our business could be disrupted, which could harm our operating results.

We expect to appropriately scale our business, internal systems and organization, and to continue to improve our operational, financial and management controls, reporting systems and procedures. Growth in sales, combined with the challenges of managing geographically dispersed operations, can place a significant strain on our management systems and resources, and our anticipated growth in future operations could continue to place such a strain. The failure to effectively manage our growth could disrupt our business and harm our operating results, and even if we are able to upgrade our systems and expand our staff, any such expansion will likely be expensive and complex. Our ability to successfully offer our products and implement our business plan in evolving markets requires an effective planning and management process. In economic downturns, we must effectively manage our spending and operations to ensure our competitive position during the downturn, as well as our future opportunities when the economy improves, remains intact. The failure to effectively manage our spending and operations could disrupt our business and harm our operating results.

A widespread health crisis could materially and adversely affect our business operations, financial performance, results of operations, financial position and the achievement of our strategic objectives.

The outbreak of a widespread health crisis, whether global in scope or localized in an area in which we, our customers or our suppliers do business, could have a material and adverse effect on our operations and the operations of our suppliers and customers. Potential impacts on our operations and financial performance include:

- significant reductions in demand for one or more of our products or a curtailment to one or more of our product lines caused by, among other things, any temporary inability of our customers to purchase and utilize our products due to shutdown orders or financial hardship;
- workforce constraints triggered by any applicable shutdown orders or stay-at-home policies;
- disruptions to our third-party contract manufacturing and raw materials supply arrangements caused by constraints over our suppliers' workforce capacity, financial, or operational difficulties;
- disruption in our own ability to produce and ship products;
- heightened risk and uncertainty regarding the loss or disruption of essential third-party service providers, including transportation services, contract manufacturing, marketing, and distribution services;
- requirements to comply with governmental and regulatory responses such as quarantines, import/export restrictions, price controls, or other governmental or regulatory actions, including closures or other restrictions that limit or close our operating and manufacturing facilities, restrict our workforce's ability to travel or perform

necessary business functions, or otherwise impact our suppliers or customers, which could adversely impact our operating results;

- general economic uncertainty in key global markets and financial market volatility; and
- increased operating expenses and potentially reduced efficiency of operations.

For example, the COVID-19 pandemic and related countermeasures impacted the global economy and continues to cause macroeconomic uncertainty. Governmental authorities around the globe implemented, and may again in the future implement, numerous and evolving measures in response to the virus or other public health concerns. The implementation of health and safety practices by us or our suppliers, distributors or customers could impact customer demand, supplier deliveries, our productivity, and costs, which could have a material and adverse impact on our business, financial condition and results of operations.

The ultimate impact of the COVID-19 pandemic on our operations and financial performance depends on many factors that are not within our control, including, but not limited, to: governmental, business and individuals' actions that have been and continue to be taken in response to the pandemic; the impact of the pandemic and actions taken in response on global and regional economies, travel, and economic activity; general economic uncertainty in key global markets and financial market volatility, including increasing levels of inflation in the United States; and global economic conditions and levels of economic growth. In addition, the global economic volatility has significantly impacted the foreign exchange markets, and the currencies of various countries in which we operate and in which we have significant volume of local-currency denominated expenses have seen significant volatility.

Any failure, disruption or security breach or incident of or impacting our information technology infrastructure or information management systems could have an adverse impact on our business and operations.

Our business depends significantly on effective and efficient information management systems, and the reliability and security of our information technology infrastructure are essential to the operation, health and expansion of our business. For example, the information gathered and processed by our information management systems assists us in managing our supply chain, financial reporting, monitoring customer accounts, and protecting our proprietary and confidential business information, plans, trade secrets, and intellectual property, among other things. In addition, these systems may contain personal data or other confidential or otherwise protected information about our employees, our customers' employees, or other business partners. We must continue to expand and update this infrastructure in response to our changing requirements as well as evolving security standards and risks.

In some cases, we may rely upon third-party providers of hosting, support and other services to meet our information technology requirements. Any failure to manage, expand and update our information technology infrastructure, including our ERP system and other applications, any failure in the extension implementation or operation of this infrastructure, or any failure by our hosting and support partners or other third-party service providers in the performance of their services could materially harm our business. In addition, we have partnered with third parties to support our information technology systems and to help design, build, test, implement and maintain our information management systems. Our merger, acquisition and divestiture activities may also require transitions to or from, and the integration of, various information management systems within our overall enterprise architecture, including our ERP system and other applications. Those systems that we acquire or that are used by acquired entities or businesses may also pose security risks of which we are unaware or unable to mitigate, particularly during the transition of these systems.

Like other companies, we are subject to ongoing attempts by malicious actors, including through hacking, malware, ransomware, denial-of-service attacks, social engineering, exploitation of internet-connected devices, and other attacks, to obtain unauthorized access to, or acquisition or other processing of confidential or other information or otherwise affect service reliability and threaten the confidentiality, integrity and availability of our systems and information stored or otherwise processed on our systems. Cyber threats have increased in recent years, in part due to increased remote work and frequent attacks, including in the form of phishing emails, malware attachments and malicious websites. Additionally, cybersecurity risks may be heightened in connection with geopolitical events such as the Russia and Ukraine war and the Israel-Hamas war. As AI capabilities improve and become increasingly commonplace, we may see cyberattacks leveraging AI technology. These attacks could be crafted with an AI tool to directly attack information systems with increased speed and/or efficiency compared to a human threat actor or create more effective phishing emails. In addition, a vulnerability could be introduced from the result of us and our third-party service providers incorporating the output of an AI tool, such as AI generated source code, that includes a threat. While we work to safeguard our internal network systems and validate the security of our third-party service providers to mitigate these potential risks, including through information security policies and employee awareness and training, there is no assurance that such actions have been or will be sufficient to prevent cyber-attacks or security breaches or incidents. We have been in the past, and may be in the future, subject to social engineering and other cybersecurity attacks, and these attacks may become more prevalent with substantial portion of our workforce being distributed geographically, particularly given the increased remote access to our networks and systems as a result. Further, our third-party service providers may have been and may be in the future subject to such attacks or otherwise may suffer security breaches or incidents. In addition, actions by our employees, service providers, partners, contractors, or others, whether malicious or in error, could affect the security of our systems and information. Further, a breach or compromise of our information technology infrastructure or that of our third-party service providers could result in the misappropriation of intellectual property, business plans, trade secrets or other information. Additionally, while our security systems are designed to maintain the physical security of our facilities and information systems, accidental or willful security breaches or incidents or other unauthorized access by third parties to our facilities or our information systems could lead to unauthorized access to, or misappropriation, disclosure, or other processing of proprietary, confidential and other information. Moreover, laws and regulations, such as the European Union's General Data Protection Regulation, the California Consumer Privacy Act and China's Personal Information Protection Law, add to the complexity of our compliance obligations and increases our compliance costs. Although we have established internal controls and procedures intended to comply with such laws and regulations, any actual or alleged failure to fully comply could result in significant penalties and other liabilities, harm to our reputation and market position, business and financial condition.

Despite our implementation of security measures, our systems and those of our third-party service providers are vulnerable to damage from these or other types of attacks, errors or acts of omissions. In addition, our systems may be impacted by natural disasters, terrorism or other similar disruptions. Any system failure, disruption, accident or security breach or incident affecting us or our third-party service providers could result in disruptions to our operations and loss or unavailability of, or unauthorized access or damage to, inappropriate access to, or use, disclosure or other processing of confidential information and other information maintained or otherwise processed by us or on our behalf. Any actual or alleged disruption to, or security breach or incident affecting, our systems or those of our third-party partners could cause significant damage to our reputation, lead to theft or misappropriation of our intellectual property and trade secrets, result in claims, investigations, and other proceedings by or before regulators, and claims, demands and litigation, legal obligations or liability, affect our relationships with our customers, require us to bear significant remediation and other costs and ultimately harm our business, financial condition and operating results. In addition, we may be required to incur significant costs to protect against or mitigate damage caused by disruptions or security breaches or incidents. Our costs incurred in efforts to prevent, detect, alleviate or otherwise address cyber or other security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant and such efforts may not be successful. All of these costs, expenses, liability and other matters may not be covered adequately by insurance and may result in an increase in our costs for insurance or insurance not being available to us on economically feasible terms, or at all. Insurers may also deny us coverage as to any future claim. Any of these results could harm our financial condition, business and reputation.

Our revenues, operating results, and cash flows may fluctuate from period to period due to a number of factors, which makes predicting financial results difficult.

Spending on optical communication and laser products is subject to cyclical and uneven fluctuations, which could cause our financial results to fluctuate unpredictably. It can be difficult to predict the degree to which end-customer demand and the seasonality and uneven sales patterns of our OEM partners or other customers will affect our business in the future, particularly as we or they release new or enhanced products. We are also subject to changes in buying patterns among our OEM partners and other customers, including unpredictable changes in their desired inventory levels. Further, if our revenue mix changes, it may also cause results to differ from historical seasonality. Accordingly, our quarterly and annual revenues, operating results, cash flows, and other financial and operating metrics have and may in the future vary significantly in the future. We attempt to identify changes in market conditions as soon as possible; however, the dynamics of the market in which we operate make prediction of and timely reaction to such events difficult. Due to these and other factors, the results of any prior periods should not be relied upon as an indication of future performance. Quarterly fluctuations from the above factors may cause our revenue, operating results, and cash flows to underperform in relation to our guidance, long-term financial targets or the expectations of financial analysts or investors, which may cause volatility or decreases in our stock price.

If we have insufficient proprietary rights or if we fail to protect our rights, our business would be materially harmed.

We seek to protect our products and product roadmaps in part by developing and/or securing proprietary rights relating to those products, including patents, trade secrets, know-how and continuing technological innovation. Protecting against the unauthorized use of our products, technology and other proprietary rights is difficult, time-consuming and expensive; therefore, the steps we take to protect our intellectual property may not adequately prevent misappropriation or ensure that others will not develop competitive technologies or products. Other companies may be investigating or developing technologies that are similar to our own. Additionally, there may be existing patents that we are unaware of, which could be pertinent to our business. It is not possible for us to know whether there are patent applications pending that our products may infringe upon since these applications are often not made publicly available until a patent is issued or published. It is possible that patents may not be issued from any of our pending applications or those we may file in the future and, if patents are issued, the claims allowed may not be sufficiently broad to deter or prohibit others from making, using or selling products that are similar to ours, or such patents could be invalidated or ruled unenforceable. We do not own patents in every country in which we sell or distribute our products, and thus others may be able to offer identical products in countries where we do not have intellectual property protections. In addition, the laws of some territories in which our products are or may be developed, manufactured or sold, including Europe, Asia-Pacific or Latin America, may not protect our products and intellectual property rights to the same extent as the laws of the United States. Any patents issued to us may be challenged, invalidated or circumvented. Additionally, we are currently a licensee for a number of third-party technologies including software and intellectual property rights from academic institutions, our competitors and others, and we are required to pay royalties to these licensors for the use thereof. In the future, if such licenses are unavailable or if we are unable to obtain such licenses on commercially reasonable terms, we may not be able to rely on such third-party technologies which could inhibit our development of new products, impede the sale of some of our current products, substantially increase the cost to provide these products to our customers, and could have a significant adverse impact on our operating results.

We also seek to protect our important trademarks by endeavoring to register them in certain countries. We have not registered our trademarks in every country in which we sell or distribute our products, and thus others may be able to use the same or confusingly similar marks in countries where we do not have trademark registrations. We have adopted Lumentum as a house trademark and trade name for our company and are in the process of establishing rights in this name and brand. We have also adopted the Lumentum logo as a house trademark for our company and are in the process of establishing rights in this brand. Trademarks associated with the Lumentum brand have been registered in the United States or other jurisdictions, however, the efforts we take to maintain registration and protect trademarks, including the Lumentum brand, may not be sufficient or effective. Although we have registered marks associated with the Lumentum brand, third parties may seek to oppose or otherwise challenge these registrations. There is the possibility that, despite efforts, the scope of the protection obtained for our trademarks, including the Lumentum brand, will be insufficient or that a registration may be deemed invalid or unenforceable in one or more jurisdictions throughout the world.

Further, a breach of our information technology infrastructure could result in the misappropriation of intellectual property, business plans or trade secrets. Any failure of our systems or those of our third-party service providers could result in unauthorized access or acquisition of such proprietary information, and any actual or perceived security breach could cause significant damage to our reputation and adversely impact our relationships with our customers.

Further, governments and courts are considering new issues in intellectual property law with respect to work created by AI technology, which could result in different intellectual property rights in development processes, procedures and technologies we create with AI technology, which could have a material adverse effect on our business.

Our products may be subject to claims that they infringe the intellectual property rights of others, the resolution of which may be time-consuming and expensive, as well as require a significant amount of resources to prosecute, defend, or make our products non-infringing.

Lawsuits and allegations of patent infringement and violation of other intellectual property rights occur regularly in our industry. We have in the past received, and anticipate that we will receive in the future, notices from third parties claiming that our products infringe upon their proprietary rights, with two distinct sources of such claims becoming increasingly prevalent. First, large technology companies, including some of our customers and competitors, are seeking to monetize their patent portfolios and have developed large internal organizations that may approach us with demands to enter into license agreements. Second, patent-holding companies that do not make or sell products (often referred to as “patent trolls”) may claim that our products infringe upon their proprietary rights. We respond to these claims in the course of our business operations. The litigation or settlement of these matters, regardless of the merit of the claims, could result in significant expense and divert the efforts of our technical and management personnel, regardless of whether or not we are successful. If we are unsuccessful, we could be required to expend significant resources to develop non-infringing technology or to obtain licenses to the technology that is the subject of the litigation. We may not be successful in such development, or such licenses may not be available on commercially reasonable terms, or at all. Without such a license, or if we are the subject of an exclusionary order, our ability to make our products could be limited and we could be enjoined from future sales of the infringing product or products, which could adversely affect our revenues and operating results. Additionally, we often indemnify our customers against claims of infringement related to our products and may incur significant expenses to defend against such claims. If we are unsuccessful defending against such claims, we may be required to indemnify our customers against any damages awarded.

We also face risks that third parties may assert trademark infringement claims against us in one or more jurisdictions throughout the world related to our Lumentum and Oclaro brands and/or other trademarks and our exposure to these risks may increase as a result of acquisitions. The litigation or settlement of these matters, regardless of the merit of the claims, could result in significant expense and divert the efforts of our technical and management personnel, regardless of whether or not we are successful. If we are unsuccessful, trademark infringement claims against us could result in significant monetary liability or prevent us from selling some or all of our products or services under the challenged trademark. In addition, resolution of claims may require us to alter our products, labels or packaging, license rights from third parties, or cease using the challenged trademark altogether, which could adversely affect our revenues and operating results.

We face certain litigation risks that could harm our business.

We are now, and in the future, may become subject to various legal proceedings and claims that arise in or outside the ordinary course of business. The results of legal proceedings are difficult to predict. Moreover, many of the complaints filed against us may not specify the amount of damages that plaintiffs seek, and we therefore may be unable to estimate the possible range of damages that might be incurred should these lawsuits be resolved against us. While we may be unable to estimate the potential damages arising from such lawsuits, certain of them assert types of claims that, if resolved against us, could give rise to substantial damages or restrictions on or changes to our business. Thus, an unfavorable outcome or settlement of one or more of these lawsuits could have a material adverse effect on our financial condition, liquidity and results of operations. Even if these lawsuits are not resolved against us, the uncertainty and expense associated with unresolved lawsuits could seriously harm our business, financial condition and reputation. Litigation is generally costly, time-consuming and disruptive to normal business operations. The costs of defending these lawsuits have been significant in the past, will continue to be costly and may not be covered by our insurance policies. The defense of these lawsuits could also result in continued diversion of our management’s time and attention away from business operations, which could harm our business. For additional discussion regarding litigation, refer to “Part II, Item 1. Legal Proceedings,” and “Note 14. Commitments and Contingencies” to the consolidated financial statements.

Our products incorporate and rely upon licensed third-party technology, and if licenses of third-party technology do not continue to be available to us or are not available on terms acceptable to us, our revenues and ability to develop and introduce new products could be adversely affected.

We integrate licensed third-party technology into certain of our products. From time-to-time, we may be required to license additional technology from third parties to develop new products or product enhancements. Third-party licenses may not be available or continue to be available to us on commercially reasonable terms. The failure to comply with the terms of any license, including free open-source software, may result in our inability to continue to use such license. Our inability to maintain or re-license any third-party licenses required in our products or our inability to obtain third-party licenses necessary to develop new products and product enhancements, could potentially require us to develop substitute technology or obtain substitute technology of lower quality or performance standards or at a greater cost, any of which could delay or prevent product shipment and harm our business, financial condition, and results of operations.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, and Nasdaq listing requirements. The Sarbanes-Oxley Act includes, among other requirements, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, and to integrate our acquisitions into our disclosure controls and procedures and internal control over financial reporting, we have expended, and anticipate that we will continue to expend, significant time and operational resources, including accounting-related costs and significant management oversight.

Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could cause us to delay reporting of our financial results, be subject to one or more investigations or enforcement actions by state or federal regulatory agencies, stockholder lawsuits or other adverse actions requiring us to incur defense costs, pay fines, settlements or judgments. Any such failures could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our common stock and customer perception of our business may suffer. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the NASDAQ stock market.

Risks Related to Human Capital

Our ability to develop, market and sell products could be harmed if we are unable to retain or hire key personnel.

Our future success depends upon our ability to recruit and retain the services of executive, engineering, manufacturing, sales and marketing, and support personnel. The supply of highly qualified individuals, in particular engineers in very specialized technical areas, or salespeople specializing in the service provider, enterprise and commercial laser markets, is limited and competition for such individuals is intense. Competition is particularly intense in certain jurisdictions where we have research and development centers, including Silicon Valley, and for engineering talent generally. Also, employees in our industries are increasingly able to work remotely, which has increased employee mobility and turnover, making it difficult for us to retain or hire employees. Further, to attract and retain top talent, we have offered, and we believe we will need to continue to offer, competitive compensation and benefits packages. Job candidates and existing employees often consider the value of the equity awards they receive in connection with their employment. Despite a wave of recent layoffs in the technology sector, competitors for talent and the increased availability of work-from-home arrangements have both intensified and expanded competition. As a result, during the last few years, we have increased our efforts to recruit and retain talent. These efforts have increased our expenses, resulted in a higher volume of equity issuances, and may not be successful in attracting, retaining, and motivating the workforce necessary to deliver on our strategy. We believe equity compensation is a valuable component of our compensation program which helps us to attract, retain, and motivate employees, and as a result, we issue stock-based awards, such as RSUs, to a significant portion of our employees. A significant change in our stock price or lower stock price performance relative to competitors, may reduce the retention value of our stock-based awards. Our employee hiring and retention also depends on our ability to build and maintain a diverse and inclusive workplace culture and be viewed as an employer of choice. If the perceived value of our equity awards declines, it may adversely affect our ability to attract and retain highly qualified employees. There can be no assurance that the programs, initiatives, rewards and recognition that are part of our people strategy will be successful in attracting and retaining the talent necessary to execute on our business plans. None of our officers or key employees is bound by an employment agreement for any specific term. The loss of the services of any of our key employees, the inability to attract or retain personnel in the future, particularly during the integration of acquisitions, or delays in hiring required personnel and the complexity and time involved in replacing or training new employees, could delay the development and introduction of new products, and negatively impact our ability to market, sell, or support our products. Similarly, the failure to properly manage the necessary knowledge transfer required for employee transitions could impact our ability to maintain industry and innovation leadership. The loss of members of our management team or other key personnel could be disruptive to our business and, were it necessary, it could be difficult to replace such individuals. If we are unable to attract and retain qualified personnel, we may be unable to manage our business effectively, and our business, financial condition and results of operations may be harmed.

Our ability to hire and retain employees may be negatively impacted by changes in immigration laws, regulations and procedures.

Foreign nationals who are not U.S. citizens or permanent residents constitute an important part of our U.S. workforce, particularly in the areas of engineering and product development. Our ability to hire and retain these workers and their ability to remain and work in the United States are impacted by laws and regulations, as well as by procedures and enforcement practices of various government agencies and global events such as COVID-19 may interfere with our ability to hire or retain workers who require visas or entry permits. For example, numerous U.S. Embassies suspended or delayed the processing of new visa applications for a period during the pandemic due to COVID-19 related concerns impacting embassy operations and staffing. Additional changes in immigration laws, regulations or procedures, including those that have been and may be enacted in the future by the U.S. government and in the United Kingdom or the European Union in connection with Brexit or the war in Ukraine, may adversely affect our ability to hire or retain such workers, increase our operating expenses and negatively impact our ability to deliver our products and services.

Risks Related to Legal, Regulatory and Compliance

Our sales may decline if we are unable to obtain government authorization to export certain of our products, and we may be subject to legal and regulatory consequences if we do not comply with applicable export control laws and regulations.

Exports of certain of our products are subject to export controls imposed by the U.S. government and administered by the U.S. Departments of State and Commerce. In certain instances, these regulations may require pre-shipment authorization from the administering department. For products subject to the EAR administered by the BIS, the requirement for a license is dependent on the type and end use of the product, the final destination, the identity of the end user and whether a license exception might apply. Virtually all exports of products subject to the International Traffic in Arms Regulations ("ITAR") administered by the Department of State's Directorate of Defense Trade Controls, require a license. Certain of our fiber optics products are subject to EAR and certain of our RF-over-fiber products, as well as certain products and technical data, are developed with government funding, and are currently subject to ITAR. Products and the associated technical data developed and manufactured in our foreign locations are subject to export controls of the applicable foreign nation. There is no assurance that we will be issued these licenses or be granted exceptions, and failure to obtain such licenses or exceptions could limit our ability to sell our products into certain countries and negatively impact our business, financial condition and/or operating results.

The requirement to obtain a license could put us at a competitive disadvantage by restricting our ability to sell products to customers in certain countries or by giving rise to delays or expenses related to obtaining a license. Given the current global political climate, obtaining export licenses can be difficult and time-consuming. Failure to obtain export licenses for these shipments could significantly reduce our revenue and materially adversely affect our business, financial condition, relationships with our customers and results of operations. Compliance with U.S. government regulations also subjects us to additional fees and costs. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position.

Further, there is increased attention from the government and the media regarding potential threats to U.S. national security and foreign policy relating to certain foreign entities, particularly Chinese entities, and the imposition of enhanced restrictions or sanctions regarding the export of our products or on specific foreign entities that would restrict their ability to do business with U.S. companies may materially adversely affect our business. For example, on May 16, 2019, Huawei was added to the BIS Entity List, additional regulatory restrictions were imposed in May and August 2020 and in October 2022 to the Foreign-Produced Direct Product Rule, which impose limitations on the supply of certain U.S. items and product support to Huawei. BIS has continued to add Chinese-based entities to the Entity List and, on May 22, 2020, FiberHome Technologies was added to the Entity List. These actions have resulted in escalating tensions between the U.S. and China and create the possibility that the Chinese government may take additional steps to retaliate against U.S. companies or industries. We cannot predict what additional actions the U.S. government may take with respect to Huawei beyond what is described above or to other of our customers, including modifications to or interpretations of Entity List restrictions, export restrictions, tariffs, or other trade limitations or barriers. For example, BIS has stopped issuing licenses for the export of most products to Huawei.

Our association with customers that are or become subject to U.S. regulatory scrutiny or export restrictions could negatively impact our business. Governmental actions such as these could subject us to actual or perceived reputational harm among current or prospective investors, suppliers or customers, customers of our customers, other parties doing business with us, or the general public. Any such reputational harm could result in the loss of investors, suppliers or customers, which could harm our business, financial condition, operating results or prospects. Further, if we fail to comply with any of these export regulations, we could be subject to civil, criminal, monetary and non-monetary penalties and costly consent decrees, which would lead to disruptions to our business, restrictions on our ability to export products and technology, and adversely affect our business and results of operation.

In addition, certain of our significant customers and suppliers have products that are subject to U.S. export controls, and therefore these customers and suppliers may also be subject to legal and regulatory consequences if they do not comply with applicable export control laws and regulations. Such regulatory consequences could disrupt our ability to obtain components from our suppliers, or to sell our products to major customers, which could significantly increase our costs, reduce our revenue and materially adversely affect our business, financial condition and results of operations.

Social and environmental responsibility regulations, policies and provisions, as well as customer and investor demands, may make our supply chain more complex and may adversely affect our relationships with customers and investors.

There is an increasing focus on environmental, social, and governance ("ESG") matters both in the United States and globally. A number of our customers have adopted, or may adopt, procurement policies that include social and environmental responsibility provisions or requirements that their suppliers should comply with, or they may seek to include such provisions or requirements in their procurement terms and conditions. An increasing number of investors are also requiring companies to disclose corporate social and environmental policies, practices and metrics. These legal and regulatory requirements, as well as investor expectations, on corporate environmental and social responsibility practices and disclosure, are subject to change, can be unpredictable, and may be difficult and expensive for us to comply with, given the complexity of our supply chain. If we are unable to comply with, or are unable to cause our suppliers or contract manufacturers to comply with such policies or provisions, or meet the requirements of our customers and investors, a customer may stop purchasing products from us or an investor may sell their shares, and may take legal action against us, which could harm our reputation, revenue and results of operations. We expect increased worldwide regulatory activity relating to climate change in the future. Future compliance with these laws and regulations, as well as meeting related customer and investor expectations, may adversely affect our business and results of operations.

Our reputation and/or business could be negatively impacted by ESG matters and/or our reporting of such matters.

We communicate certain ESG-related initiatives, goals, and/or commitments regarding environmental matters, diversity, responsible sourcing and social investments, and other matters, in our annual Corporate Social Responsibility Report, on our website, in certain filings with the SEC, and elsewhere. These initiatives, goals, or commitments could be difficult to achieve and costly to implement. In addition, we could be criticized for the timing, scope or nature of these initiatives, goals, or commitments, for any revisions to them, or for our disclosures related to such matters, or for our policies and practices related to these matters. Our actual or perceived failure to achieve our ESG-related initiatives, goals, or commitments could negatively impact our reputation or otherwise materially harm our business.

We may be adversely affected by climate change regulations.

In many of the countries in which we operate, government bodies are increasingly enacting legislation and regulations in response to potential impacts of climate change. These laws and regulations may be mandatory. They have the potential to impact our operations directly or indirectly as a result of required compliance by our customers or supply chain. Inconsistency of regulations may also affect the costs of compliance with such laws and regulations. Assessments of the potential impact of future climate change legislation, regulation, and international treaties and accords are uncertain, given the wide scope of potential regulatory change in countries in which we operate.

We may incur increased capital expenditures resulting from required compliance with revised or new legislation or regulations, added costs to purchase raw materials, lower profits from sales of our products, increased insurance premiums and deductibles, changes in competitive position relative to industry peers, changes to profit or loss arising from increased or decreased demand for goods produced by us, or changes in costs of goods sold, which would have an adverse effect on our business, financial condition and results of operations.

We are subject to laws and regulations worldwide including with respect to environmental matters, securities laws, privacy and data protection, compliance with which could increase our expenses and harm our operating results.

Our operations and our products are subject to various federal, state and foreign laws and regulations, including those governing pollution and protection of human health and the environment in the jurisdictions in which we operate or sell our products. These laws and regulations govern, among other things, wastewater discharges and the handling and disposal of hazardous materials in our products. Our failure to comply with current and future environmental or health or safety requirements could cause us to incur substantial costs, including significant capital expenditures, to comply with such environmental laws and regulations and to clean up contaminated properties that we own or operate. Such clean-up or compliance obligations could result in disruptions to our operations. Additionally, if we are found to be in violation of these laws, we could be subject to governmental fines or civil liability for damages resulting from such violations. These costs could have a material adverse impact on our financial condition or operating results.

From time-to-time new regulations are enacted, and it is difficult to anticipate the impact of the implementation and enforcement of such regulations. We continue to evaluate the necessary steps for compliance with regulations upon their enactment. These regulations include, for example, the Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH"), the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive ("RoHS") and the Waste Electrical and Electronic Equipment Directive ("WEEE") enacted in the European Union which regulate the use of certain hazardous substances in, and require the collection, reuse and recycling of waste from, certain products we manufacture. These regulations and similar legislation may require us to re-design our products to ensure compliance with the applicable standards, for example by requiring the use of different types of materials, which could have an adverse impact on the performance of our products, add greater testing lead-times for product introductions or other similar effects. We believe we comply with all such legislation where our products are sold, and we continuously monitor these laws and the regulations being adopted under them to determine our responsibilities.

In addition, pursuant to Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the SEC has promulgated rules requiring disclosure regarding the use of certain "conflict minerals" that are mined from the Democratic Republic of Congo and adjoining countries and procedures regarding a manufacturer's efforts to prevent the sourcing of such minerals. We may face challenges with government regulators and our customers and suppliers if we are unable to sufficiently make any required determination that the metals used in our products are conflict free. Complying with these disclosure requirements involves substantial diligence efforts to determine the source of any conflict minerals used in our products and may require third-party auditing of our diligence process. These efforts may demand internal resources that would otherwise be directed towards operations activities.

Since our supply chain is complex, we may face reputational challenges if we are unable to sufficiently verify the origins of all minerals used in our products. In addition, if we are unable to satisfy those customers who require that all of the components of our products be determined to be conflict free, they may choose a competitor's products which could materially impact our financial condition and operating results.

We are also subject to laws and regulations to our collection and other processing of personal data of our employees, customers, and others. These laws and regulations are subject to frequent modifications and updates and require ongoing supervision. For example, the European Union adopted a General Data Protection Regulation ("GDPR") that became effective in May 2018, and has established new, and in some cases more stringent, requirements for data protection in Europe, and which provides for substantial penalties for noncompliance. Brazil passed the General Data Protection Law that became effective in August 2020 to regulate processing of personal data of individuals, which also provides for substantial penalties for noncompliance. Additionally, California has the California Consumer Privacy Act ("CCPA"), which went into effect on January 1, 2020. In November 2020, California passed the California Privacy Rights Act ("CPRA"), which went into effect on January 1, 2023. The CPRA amends and augments the CCPA including by expanding individuals' rights and the obligations of businesses that handle personal data. Similar legislation has been proposed or adopted in several other states. Aspects of the CCPA, CPRA and these other laws and regulations, as well as their enforcement, remain unclear. The U.S. federal government also is contemplating federal privacy legislation. The effects and impact of these or other laws and regulations relating to privacy and data protection are potentially significant and may require us to modify our data processing practices and policies and to incur substantial costs and expenses in efforts to comply. Laws and regulations relating to privacy and data protection continue to evolve in various jurisdictions, with existing laws and regulations subject to new and differing interpretations and new laws and regulations being proposed and adopted. It is possible that our practices may be deemed not to comply with those privacy and data protection legal requirements that apply to us now or in the future.

Further, the United Kingdom has implemented legislation similar to the GDPR, including the UK Data Protection Act and legislation referred to as the UK GDPR, which provides for substantial penalties, similar to the GDPR. Aspects of United Kingdom data protection law remains unclear following the United Kingdom's exit from the European Union, including with respect to data transfers between the United Kingdom and other jurisdictions. We cannot fully predict how the Data Protection Act, the UK GDPR, and other United Kingdom data protection laws or regulations may develop in the medium to longer term nor the effects of divergent laws and guidance regarding data transfers. We may find it necessary to make further changes to our handling of personal data of residents of the European Economic Area, Switzerland and the United Kingdom, each of which may require us to incur significant costs and expenses.

New technology trends, such as AI, require us to keep pace with evolving regulations and industry standards. In the United States, the European Union, and China there are various current and proposed regulatory frameworks relating to the use of AI in products and services. We expect that the legal and regulatory environment relating to emerging technologies such as AI will continue to develop and could increase the cost of doing business, and create compliance risks and potential liability, all which may have a material adverse effect on our financial condition and results of operations.

Our failure or perceived failure to comply with any of the foregoing legal and regulatory requirements, or other actual or asserted obligations relating to privacy, data protection or information security could result in increased costs for our products, monetary penalties, damage to our reputation, government inquiries, investigations and other legal proceeds, legal claims, demands and litigation and other obligations and liabilities. Furthermore, the legal and regulatory requirements that are applicable to our business are subject to change from time-to-time, which increases our monitoring and compliance costs and the risk that we may fall out of compliance. In addition, we may be required to ensure that our suppliers comply with applicable laws and regulations. If we or our suppliers fail to comply with such laws or regulations, we could face sanctions for such noncompliance, and our customers may refuse to purchase our products, which would have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Our Common Stock

Our stock price may be volatile and may decline regardless of our operating performance.

Our common stock is listed on the Nasdaq Global Select Market (“NASDAQ”) under the symbol “LITE”. The market price of our common stock has fluctuated in the past and may fluctuate significantly due to a number of factors, some of which may be beyond our control and may often be unrelated or disproportionate to our operating performance. These include:

- general economic and market conditions and other external factors;
- changes in global economic conditions, including those resulting from trade tensions, rising inflation, and fluctuations in foreign currency exchange and interest rates;
- speculation in the press or investment community about our strategic position;
- actual or anticipated fluctuations in our quarterly or annual operating results;
- changes in earnings estimates by securities analysts or our ability to meet those estimates;
- the operating and stock price performance of other comparable companies;
- a shift in our investor base;
- the financial performance of other companies in our industry, and of our customers;
- general market, economic and political conditions, including market conditions in the semiconductor industry;
- pandemics and similar major health concerns, including the COVID-19 pandemic;
- success or failure of our business strategy;
- credit market fluctuations which could negatively impact our ability to obtain financing as needed;
- changes in governmental regulation including taxation and tariff policies;
- changes in global political tensions that may affect business with our customers;
- announcements by us, competitors, customers, or our contract manufacturers of significant acquisitions or dispositions, strategic alliances or overall movement toward industry consolidations among our customers and competitors;
- investor perception of us and our industry;
- changes in recommendations by securities analysts;
- changes in accounting standards, policies, guidance, interpretations or principles;
- differences, whether actual or perceived, between our corporate social responsibility and ESG practices and disclosure and investor expectations;
- litigation or disputes in which we may become involved;
- overall market fluctuations;
- issuances of our shares upon conversion of some or all of the convertible notes;

- sales of our shares by our officers, directors, or significant stockholders; and
- the timing and amount of share repurchases, if any.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many technology companies. Stock prices of many technology companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. In the past, stockholders have instituted securities class action litigation following periods of market volatility. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management from our business and adversely affect our business, results of operations, financial condition and cash flows.

Servicing our existing and future indebtedness, including the 2024 Notes, 2026 Notes, 2028 Notes and 2029 Notes (collectively referred to as "the convertible notes") may require a significant amount of cash, and we may not have sufficient cash flow or the ability to raise the funds necessary to satisfy our obligations under the convertible notes and our current and future indebtedness may limit our operating flexibility or otherwise affect our business.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness under the convertible notes, or to make cash payments in connection with any conversion of the convertible notes or upon any fundamental change if holders of the applicable series of the convertible notes require us to repurchase their convertible notes for cash, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our indebtedness and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring indebtedness or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations. In addition, our existing and future indebtedness could have important consequences to our stockholders and significant effects on our business. For example, it could:

- make it more difficult for us to satisfy our debt obligations under the convertible notes;
- increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- restrict us from exploiting business opportunities;
- place us at a competitive disadvantage compared to our competitors that have less indebtedness; and
- limit our availability to borrow additional funds for working capital, capital expenditures, acquisitions, debt service requirements, execution of our business strategy or other general purposes.

Transactions relating to our convertible notes may dilute the ownership interest of existing stockholders or may otherwise depress the price of our common stock.

If the convertible notes are converted by holders of such series, we have the ability under the applicable indenture to deliver cash, common stock, or any combination of cash or common stock, at our election upon conversion of the applicable series of the convertible notes. If we elect to deliver common stock upon conversion of the convertible notes, it would dilute the ownership interests of existing stockholders. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, certain holders of the convertible notes may engage in short selling to hedge their position in the convertible notes. Anticipated future conversions of the convertible notes into shares of our common stock could depress the price of our common stock.

We do not expect to pay dividends on our common stock.

We do not currently expect to pay dividends on our common stock. The payment of any dividends to our stockholders in the future, and the timing and amount thereof, if any, is within the discretion of our board of directors. Our board of directors' decisions regarding the payment of dividends will depend on many factors, such as our financial condition, earnings, capital requirements, potential debt service obligations or restrictive covenants, industry practice, legal requirements, regulatory constraints and other factors that our board of directors deems relevant.

In addition, because we are a holding company with no material direct operations, we are dependent on loans, dividends and other payments from our operating subsidiaries to generate the funds necessary to pay dividends on our common stock. However, our operating subsidiaries' ability to make such distributions will be subject to their operating results, cash requirements and financial condition and the applicable provisions of Delaware law that may limit the amount of funds available for distribution. Our ability to pay cash dividends may also be subject to covenants and financial ratios related to existing or future indebtedness, and other agreements with third parties.

Certain provisions in our charter and Delaware corporate law could hinder a takeover attempt.

We are subject to the provisions of Section 203 of the Delaware General Corporate Law which prohibits us, under some circumstances, from engaging in business combinations with some stockholders for a specified period without the approval of the holders of substantially all of our outstanding voting stock. Such provisions could delay or impede the removal of incumbent directors and could make more difficult a merger, tender offer or proxy contest involving us, even if such events could be beneficial, in the short-term, to the interests of our stockholders. In addition, such provisions could limit the price that some investors might be willing to pay in the future for shares of our common stock. Our certificate of incorporation and bylaws contain provisions providing for the limitations of liability and indemnification of our directors and officers, allowing vacancies on our board of directors to be filled by the vote of a majority of the remaining directors, granting our board of directors the authority to establish additional series of preferred stock and to designate the rights, preferences and privileges of such shares (commonly known as "blank check preferred") and providing that our stockholders can take action only at a duly called annual or special meeting of stockholders, which may only be called by the chairman of the board of directors, the chief executive officer or the board of directors. These provisions may also have the effect of deterring hostile takeovers or delaying changes in control or changes in our management.

Our bylaws designate Delaware courts as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could discourage lawsuits against us or our directors and officers.

Our bylaws provide that, unless we consent in writing to an alternative forum, the state or federal courts of Delaware are the sole and exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting breach of fiduciary duty, or other wrongdoing, by our directors, officers or other employees to us or our stockholders; any action asserting a claim against Lumentum pursuant to the Delaware General Corporation Law or our certificate of incorporation or bylaws; any action asserting a claim against Lumentum governed by the internal affairs doctrine; or any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws. This exclusive forum provision may limit the ability of our stockholders to bring a claim in a different judicial forum that such stockholders find favorable for disputes with us or our directors or officers, which may discourage such lawsuits against us or our directors and officers.

Alternatively, if a court outside of Delaware were to find this exclusive forum provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings described above, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

Risks Related to Cloud Light Acquisition

We face risks related to the integration of Cloud Lights' business, our cash resources and financial results, undisclosed liabilities, and employee and customer retention.

On November 7, 2023, we completed the acquisition of Cloud Light. We will devote significant management attention and resources to integrating the business practices and operations of Cloud Light with our business. We may encounter potential difficulties as part of the integration process including those related to the costs of integration and compliance, diversion of management's attention, our ability to create and enforce uniform standards, controls, procedures, policies and information systems, potential unknown liabilities, and unforeseen increased expenses or delays.

In addition, the use of a significant portion of our cash in acquiring Cloud Light reduced our liquidity and may limit our flexibility in responding to other business opportunities and increase our vulnerability to adverse economic and industry conditions.

If there are any undisclosed liabilities that were not previously disclosed, Lumentum as successor may be responsible for such undisclosed liabilities. Such undisclosed liabilities could have an adverse effect on the business and results of operations of Lumentum and may adversely affect the value of Lumentum common stock after the consummation of the acquisition.

The acquisition may also result in significant charges or other liabilities that could adversely affect our results of operations, such as cash expenses and non-cash accounting charges incurred in connection with our acquisition and/or integration of the business and operations of Cloud Light. In addition, our failure to identify or accurately assess the magnitude of certain liabilities we are assuming in the acquisition could result in unexpected litigation or regulatory exposure, unfavorable accounting charges, unexpected increases in taxes due, a loss of anticipated tax benefits or other adverse effects on our business, results of operations, financial condition or cash flows.

Uncertainties about the acquisition may cause our or Cloud Light's current and prospective employees to experience uncertainty about their futures. These uncertainties may impair our ability to retain, recruit or motivate key management, engineering, technical and other personnel. Similarly, our or Cloud Light's existing or prospective customers, suppliers and/or partners may delay, defer or cease purchasing products or services from or providing products or services to us or Cloud Light; delay or defer other decisions concerning us or Cloud Light; or otherwise seek to change the terms on which they do business with us or Cloud Light. Any of the above could harm us and/or Cloud Light, and thus decrease the benefits we expect to receive from the acquisition.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

We did not have any repurchases of shares of our common stock during the three months ended December 30, 2023, as shown in the table below. (*in millions, except share and per share amounts*):

Period	Total Number of Shares Purchased [1]	Average Price Paid per Share [2]	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximation Dollar Value) of Shares That May Yet Be Purchased under the Plans or Programs
October 1, 2023 to October 28, 2023	—	$ —	—	$ 569.6
October 29, 2023 to December 2, 2023	—	$ —	—	$ 569.6
December 3, 2023 to December 30, 2023	—	$ —	—	$ 569.6
Total	—	$ —	—	$ 569.6

[1] On May 7, 2021, we announced that our board of directors approved the 2021 share buyback program, which authorizes us to use up to $700.0 million to purchase our own shares of common stock. On March 3, 2022, our board of directors approved an increase in our share buyback program, which authorizes us to use up to an aggregate amount of $1.0 billion (an increase from $700.0 million) to purchase our own shares of common stock through May 2024. On April 5, 2023, our board of directors approved a further increase in our share buyback program, which authorizes us to utilize up to an aggregate amount of $1.2 billion (an increase from $1.0 billion) to purchase our own shares of common stock through May 2025, but may be suspended or terminated at any time.

[2] Average price paid per share includes costs associated with the repurchases.

ITEM 5. OTHER INFORMATION

Securities Trading Plans of Directors and Executive Officers

During our last fiscal quarter, no director or officer, as defined in Rule 16a-1(f), adopted or terminated a “Rule 10b5-1 trading arrangement” or a “non-Rule 10b5-1 trading arrangement,” each as defined in Regulation S-K Item 408.

ITEM 6. EXHIBITS

The following exhibits are filed herewith or are incorporated by reference to exhibits previously filed with the Securities and Exchange Commission.

Exhibit No.	Exhibit Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed Herewith
2.1	Agreement and Plan of Merger dated as of October 29, 2023 by and among Lumentum Holdings Inc., Cloud Light, Crius Merger Sub Inc.	8-K	001-36861	2.1	October 30, 2023	
10.1	Amended Change in Control Benefits Plan effective 8.22.23	10-Q	001-36861	10.1	November 8, 2023	
10.1	2015 Equity Incentive Plan, as Amended and Restated September 15,2023	8-K	001-36861	10.1	November 21, 2023	
31.1	Certification of the Chief Executive Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of the Chief Financial Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1†	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
32.2†	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101	The following financial information from Lumentum Holdings Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended December 30, 2023 formatted in Inline XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Statements of Operations for the three and six months ended December 30, 2023 and December 31, 2022; (ii) Condensed Consolidated Statements of Comprehensive Loss for the three and six months ended December 30, 2023 and December 31, 2022; (iii) Condensed Consolidated Balance Sheets as of December 30, 2023 and July 1, 2023; (iv) Condensed Consolidated Statements of Stockholders' Equity for the three and six months ended December 30, 2023 and December 31, 2022; (v) Condensed Consolidated Statements of Cash Flows for the six months ended December 30, 2023 and December 31, 2022, and (vi) Notes to the Consolidated Financial Statements.					X
104	Cover Page Interactive Data File, formatted in Inline XBRL (included in Exhibit 101).					X

† The certifications furnished in Exhibits 32.1 and 32.2 that accompany this report are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this report, irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

		LUMENTUM HOLDINGS INC.
Date:	February 8, 2024	By: /s/ Wajid Ali
		By: Wajid Ali
		Executive Vice President, Chief Financial Officer

Exhibit 31.1

LUMENTUM HOLDINGS INC.
CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Alan Lowe, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lumentum Holdings 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. The registrant’s other certifying officer(s) and I are 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. The registrant’s other certifying officer(s) and 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.

Dated: February 8, 2024

/s/ Alan Lowe

Alan Lowe
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

LUMENTUM HOLDINGS INC.
CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Wajid Ali, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lumentum Holdings 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. The registrant's other certifying officer(s) and I are 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. The registrant's other certifying officer(s) and 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.

Dated: February 8, 2024

/s/ Wajid Ali

Wajid Ali
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

LUMENTUM HOLDINGS INC.
CERTIFICATION PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Lumentum Holdings Inc. (the “Company”) for the quarter ended December 30, 2023 as filed with the Securities and Exchange Commission (the “Report”), I, Alan Lowe, President and Chief Executive Officer (Principal Executive Officer) of the Company, hereby certify as of the date hereof, solely for purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This Certification has not been, and shall not be deemed, “filed” with the Securities and Exchange Commission.

Dated: February 8, 2024

/s/ Alan Lowe

Alan Lowe
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

LUMENTUM HOLDINGS INC.
CERTIFICATION PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Lumentum Holdings Inc. (the “Company”) for the quarter ended December 30, 2023 as filed with the Securities and Exchange Commission (the “Report”), I, Wajid Ali, Executive Vice President and Chief Financial Officer (Principal Financial Officer) of the Company, hereby certify as of the date hereof, solely for purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This Certification has not been, and shall not be deemed, “filed” with the Securities and Exchange Commission.

Dated: February 8, 2024

/s/ Wajid Ali

Wajid Ali
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)