Table of Contents

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 June 30, 2024

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 001-33155

IPG PHOTONICS CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**04-3444218**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*
377 Simarano Drive, Marlborough, Massachusetts	**01752**
(Address of principal executive offices)	*(Zip code)*

Registrant's telephone number, including area code: **(508) 373-1100**

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**IPGP**	**The Nasdaq Stock Market LLC**

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 ☒ No ☐

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 (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-Accelerated Filer	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐		

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

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

As of July 29, 2024, there were 44,226,115 shares of the registrant's common stock outstanding.

TABLE OF CONTENTS

Part I. Financial Information 1
Item 1. Unaudited Interim Financial Statements 1
Condensed Consolidated Balance Sheets: June 30, 2024 and December 31, 2023 1
Condensed Consolidated Statements of Income: Three and Six Months Ended June 30, 2024 and 2023 2
Condensed Consolidated Statements of Comprehensive Income: Three and Six Months Ended June 30, 2024 and 2023 3
Condensed Consolidated Statements of Cash Flows: Six Months Ended June 30, 2024 and 2023 4
Condensed Consolidated Statements of Equity: Three and Six Months Ended June 30, 2024 and 2023 5
Notes to Condensed Consolidated Financial Statements 6
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations 16
Item 3. Quantitative and Qualitative Disclosures About Market Risk 27
Item 4. Controls and Procedures 28
Part II. Other Information 29
Item 1. Legal Proceedings 29
Item 1A. Risk Factors 29
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds 29
Item 3. Defaults Upon Senior Securities 29
Item 4. Mine Safety Disclosures 29
Item 5. Other Information 30
Item 6. Exhibits 30
Signatures 31

PART I—FINANCIAL INFORMATION

ITEM 1. UNAUDITED INTERIM FINANCIAL STATEMENTS

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS

	June 30, 2024	December 31, 2023
	(In thousands, except share and per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 720,540	$ 514,674
Short-term investments	343,363	662,807
Accounts receivable, net	176,153	219,053
Inventories	400,839	453,874
Prepaid income taxes	30,208	26,038
Prepaid expenses and other current assets	46,849	38,208
Total current assets	1,717,952	1,914,654
Deferred income taxes, net	88,865	88,788
Goodwill	38,278	38,540
Intangible assets, net	23,423	26,234
Property, plant and equipment, net	593,136	602,257
Other assets	33,777	28,425
Total assets	$ 2,495,431	$ 2,698,898
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 26,232	$ 28,618
Accrued expenses and other current liabilities	161,229	181,350
Income taxes payable	3,022	4,893
Total current liabilities	190,483	214,861
Other long-term liabilities and deferred income taxes	51,578	68,652
Total liabilities	242,061	283,513
Commitments and contingencies (Note 10)		
IPG Photonics Corporation equity:		
Common stock, $0.0001 par value, 175,000,000 shares authorized; 56,584,223 and 44,225,282 shares issued and outstanding, respectively, at June 30, 2024; 56,317,438 and 46,320,671 shares issued and outstanding, respectively, at December 31, 2023.	6	6
Treasury stock, at cost, 12,358,941 and 9,996,767 shares held at June 30, 2024 and December 31, 2023, respectively.	(1,373,525)	(1,161,505)
Additional paid-in capital	1,014,094	994,020
Retained earnings	2,839,647	2,795,394
Accumulated other comprehensive loss	(226,852)	(212,530)
Total IPG Photonics Corporation equity	2,253,370	2,415,385
Total liabilities and equity	$ 2,495,431	$ 2,698,898

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF INCOME

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
	(In thousands, except per share data)			
Net sales	$ 257,645	$ 339,971	$ 509,654	$ 687,145
Cost of sales	161,459	192,280	315,932	392,516
Gross profit	96,186	147,691	193,722	294,629
Operating expenses:				
Sales and marketing	22,487	20,187	45,485	41,275
Research and development	27,487	23,512	56,868	46,282
General and administrative	31,602	29,660	62,760	59,788
Gain on sale of assets	(674)	—	(7,450)	—
Restructuring charges, net	—	963	—	1,144
Loss (gain) on foreign exchange	3,244	1,306	4,919	(1,349)
Total operating expenses	84,146	75,628	162,582	147,140
Operating income	12,040	72,063	31,140	147,489
Other income, net:				
Interest income, net	12,778	9,264	26,955	16,797
Other income, net	194	285	519	616
Total other income	12,972	9,549	27,474	17,413
Income before provision for income taxes	25,012	81,612	58,614	164,902
Provision for income taxes	4,858	19,291	14,361	42,446
Net income attributable to IPG Photonics Corporation common stockholders	$ 20,154	$ 62,321	$ 44,253	$ 122,456
Net income attributable to IPG Photonics Corporation per common share:				
Basic	$ 0.45	$ 1.32	$ 0.97	$ 2.58
Diluted	$ 0.45	$ 1.31	$ 0.97	$ 2.57
Weighted average common shares outstanding:				
Basic	44,918	47,316	45,439	47,429
Diluted	45,012	47,453	45,601	47,618

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
	(In thousands)			
Net income	$ 20,154	$ 62,321	$ 44,253	$ 122,456
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments and other	3,406	(15,082)	(14,322)	(14,601)
Unrealized loss on derivatives	—	(63)	—	(152)
Total other comprehensive income (loss)	3,406	(15,145)	(14,322)	(14,753)
Comprehensive income attributable to IPG Photonics Corporation	$ 23,560	$ 47,176	$ 29,931	$ 107,703

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	Six Months Ended June 30,	
	2024	2023
	(In thousands)	
Cash flows from operating activities:		
Net income	$ 44,253	$ 122,456
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	31,506	35,343
Deferred income taxes	720	5,065
Stock-based compensation	18,282	19,249
Unrealized gain on foreign currency transactions	(487)	(1,816)
Provisions for inventory, warranty and bad debt	30,365	31,846
Amortization of premium/discount on investments	(13,007)	(11,037)
Other	(5,516)	2,154
Changes in assets and liabilities that provided (used) cash, net of acquisitions:		
Accounts receivable	38,460	(23,876)
Inventories	17,041	(12,103)
Prepaid expenses and other assets	(7,143)	(15,480)
Accounts payable	1,276	(7,472)
Accrued expenses and other liabilities	(28,265)	(27,736)
Income and other taxes payable	(19,431)	(12,647)
Net cash provided by operating activities	108,054	103,946
Cash flows from investing activities:		
Purchases of and deposits on property, plant and equipment	(52,270)	(59,139)
Proceeds from sales of property, plant and equipment	28,274	1,740
Purchases of short-term investments	(301,541)	(583,347)
Proceeds from short-term investments	633,993	549,879
Other	188	326
Net cash provided by (used in) investing activities	308,644	(90,541)
Cash flows from financing activities:		
Principal payments on long-term borrowings	—	(16,031)
Proceeds from issuance of common stock under employee stock option and purchase plans less payments for taxes related to net share settlement of equity awards	1,792	(731)
Purchase of treasury stock, at cost	(212,020)	(113,031)
Net cash used in financing activities	(210,228)	(129,793)
Effect of changes in exchange rates on cash and cash equivalents	(604)	(8,750)
Net increase (decrease) in cash and cash equivalents	205,866	(125,138)
Cash and cash equivalents — Beginning of period	514,674	698,209
Cash and cash equivalents — End of period	$ 720,540	$ 573,071
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 94	$ 947
Cash paid for income taxes	$ 34,165	$ 58,178
Non-cash transactions:		
Demonstration units transferred from inventory to other assets	$ 2,998	$ 2,737
Inventory transferred to machinery and equipment	$ 914	$ 1,731
Additions to property, plant and equipment included in accounts payable	$ 811	$ 1,189
Leased assets obtained in exchange for new operating lease liabilities	$ 2,745	$ 788

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY

Three Months Ended June 30,

(In thousands, except share data)	Common Stock Shares	Common Stock Amount	Treasury Stock Shares	Treasury Stock Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
Balance, April 1, 2024	**45,566,746**	**$ 6**	**(10,954,692)**	**$ (1,251,121)**	**$ 1,002,600**	**$ 2,819,493**	**$ (230,258)**	**$ 2,340,720**
Vesting of RSUs and PSUs, net of shares withheld for taxes, and exercise of stock options	27,943	—	—	—	451	—	—	451
Common stock issued under employee stock purchase plan	34,842	—	—	—	2,499	—	—	2,499
Purchased common stock	(1,404,249)	—	(1,404,249)	(122,404)	—	—	—	(122,404)
Stock-based compensation	—	—	—	—	8,544	—	—	8,544
Net income	—	—	—	—	—	20,154	—	20,154
Foreign currency translation adjustments and other	—	—	—	—	—	—	3,406	3,406
Balance, June 30, 2024	**44,225,282**	**$ 6**	**(12,358,941)**	**$ (1,373,525)**	**$ 1,014,094**	**$ 2,839,647**	**$ (226,852)**	**$ 2,253,370**
Balance, April 1, 2023	**47,305,551**	**$ 6**	**(8,878,184)**	**$ (1,051,103)**	**$ 957,103**	**$ 2,636,651**	**$ (204,132)**	**$ 2,338,525**
Vesting of RSUs and PSUs, net of shares withheld for taxes, and exercise of stock options	28,366	—	—	—	620	—	—	620
Common stock issued under employee stock purchase plan	30,403	—	—	—	2,494	—	—	2,494
Purchased common stock	—	—	—	63	—	—	—	63
Stock-based compensation	—	—	—	—	9,672	—	—	9,672
Net income	—	—	—	—	—	62,321	—	62,321
Foreign currency translation adjustments and other	—	—	—	—	—	—	(15,082)	(15,082)
Unrealized loss on derivatives, net of tax	—	—	—	—	—	—	(63)	(63)
Balance, June 30, 2023	**47,364,320**	**$ 6**	**(8,878,184)**	**$ (1,051,040)**	**$ 969,889**	**$ 2,698,972**	**$ (219,277)**	**$ 2,398,550**

Six Months Ended June 30,

(In thousands, except share data)	Common Stock Shares	Common Stock Amount	Treasury Stock Shares	Treasury Stock Amount	Additional Paid In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
Balance, January 1, 2024	**46,320,671**	**$ 6**	**(9,996,767)**	**$ (1,161,505)**	**$ 994,020**	**$ 2,795,394**	**$ (212,530)**	**$ 2,415,385**
Vesting of RSUs and PSUs, net of shares withheld for taxes, and exercise of stock options	231,943	—	—	—	(707)	—	—	(707)
Common stock issued under employee stock purchase plan	34,842	—	—	—	2,499	—	—	2,499
Purchased common stock	(2,362,174)	—	(2,362,174)	(212,020)	—	—	—	(212,020)
Stock-based compensation	—	—	—	—	18,282	—	—	18,282
Net income	—	—	—	—	—	44,253	—	44,253
Foreign currency translation adjustments and other	—	—	—	—	—	—	(14,322)	(14,322)
Balance, June 30, 2024	**44,225,282**	**$ 6**	**(12,358,941)**	**$ (1,373,525)**	**$ 1,014,094**	**$ 2,839,647**	**$ (226,852)**	**$ 2,253,370**
Balance, January 1, 2023	**48,138,257**	**$ 6**	**(7,879,415)**	**$ (938,009)**	**$ 951,371**	**$ 2,576,516**	**$ (204,524)**	**$ 2,385,360**
Vesting of RSUs and PSUs, net of shares withheld for taxes, and exercise of stock options	194,429	—	—	—	(3,224)	—	—	(3,224)
Common stock issued under employee stock purchase plan	30,403	—	—	—	2,493	—	—	2,493
Purchased common stock	(998,769)	—	(998,769)	(113,031)	—	—	—	(113,031)
Stock-based compensation	—	—	—	—	19,249	—	—	19,249
Net income	—	—	—	—	—	122,456	—	122,456
Foreign currency translation adjustments and other	—	—	—	—	—	—	(14,601)	(14,601)
Unrealized loss on derivatives, net of tax	—	—	—	—	—	—	(152)	(152)
Balance, June 30, 2023	**47,364,320**	**$ 6**	**(8,878,184)**	**$ (1,051,040)**	**$ 969,889**	**$ 2,698,972**	**$ (219,277)**	**$ 2,398,550**

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share data)

1. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation — The accompanying unaudited condensed consolidated financial statements have been prepared by IPG Photonics Corporation, or "IPG", "its" or the "Company". Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). The condensed consolidated financial statements include the Company's accounts and those of its subsidiaries. All intercompany balances have been eliminated in consolidation. These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto in the Company's Annual Report on Form 10-K for the year ended December 31, 2023.

In the opinion of the Company's management, the financial information for the interim periods presented reflects all adjustments necessary for a fair presentation of the Company's financial position, results of operations and cash flows. The results reported in these condensed consolidated financial statements are not necessarily indicative of results that may be expected for the entire year.

Accounts Receivable and Allowance for Credit Losses — The Company maintains an allowance for doubtful accounts to provide for the estimated amount of accounts receivable that will not be collected. The allowance is based upon an estimate of expected credit losses over the life of outstanding receivables. The estimate involves an assessment of customer creditworthiness, historical payment experience, an assumption of future expected credit losses, and the age of outstanding receivables.

Activity related to the allowance for doubtful accounts was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Balance, beginning of period	$ 1,817	$ 2,363	$ 1,763	$ 2,639
Provision for bad debts, net of (recoveries)	298	58	391	(151)
Uncollectible accounts written off	(16)	(191)	(41)	(241)
Foreign currency translation	(4)	(61)	(18)	(78)
Balance, end of period	$ 2,095	$ 2,169	$ 2,095	$ 2,169

Comprehensive Income — Comprehensive income includes charges and credits to equity that are not the result of transactions with stockholders. Included within comprehensive income is the cumulative foreign currency translation adjustments. These adjustments are accumulated within the condensed consolidated statements of comprehensive income.

Total components of accumulated other comprehensive loss were as follows:

	Foreign currency translation adjustments and other	Unrealized gain (loss) on derivatives, net of tax	Total
Balance, April 1, 2024	$ (230,258)	$ —	$ (230,258)
Other comprehensive income, net of tax:			
Foreign currency translation adjustments and other, net of tax benefit of $92	3,406	—	3,406
Total other comprehensive income	3,406	—	3,406
Balance, June 30, 2024	$ (226,852)	$ —	$ (226,852)
Balance, April 1, 2023	$ (204,195)	$ 63	$ (204,132)
Other comprehensive loss, net of tax:			
Foreign currency translation adjustments and other, net of tax expense of $69	(15,082)	—	(15,082)
Unrealized loss on derivatives, net of tax benefit of $20	—	(63)	(63)
Total other comprehensive loss	(15,082)	(63)	(15,145)
Balance, June 30, 2023	$ (219,277)	$ —	$ (219,277)

	Foreign currency translation adjustments and other	Unrealized gain (loss) on derivatives, net of tax	Total
Balance, January 1, 2024	$ (212,530)	$ —	$ (212,530)
Other comprehensive loss, net of tax:			
Foreign currency translation adjustments and other, net of tax benefit of $125	(14,322)	—	(14,322)
Total other comprehensive loss	(14,322)	—	(14,322)
Balance,June 30, 2024	$ (226,852)	$ —	$ (226,852)
Balance, January 1, 2023	$ (204,676)	$ 152	$ (204,524)
Other comprehensive loss, net of tax:			
Foreign currency translation adjustments and other, net of tax expense of $104	(14,601)	—	(14,601)
Unrealized loss on derivatives, net of tax benefit of $46	—	(152)	(152)
Total other comprehensive loss	(14,601)	(152)	(14,753)
Balance, June 30, 2023	$ (219,277)	$ —	$ (219,277)

Subsequent Events — The Company has considered the impact of subsequent events through the filing date of these financial statements. There were no events through the filing date of these financial statements required to be disclosed.

2. RECENT ACCOUNTING PRONOUNCEMENTS

Adopted Pronouncements — In November 2023, the FASB issued ASU No. 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures" ("ASU 2023-07"), which improves reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses on an annual and interim basis. Under the new guidance an entity is required to disclose the title and position of the chief operating decision maker ("CODM") and an explanation of how the CODM uses the reported measure(s) of segment profit or loss in assessing segment performance and deciding how to allocate resources. The ASU also requires that an entity that has a single reportable segment provide all the

disclosures required by this ASU and all existing segment disclosures in Topic 280. ASU 2023-07 is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. The Company adopted this standard during fiscal year 2024, and will start disclosing the required information in fiscal year ending December 31, 2024. The adoption of this standard only impacts disclosures and is not expected to have a material impact on the Company's consolidated financial statements.

Pronouncements Currently Under Evaluation — In December 2023, the FASB issued ASU No. 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures" ("ASU 2023-09"), which requires an entity on an annual basis to disclose specific categories in the rate reconciliation and provide additional information for reconciling items that meet a quantitative threshold. The guidance also requires an entity to disclose on an annual basis information about income taxes paid. ASU 2023-09 is effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The Company is evaluating the impact of this ASU. The adoption of this standard only impacts disclosures and is not expected to have a material impact on the Company's consolidated financial statements.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Sales are derived from products for different applications: fiber lasers, diode lasers, systems and accessories for materials processing; fiber lasers, diodes and amplifiers for advanced applications; and fiber lasers, systems and fibers for medical applications.

The following tables represent a disaggregation of revenue from contracts with customers:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Sales by Application				
Materials processing	$ 225,773	$ 314,184	$ 452,138	$ 627,153
Other applications	31,872	25,787	57,516	59,992
Total	$ 257,645	$ 339,971	$ 509,654	$ 687,145
Sales by Product				
High Power Continuous Wave ("CW") Lasers	$ 82,225	$ 145,992	$ 173,018	$ 300,026
Medium Power CW Lasers	15,758	22,370	31,972	36,209
Pulsed Lasers	42,536	53,002	77,355	109,149
Quasi-Continuous Wave ("QCW") Lasers	10,549	13,840	26,340	25,122
Laser and Non-Laser Systems	38,668	38,187	76,171	79,571
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue	67,909	66,580	124,798	137,068
Total	$ 257,645	$ 339,971	$ 509,654	$ 687,145
Sales by Geography				
North America	$ 76,905	$ 78,220	$ 140,869	$ 154,300
Europe:				
Germany	20,809	28,962	40,828	48,795
Other Europe	53,722	72,865	113,219	153,285
Asia:				
China	64,875	98,567	127,605	199,854
Japan	10,215	16,749	26,913	38,367
Other Asia	27,643	38,062	52,621	81,716
Rest of World	3,476	6,546	7,599	10,828
Total	$ 257,645	$ 339,971	$ 509,654	$ 687,145

IPG PHOTONICS CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - (Continued)
(In thousands, except share and per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Timing of Revenue Recognition				
Goods and services transferred at a point in time	$ 248,117	$ 329,571	$ 490,644	$ 662,696
Goods and services transferred over time	9,528	10,400	19,010	24,449
Total	$ 257,645	$ 339,971	$ 509,654	$ 687,145

One of the Company's customers accounted for 17% and 14% of the Company's net accounts receivable as of June 30, 2024 and December 31, 2023, respectively.

The Company enters into contracts to sell lasers and spare parts, for which revenue is generally recognized upon shipment or delivery, depending on the terms of the contract. The Company also provides installation services and extended warranties. The Company frequently receives consideration from a customer prior to transferring goods to the customer under the terms of a sales contract. The Company records customer deposits related to these prepayments, which represent a contract liability. The Company also records deferred revenue related to installation services when consideration is received before the services have been performed. The standalone selling price for installation services is determined based on the estimated number of days of service technician time required for installation at standard service rates. The Company recognizes customer deposits and deferred revenue as net sales after control of the goods or services has been transferred to the customer and all revenue recognition criteria are met. The Company bills customers for extended warranties upon entering into the agreement with the customer, resulting in deferred revenue that is recognized over the period of the extended warranty contract. The Company recognizes revenue over time on contracts for the sale of large scale materials processing systems. The timing of customer payments on these contracts generally differs from the timing of revenue recognized. If revenue recognized exceeds customer payments, a contract asset is recorded and if customer payments exceed revenue recognized, a contract liability is recorded. Contract assets are included within prepaid expense and other current assets on the condensed consolidated balance sheets. Contract liabilities are included within accrued expenses and other current liabilities on the condensed consolidated balance sheets. Certain deferred revenues related to extended warranties in excess of one year from the balance sheet date are included within other long-term liabilities and deferred income taxes on the condensed consolidated balance sheets.

The following table reflects the changes in the Company's contract assets and liabilities for the six months ended June 30, 2024 and 2023:

	June 30, 2024	January 1, 2024	Change	June 30, 2023	January 1, 2023	Change
Contract assets						
Contract assets	$ 13,194	$ 9,383	$ 3,811	$ 17,460	$ 8,620	$ 8,840
Contract liabilities						
Contract liabilities - current	57,452	69,219	(11,767)	75,785	80,068	(4,283)
Contract liabilities - long-term	2,593	2,851	(258)	3,054	3,142	(88)

During the three months ended June 30, 2024 and 2023 the Company recognized revenue of $12,716 and $14,431, respectively, that was included in contract liabilities at the beginning of each year. During the six months ended June 30, 2024 and 2023 the Company recognized revenue of $43,216 and $43,443 respectively, that was included in contract liabilities at the beginning of each year.

The following table represents the Company's remaining performance obligations from contracts that are recognized over time as of June 30, 2024:

	Remaining Performance Obligations						
	2024 [a]	2025	2026	2027	2028	Thereafter	Total
Revenue expected to be recognized for extended warranty agreements	$ 1,799	$ 1,624	$ 954	$ 642	$ 185	$ 129	$ 5,333
Revenue to be earned over time from contracts to sell large scale materials processing systems	14,199	2,462	—	—	—	—	16,661
Total	$ 15,998	$ 4,086	$ 954	$ 642	$ 185	$ 129	$ 21,994

[a] For the six-month period beginning July 1, 2024.

4. FAIR VALUE MEASUREMENTS

The Company's financial instruments consist of cash equivalents, short-term investments, accounts receivable, accounts payable, and revolving lines of credit.

The valuation techniques used to measure fair value are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect internal market assumptions. These two types of inputs create the following fair value hierarchy: Level 1, defined as observable inputs such as quoted prices for identical instruments in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions. The Company classifies its financial instruments according to the prescribed criteria.

The fair value of money market fund deposits, cash equivalent term deposits, accounts receivable, accounts payable and drawings on revolving lines of credit is reasonably close to their carrying amounts due to the short maturity of most of these instruments or as a result of the competitive market interest rates, which have been negotiated. The fair value of the Company's commercial paper, corporate bonds, U.S. Treasury and agency obligations and term deposits are based on Level 2 inputs.

The following table presents fair value information related to the Company's assets and liabilities measured at amortized cost on the condensed consolidated balance sheets:

	Fair Value Measurements at June 30, 2024			
	Total	Level 1	Level 2	Level 3
Assets				
Cash equivalents:				
Money market fund deposits	$ 255,715	$ 255,715	$ —	$ —
Commercial paper	39,566	—	39,566	—
Term deposits	27,904	—	27,904	—
Corporate bonds	22,938	—	22,938	—
Total cash equivalents	346,123	255,715	90,408	—
Short-term investments:				
Commercial paper	170,030	—	170,030	—
Corporate bonds	103,773	—	103,773	—
U.S. Treasury and agency obligations	66,319	—	66,319	—
Term deposits	3,048	—	3,048	—
Total short-term investments	343,170	—	343,170	—
Total	$ 689,293	$ 255,715	$ 433,578	$ —

	Fair Value Measurements at December 31, 2023			
	Total	Level 1	Level 2	Level 3
Assets				
Cash equivalents:				
Money market fund deposits	$ 171,632	$ 171,632	$ —	$ —
Term deposits	83,965	—	83,965	—
Corporate bonds	23,516	—	23,516	—
Commercial paper	6,369	—	6,369	—
Total cash equivalents	285,482	171,632	113,850	—
Short-term investments:				
Commercial paper	244,571	—	244,571	—
Corporate bonds	243,915	—	243,915	—
U.S. Treasury and agency obligations	171,316	—	171,316	—
Term deposits	3,009	—	3,009	—
Total short-term investments	662,811	—	662,811	—
Total	$ 948,293	$ 171,632	$ 776,661	$ —

There were no impairments for the investments considered held-to-maturity during the quarters ended June 30, 2024 and 2023. There were no current expected credit loss allowances for the investments considered held-to-maturity at June 30, 2024 and 2023. The Company holds highly-rated held-to-maturity instruments that are within one year of maturity.

The following table presents the effective maturity dates of debt investments, which are held-to-maturity:

	June 30, 2024		December 31, 2023	
	Book Value	Fair Value	Book Value	Fair Value
Investment maturity				
Less than 1 year	$ 343,363	$ 343,170	$ 662,807	$ 662,811

5. INVENTORIES

Inventories consist of the following:

	June 30, 2024	December 31, 2023
Components and raw materials	$ 226,305	$ 263,652
Work-in-process	44,051	47,997
Finished goods	130,483	142,225
Total	$ 400,839	$ 453,874

The Company recorded inventory provisions totaling $14,009 and $11,218 for the three months ended June 30, 2024 and 2023, respectively, and $26,851 and $23,314 for the six months ended June 30, 2024 and 2023. These provisions relate to the recoverability of the value of inventories due to technological changes and excess quantities. These provisions are reported as a reduction to components and raw materials, work-in-process and finished goods.

6. GOODWILL AND INTANGIBLES

The following table sets forth the changes in the carrying amount of goodwill:

	Six Months Ended June 30,	
	2024	2023
Balance, beginning of period	$ 38,540	$ 38,325
Foreign exchange adjustment	(262)	169
Balance, end of period	$ 38,278	$ 38,494

Intangible assets, subject to amortization, consisted of the following:

	June 30, 2024				December 31, 2023			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Lives	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Lives
Customer relationships	$ 48,140	$ (27,778)	$ 20,362	11 years	$ 48,216	$ (25,973)	$ 22,243	11 years
Technology, trademark and trade name	29,903	(26,842)	3,061	7 years	29,903	(25,960)	3,943	7 years
Production know-how	9,111	(9,111)	—	7 years	9,155	(9,155)	—	7 years
Patents	8,034	(8,034)	—	8 years	8,035	(7,987)	48	8 years
Total	$ 95,188	$ (71,765)	$ 23,423		$ 95,309	$ (69,075)	$ 26,234	

Amortization expense for the three months ended June 30, 2024 and 2023 was $1,377 and $2,021, respectively. Amortization expense for the six months ended June 30, 2024 and 2023 was $2,802 and $4,042, respectively. The estimated future amortization expense for intangibles for the remainder of 2024 and subsequent years is as follows:

2024 [a]	2025	2026	2027	2028	Thereafter	Total
$ 2,751	$ 4,977	$ 4,216	$ 4,004	$ 3,633	$ 3,842	$ 23,423

[a] For the six-month period beginning July 1, 2024.

7. OTHER LIABILITIES

Accrued expenses and other current liabilities consist of the following:

	June 30, 2024	December 31, 2023
Accrued compensation	$ 60,722	$ 67,053
Contract liabilities	57,452	69,219
Current portion of accrued warranty	24,754	27,283
Short-term lease liabilities	4,454	4,597
Other	13,847	13,198
Total	$ 161,229	$ 181,350

Other long-term liabilities and deferred income taxes consist of the following:

	June 30, 2024	December 31, 2023
Accrued warranty	$ 16,320	$ 19,926
Unrecognized tax benefits	15,527	17,176
Long-term lease liabilities	12,964	13,664
Deferred income taxes	1,506	1,508
Transition tax related to 2017 U.S. tax reform act	—	11,009
Other	5,261	5,369
Total	$ 51,578	$ 68,652

8. PRODUCT WARRANTIES

The Company typically provides one to five years parts and service warranties on lasers, laser and non-laser systems, and amplifiers. Most of the Company's sales offices provide support to customers in their respective geographic areas. Warranty reserves have generally been sufficient to cover product warranty repair and replacement costs.

Activity related to the warranty accrual was as follows:

	Six Months Ended June 30,	
	2024	2023
Balance, beginning of period	$ 47,209	$ 52,862
Provision for warranty accrual	2,853	7,089
Warranty claims	(8,268)	(8,533)
Foreign currency translation	(720)	216
Balance, end of period	$ 41,074	$ 51,634

Accrued warranty reported in the accompanying condensed consolidated financial statements as of June 30, 2024 and December 31, 2023 consist of $24,754 and $27,283 in accrued expenses and other current liabilities, respectively, and $16,320 and $19,926 in other long-term liabilities and deferred income taxes, respectively.

9. FINANCING ARRANGEMENTS

Revolving Line of Credit Facilities:

The Company maintains a $75,000 U.S. revolving line of credit, which is available to certain foreign subsidiaries and allows for borrowings in the local currencies of those subsidiaries. At June 30, 2024 and December 31, 2023, there were no amounts drawn on the U.S. line-of-credit, and there were $2,153 and $2,487, respectively, of guarantees issued against the facility, which reduce the amount of the facility available to draw. After providing for the guarantees used, the remaining availability under this line was $72,847 at June 30, 2024. In addition, the Company maintains Euro lines of credit facilities with a total principal amount of €6,500 ($6,964 as of June 30, 2024), which are available to certain European subsidiaries.

10. COMMITMENTS AND CONTINGENCIES

From time to time, the Company may be involved in legal disputes and other proceedings in the ordinary course of its business. These matters may include allegations of infringement of intellectual property, commercial disputes and employment matters. As of June 30, 2024 and through the filing date of these condensed consolidated financial statements, the Company is aware of no ongoing legal proceedings that management estimates could have a material effect on the Company's Condensed Consolidated Financial Statements.

11. INCOME TAXES

The effective tax rates were 19.4% and 23.6% for the three months ended June 30, 2024 and 2023, respectively, and 24.5% and 25.7% for the six months ended June 30, 2024 and 2023 respectively. There was a net discrete tax benefit of $85 for

the three months ended June 30, 2024 and a net discrete tax benefit of $1,751 for the three months ended June 30, 2023. There was a net discrete tax detriment of $1,912 for the six months ended June 30, 2024 and a net discrete tax detriment of $221 for the six months ended June 30, 2023. The detriment in 2024 and 2023 relates primarily to the increase in tax expense for equity-based compensation expense reflected in financial statement income in excess of the deductions allowed for tax purposes as well as reductions in tax reserves for the expiration of the statute of limitations and for agreements with tax authorities for prior year audits. Excluding discrete items, the overall effective tax rate in 2024 decreased as compared to 2023 due to an increase in US tax benefits and credits, as well as an increase in tax benefits from the use of foreign tax benefits that previously were offset by a full valuation allowance.

The Company accounts for its uncertain tax positions in accordance with the accounting standards for income taxes. The Company classifies interest and penalties related to unrecognized tax benefits as a component of the provision for income taxes. The following is a summary of the activity of the Company's unrecognized tax benefits for the six months ended June 30, 2024 and 2023:

	Six Months Ended June 30,	
	2024	2023
Balance, beginning of period	$ 17,176	$ 15,841
Change in prior period positions	(1,759)	(1,273)
Additions for tax positions in current period	170	950
Foreign currency translation	(60)	(482)
Balance, end of period	$ 15,527	$ 15,036

The liability for uncertain tax benefits is included in other long-term liabilities and deferred income taxes at June 30, 2024 and December 31, 2023. Substantially all of the liability for uncertain tax benefits related to various federal, state and foreign income tax matters would benefit the Company's effective tax rate, if the tax benefits are recognized.

12. NET INCOME ATTRIBUTABLE TO IPG PHOTONICS CORPORATION PER COMMON SHARE

The following table sets forth the computation of diluted net income attributable to IPG Photonics Corporation per common share following the treasury stock method:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Net income attributable to IPG Photonics Corporation common stockholders	$ 20,154	$ 62,321	$ 44,253	$ 122,456
Basic weighted average common shares	44,917,696	47,316,342	45,439,126	47,428,639
Dilutive effect of common stock equivalents	94,778	136,918	162,313	189,523
Diluted weighted average common shares	45,012,474	47,453,260	45,601,439	47,618,162
Basic net income attributable to IPG Photonics Corporation per common share	$ 0.45	$ 1.32	$ 0.97	$ 2.58
Diluted net income attributable to IPG Photonics Corporation per common share	$ 0.45	$ 1.31	$ 0.97	$ 2.57

The computation of diluted weighted average common shares excludes common stock equivalents including non-qualified stock options, performance stock units ("PSUs"), restricted stock units ("RSUs") and employee stock purchase plan ("ESPP") because the effect of including them would be anti-dilutive. The weighted average anti-dilutive shares outstanding for the three and six months ended June 30, 2024 and 2023 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Non-qualified stock options	603,281	538,442	598,073	540,912
Restricted stock units	235,619	420,750	235,739	397,861
Performance stock units	59,350	64,590	59,350	47,818
Total weighed average anti-dilutive shares outstanding	898,250	1,023,782	893,162	986,591

On February 13, 2024, the Company announced that its Board of Directors has authorized the purchase of up to $300,000 of IPG common stock. This authorization is in addition to the Company's stock repurchase programs authorized in May 2023.

For the three months ended June 30, 2024, the Company repurchased 1,404,249 shares under the May 2023 authorization and February 2024 authorization with a weighted average price of $86.32 per share in the open market. For the six months ended June 30, 2024, the Company repurchased 2,362,174 shares under the May 2023 authorization and February 2024 authorization with a weighted average price of $88.92 per share in the open market. The impact on the reduction of weighted average shares for the three and six months ended June 30, 2024 was 662,348 shares and 1,028,573 shares, respectively. As of June 30, 2024, the Company has completed all the repurchases under the May 2023 authorization and up to $180,484 remains available under the February 2024 authorization.

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

You should read the following discussion in conjunction with our condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward looking statements that are based on management's current expectations, estimates and projections about our business and operations. Our actual results may differ materially from those currently anticipated and expressed in such forward-looking statements. See "Cautionary Statement Regarding Forward-Looking Statements."

Overview

We develop, manufacture and sell high-performance fiber lasers and diode lasers that are used for diverse applications, primarily in materials processing. We also manufacture and sell complementary products used with our lasers including optical delivery cables, fiber couplers, beam switches, optical processing heads, in-line sensors and chillers. In addition, we offer laser-based and non-laser based systems for certain markets and applications. Our portfolio of laser solutions is used in materials processing, medical, advanced applications and communications. We sell our products globally to original equipment manufacturers ("OEMs"), system integrators and end users. We market our products internationally, primarily through our direct sales force. Our major manufacturing facilities are located in the United States and Germany. In response to the risks from the Russia-Ukraine conflict, we have substantially reduced our reliance on our Russian operations, and have ceased new investments in our Russian and Belarus operations. We have and will continue to expand our manufacturing operations in Germany and the United States, and have added manufacturing capacity in Poland and expanded capacity in Italy to meet the demand for our products and our sales and support needs. We have sales and service offices and applications laboratories worldwide.

We are vertically integrated such that we design and manufacture most of the key components used in our finished products, from semiconductor diodes to optical fiber preforms, finished fiber lasers and complementary products. Our vertically integrated operations allow us to reduce manufacturing costs, control quality, rapidly develop and integrate advanced products and protect our proprietary technology.

On June 5, 2024, Dr. Mark Gitin succeeded Dr. Eugene Scherbakov as Chief Executive Officer of the Company. Dr. Scherbakov continues to serve as a member of the Board of Directors and as an advisor to Dr. Gitin. Dr. Gitin has more than 30 years of experience in the lasers and optics sector, most recently overseeing the Photonics Solutions Division at MKS Instruments.

Factors and Trends That Affect Our Operations and Financial Results

In reading our financial statements, you should be aware of the following factors and trends that our management believes are important in understanding our financial performance.

Russia-Ukraine Conflict. The Russia-Ukraine conflict and the sanctions imposed in response to this crisis have significantly curtailed our ability to use our manufacturing operations in Russia to supply other IPG operations outside of Russia. The EU issued additional sanctions for Belarus on June 29, 2024. The sanctions allow shipments related to existing contracts to continue through October 2, 2024. We are currently evaluating the effect these new sanctions will have on our business. Our preliminary assessment is that our ability to continue supply of certain components from our factory in Belarus will be affected. Since the start of the conflict, we have been executing on plans to reduce our reliance on our Russia and Belarus operations by adding capacity in other countries, increasing inventories worldwide and qualifying third-party suppliers. Since 2022, we have hired and trained additional employees, expanded capacity for increased production, run additional shifts in the U.S. and Germany and added additional manufacturing capacity in Italy and Poland. We have also qualified and begun purchasing components from third party vendors to reduce reliance on sub-assemblies currently made in Belarus.

We believe the contingency measures outlined above that we have already put in place have mitigated substantially all the effects of current sanctions on our ability to supply finished products to customers. Additionally, we believe that we will be able to mitigate the effect of the new Belarus sanctions, although we are still evaluating the full impact of those sanctions on our business. If we have not fully mitigated the effect of these and other trade restrictions, or if new sanctions are adopted, our ability to supply finished products to customers could be impacted. Although we believe our contingency plans mitigate the risk of our ability to supply customers with finished product, these plans require additional investments in facilities outside of Russia and Belarus in the near term as well as additional ongoing operating costs, primarily associated with the higher cost of labor outside of Russia and Belarus. While we have sufficient financial resources to make these investments and expenditures, our gross margins and financial results have been and will be adversely impacted by increased operating costs associated with these transitions. Over time, we intend to mitigate some of these increases by producing components in countries with lower labor costs than the United States and Germany, with ongoing product expense reduction initiatives, higher productivity from

automation, improved yields and product specifications. We are also continuing to review our operations in Russia and Belarus. For additional information regarding the risks and potential impacts of the Russia-Ukraine conflict, see "*Risk Factors – The ongoing conflict between Russia and Ukraine may adversely affect our business and results of operations*" in Item 1A of Part I of Form 10-K for the year ended December 31, 2023.

We evaluated the recoverability of certain assets located in Russia during the fourth quarter of 2022 and incurred impairment charges that reduced the value of fixed assets, inventory and other current assets. We also incurred restructuring charges in 2022 and 2023. As of December 31, 2023, we have substantially completed the restructuring program in Russia.

Sales to third-parties in Russia were approximately 4% of our revenue for the first half of 2024, and approximately 3% for the full year ended December 31, 2023. Our Russian subsidiary has historically supplied finished goods for our China market. Sanctions have limited our ability to provide components to Russia for the completion of finished lasers. Although our Russian operation has built safety stock in anticipation of this situation, we are also producing more finished lasers for China at other IPG locations. The total value of product shipped to the Chinese market from Russia was approximately $5.8 million for the six months ended June 30, 2024 and $15.8 million for the full year ended December 31, 2023.

At June 30, 2024, we had working capital excluding cash and cash equivalents of $37.0 million in Russia of which $27.8 million is inventory. We had $78.1 million of cash and cash equivalents in Russia. The net asset value of our Russian subsidiary was $117.3 million. The net asset value of our Russian subsidiary has been reduced by $133.3 million due to the cumulative translation effect of the Russian ruble compared to the U.S. dollar, which is included in the accumulated other comprehensive loss component of stockholders' equity. Depending upon the outcome of our review of our Russian operations, we may incur additional asset impairment charges and the other comprehensive loss that is currently in the equity section of our condensed consolidated balance sheets may be charged to our condensed consolidated statements of income.

We continue to manufacture laser cabinets and other mechanical components in Belarus. As noted above, we are evaluating a new round of sanctions that were issued by the EU on June 29, 2024. These sanctions allow shipments under existing orders to be shipped through October 2, 2024. It is expected that these sanctions will impact our ability to export some or all of the laser and mechanical components currently manufactured in Belarus after that date. The value of the long lived assets in Belarus was $30.9 million at June 30, 2024, and we had working capital excluding cash of $2.9 million in Belarus of which $3.3 million is inventory. In addition, we had $3.5 million of cash in Belarus. The net asset value of our Belarus subsidiary combined with inter-company loans was $37.4 million. The net asset value of our Belarus subsidiary has been reduced by $17.5 million due to the cumulative translation effect of the Belarus ruble compared to the U.S. dollar, which is included in the accumulated other comprehensive loss component of stockholders' equity. The evaluation of the latest round of sanctions may lead to management decisions that could trigger an asset impairment evaluation and may result in impairment charges in the future.

Our Board of Directors has been monitoring and continues to assess and monitor risks to our business associated with the Russia-Ukraine conflict and our Russian and Belarus operations. Our Directors request and receive management reports from management regarding our Russian and Belarus operations, contingency planning and execution, and impacts on our business at
its quarterly and special meetings.

Supply Chain. Because of disruptions to our supply chain caused by the COVID-19 pandemic and Russia-Ukraine related sanctions, we increased our inventory safety stocks and placed non-cancellable orders for long lead time items. These caused our inventory levels and our days inventory on hand to increase. Our ability to reduce inventory will depend on sales volume and demand for the items we have on stock. If inventory on hand becomes excess or obsolete, our inventory reserves may increase. We may also be affected by changes in freight costs as a result of other global supply chain disruptions that may occur from time to time.

Net sales. Our net sales have historically fluctuated from quarter to quarter. The increase or decrease in sales from a prior quarter can be affected by the timing of orders received from customers, the timing of shipments, the mix of OEM orders and one-time orders for products with large purchase prices, competitive pressures, acquisitions, economic and political conditions in a certain country or region and seasonal factors such as the purchasing patterns and levels of activity throughout the year in the regions where we operate. Net sales can be affected by the time taken to qualify our products for use in new applications in the end markets that we serve. Our sales cycle varies substantially, ranging from a period of a few weeks to as long as one year or more, but is typically several months. The adoption of our products by a new customer or qualification in a new application can lead to an increase in net sales for a period, which may then slow until we penetrate new markets or obtain new customers. Foreign exchange rates also affect our net sales, due to changes in the U.S. dollar value of sales made in foreign currencies.

Our business depends substantially upon capital expenditures by end users, particularly by manufacturers using our products for materials processing, which includes general manufacturing, automotive including electric vehicles ("EV"), other transportation, aerospace, heavy industry, consumer, semiconductor and electronics. Approximately 89% of our revenues for

the first half of 2024, and 90% of the full fiscal year of 2023 were from customers using our products for materials processing. Although applications within materials processing are broad, the capital equipment market in general is cyclical and historically has experienced sudden and severe downturns. For the foreseeable future, our operations will continue to depend upon capital expenditures by end users of materials processing equipment and will be subject to the broader fluctuations of capital equipment spending.

In response to inflation in recent years, some global central banks have adopted less accommodating monetary policy and have increased benchmark interest rates in several major global economies. The increase in interest rates is intended to dampen demand that could lead to regional or global recession that may reduce demand for our products. In addition, an increase in interest rates would increase the cost of equipment financed with leases or debt. If inflation starts to moderate in 2024, global central banks may adopt more accommodating monetary policy and reduce benchmark interest rates.

In recent years, our net sales and margins have been negatively impacted by tariffs and trade policy. New tariffs and other changes in U.S. trade policy could trigger retaliatory actions by affected countries, and certain foreign governments.

We are also susceptible to global or regional disruptions such as political instability, geopolitical conflicts, acts of terrorism, significant fluctuations in currency values, natural disasters and pandemics to the extent that they affect macroeconomic conditions, global supply chains or individual IPG locations.

The average selling prices of our products generally decrease as the products mature. These decreases result from factors such as increased competition, decreased manufacturing costs and increased unit volumes. We may also reduce selling prices in order to penetrate new markets and applications. Furthermore, we may negotiate discounted selling prices from time to time with certain customers that place high unit-volume orders.

The secular shift to fiber laser technology in large materials processing applications, such as welding and cutting applications, had a positive effect on our sales trends in the past such that our sales trends were often better than other capital equipment manufacturers in both positive and negative economic cycles. As the secular shift to fiber laser technology matures in such applications, our sales trends are more susceptible to economic cycles, which can broadly affect the demand for capital equipment including machine tools and industrial lasers, and competition from other fiber laser manufacturers.

Gross margin. Our total gross margin in any period can be significantly affected by a number of factors, including net sales, production volumes, competitive factors, product mix, and by other factors such as changes in foreign exchange rates relative to the U.S. dollar, tariffs and shipping costs. Many of these factors are not under our control. The following are examples of factors affecting gross margin:

- As our products mature, we can experience additional competition which tends to decrease average selling prices and affects gross margin;
- Our gross margin can be significantly affected by product mix. Within each of our product categories, the gross margin is generally higher for devices with greater average power. These higher power products often have better performance, more difficult specifications to attain and fewer competing products in the marketplace;
- Higher power lasers also use a greater number of optical components, improving absorption of fixed overhead costs and enabling economies of scale in manufacturing;
- The gross margin for certain specialty products may be higher because there are fewer or sometimes no equivalent competing products;
- Customers that purchase devices in greater unit volumes generally are provided lower prices per device than customers that purchase fewer units. In general, lower selling prices to high unit volume customers reduce gross margin although this may be partially offset by improved absorption of fixed overhead costs associated with larger product volumes, which drive economies of scale;
- Gross margin on systems can be lower than gross margin for our lasers and sub-systems, depending on the configuration, volume and competitive forces, among other factors;
- Persistent inflation leading to increases in average manufacturing salaries as well as an increase in the purchase price of components including, but not limited to, electronic components and metal parts could negatively impact gross margin if we are not able to pass those increases on to customers by increasing the selling price of our products;
- Changes in relative exchange rates between currencies we receive when selling our products and currencies we use to pay our manufacturing expenses; and finally,

- Our gross margin from products on new manufacturing lines can be lower due to production inefficiencies and high scrap costs.

We expect that some new technologies, products and systems will have returns above our cost of capital but may have gross margins below our corporate average. If we are able to develop opportunities that are significant in size, competitively advantageous or leverage our existing technology base and leadership, our current gross margin levels may not be maintained. Instead, we aim to deliver industry-leading levels of gross margins by growing sales, by taking market share in existing markets, or by developing new applications and markets we address, by reducing the cost of our products and by optimizing the efficiency of our manufacturing operations.

A high proportion of our costs is fixed so costs are generally difficult to adjust or may take time to adjust in response to changes in demand. In addition, our fixed costs increase as we expand our capacity. If we expand capacity faster than is required by sales growth, gross margins could be negatively affected. Gross margins generally decline if production volumes are lower as a result of a decrease in sales or a reduction in inventory because the absorption of fixed manufacturing costs will be reduced. Gross margins generally improve when the opposite occurs. If both sales and inventory decrease in the same period, the decline in gross margin may be greater if we cannot reduce fixed costs or choose not to reduce fixed costs to match the decrease in the level of production. If we experience a decline in sales that reduces absorption of our fixed costs, or if we have production issues, our gross margins will be negatively affected.

We also regularly review our inventory for items that are slow-moving, have been rendered obsolete or are determined to be excess. Any provision for such slow-moving, obsolete or excess inventory affects our gross margins. For example, we recorded provisions for slow-moving, obsolete or excess inventory totaling $14.0 million and $11.2 million for the three months ended June 30, 2024 and 2023, respectively, and $26.9 million and $23.3 million for the six months ended June 30, 2024 and 2023, respectively.

Selling and general and administrative expenses. In the past, we invested in selling and general and administrative costs in order to support continued growth in the Company. As the secular shift to fiber laser technology matures, our sales growth becomes more susceptible to the cyclical trends typical of capital equipment manufacturers. Accordingly, our future management of and investments in selling and general and administrative expenses will also be influenced by these trends, although we may still invest in selling or general and administrative functions to support certain initiatives even in economic down cycles. Certain general and administrative expenses are not related to the level of sales and may vary quarter to quarter based primarily upon the level of acquisitions, litigation and project related consulting expenses.

Research and development expenses. We plan to continue to invest in research and development to improve our existing components and products and develop new components, products, systems and applications technology. We believe that these investments will sustain our position as a leader in the fiber laser industry and will support development of new products that can address new markets and growth opportunities. The amount of research and development expense we incur may vary from period to period.

Goodwill and long-lived assets impairments. We review our intangible assets and property, plant and equipment for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to be tested for impairment at least annually. Negative industry or economic trends, including reduced estimates of future cash flows, disruptions to our business, slower growth rates, lack of growth in our relevant business units, differences in the estimated product acceptance rates, or market prices below the carrying value of long-lived assets evaluated for sale could lead to impairment charges against our long-lived assets, including goodwill and other intangible assets. We have long-lived assets in Belarus with a carrying value of $30.9 million. As noted above, we are evaluating a new round of sanctions that were issued by the EU on June 29, 2024 and become effective on October 2, 2024. It is expected that these sanctions will impact our ability to export some or all of the laser and mechanical components currently manufactured in Belarus. If we can no longer use Belarus as a source of supply for our laser and mechanical components, we may need to evaluate those assets for impairment, which may result in impairment charges in the future.

Our valuation methodology for assessing impairment requires management to make significant judgments and assumptions based on historical experience and to rely heavily on projections of future operating performance at many points during the analysis. Also, the process of evaluating the potential impairment of goodwill is subjective. We operate in a highly competitive environment and projections of future operating results and cash flows may vary significantly from actual results. If our analysis indicates potential impairment to goodwill in one or more of our reporting units, we may be required to record charges to earnings in our financial statements, which could negatively affect our results of operations.

Foreign exchange. Because we are a U.S.-based company doing business globally, we have both translational and transactional exposure to fluctuations in foreign currency exchange rates. Changes in the relative exchange rate between the

U.S. dollar and the foreign currencies in which our subsidiaries operate directly affects our sales, costs and earnings. Differences in the relative exchange rates between where we sell our products and where we incur manufacturing and other operating costs (primarily in the U.S. and Germany) also affects our costs and earnings. Certain currencies experiencing significant exchange rate fluctuations like the euro, the Russian ruble, the Chinese yuan and Japanese yen have had and could have an additional significant impact on our sales, costs and earnings. For the quarter ended June 30, 2024, the foreign exchange loss was primarily created by the depreciation of the Chinese yuan as compared to the U.S. dollar. Our European subsidiaries have certain net assets denominated in U.S. dollars, and our Chinese and Russian subsidiaries have certain net liabilities denominated in U.S. dollars. Our ability to adjust the foreign currency selling prices of products in response to changes in exchange rates is limited and may not offset the impact of the changes in exchange rates on the translated value of sales or costs. In addition, if we increase the selling price of our products in local currencies, this could have a negative impact on the demand for our products.

Income taxes. We are evaluating the impact of countries adopting tax legislation in accordance with the proposals presented by the OECD (Pillars 1 and 2). Based on the current drafts of the proposals, the tax impact in most countries will not be significant in 2024 due to an effective tax rate in those countries in excess of 15% or as a result of the transition rules that are proposed.

Major customers. While we have historically depended on a few customers for a large percentage of our annual net sales, the composition of this group can change from period to period. Net sales derived from our five largest customers as a percentage of our net sales was 13% for the six months ended June 30, 2024 and 13%, and 15% for the full years 2023 and 2022, respectively. One of our customers accounted for 17% and 14% of our net accounts receivable at June 30, 2024 and December 31, 2023, respectively. We seek to add new customers and to expand our relationships with existing customers. We anticipate that the composition of our significant customers will continue to change. We generally do not enter into agreements with our customers obligating them to purchase a fixed number or large volume of our products. If any of our significant customers substantially reduced their purchases from us, our results would be adversely affected.

Results of Operations for the Three Months Ended June 30, 2024 Compared to the Three Months Ended June 30, 2023

Net sales. Net sales decreased by $82.4 million, or 24.2%, to $257.6 million for the three months ended June 30, 2024 from $340.0 million for the three months ended June 30, 2023.

The table below sets forth sales by application:

	Three Months Ended June 30,					
	2024		2023		Change	
	(In thousands, except for percentages)					
Sales by Application		% of Total		% of Total		
Materials processing	$ 225,773	87.6 %	$ 314,184	92.4 %	$ (88,411)	(28.1)%
Other applications	31,872	12.4 %	25,787	7.6 %	6,085	23.6 %
Total	$ 257,645	100.0 %	$ 339,971	100.0 %	$ (82,326)	(24.2)%

The table below sets forth sales by type of product and other revenue:

	Three Months Ended June 30,					
	2024		2023		Change	
	(In thousands, except for percentages)					
Sales by Product		% of Total		% of Total		
High Power Continuous Wave ("CW") Lasers	$ 82,225	31.9 %	$ 145,992	42.9 %	$ (63,767)	(43.7)%
Medium Power CW Lasers	15,758	6.1 %	22,370	6.6 %	(6,612)	(29.6)%
Pulsed Lasers	42,536	16.5 %	53,002	15.6 %	(10,466)	(19.7)%
Quasi-Continuous Wave ("QCW") Lasers	10,549	4.1 %	13,840	4.1 %	(3,291)	(23.8)%
Laser and Non-Laser Systems	38,668	15.0 %	38,187	11.2 %	481	1.3 %
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue	67,909	26.4 %	66,580	19.6 %	1,329	2.0 %
Total	$ 257,645	100.0 %	$ 339,971	100.0 %	$ (82,326)	(24.2)%

Materials processing

Sales for materials processing applications decreased due to lower sales of high power CW lasers, medium power CW lasers, pulsed lasers, QCW lasers and other laser products, partially offset by higher sales in laser and non-laser systems.

- High power CW laser sales decreased due to lower sales for cutting and welding applications. Within cutting applications, the decrease in sales was attributable to softer industrial demand, increased competition in China and inventory management by OEM customers, while welding application was primarily impacted by a delay in the e-mobility investments.
- Medium power CW laser sales decreased due to lower demand in welding, partially offset by an increase in 3D printing applications.
- Pulsed laser sales, including high power pulsed lasers, decreased due to lower demand for foil cutting and solar cell manufacturing applications.
- QCW laser sales decreased due to lower demand in general industrial applications.
- Laser and non-laser systems sales increased driven by higher demand for LightWELD and other laser systems.

Other Applications

Sales from other applications increased driven by increased demand for lasers used in medical procedures and advanced applications.

Cost of sales and gross margin. Cost of sales decreased by $30.8 million, or 16.0%, to $161.5 million for the three months ended June 30, 2024 from $192.3 million for the three months ended June 30, 2023. Our gross margin decreased to 37.3% for the three months ended June 30, 2024 from 43.4% for the three months ended June 30, 2023. The decrease in gross margin was driven by an increase in unabsorbed manufacturing costs and an increase in inventory provisions as a percentage of sales. The decrease in gross margin was partially offset by a decrease in shipping costs and tariffs, as a percentage of sales. The strong U.S. dollar has negatively affected gross margin because a disproportionate amount of our manufacturing costs are denominated in U.S. dollars as compared to our sales which are predominantly denominated in foreign currencies.

Sales and marketing expense. Sales and marketing expense increased by $2.3 million, or 11.4%, to $22.5 million for the three months ended June 30, 2024 compared with $20.2 million for the three months ended June 30, 2023. The increase is due to higher personnel and related costs and premises costs. As a percentage of sales, sales and marketing expense increased to 8.7% from 5.9% for the three months ended June 30, 2024 and 2023, respectively.

Research and development expense. Research and development expense increased by $4.0 million, or 17.0%, to $27.5 million for the three months ended June 30, 2024, compared to $23.5 million for the three months ended June 30, 2023. The increase is due to higher personnel and related costs and premises costs. As a percentage of sales, research and development expense increased to 10.7% from 6.9% for the three months ended June 30, 2024 and 2023, respectively.

General and administrative expense. General and administrative expense increased by $1.9 million, or 6.4%, to $31.6 million for the three months ended June 30, 2024 from $29.7 million for the three months ended June 30, 2023. The increase was due to increases in consultant costs and legal expenses. As a percentage of sales, general and administrative expense increased to 12.3% from 8.7% for the three months ended June 30, 2024 and 2023, respectively.

Effect of exchange rates on net sales, gross profit and operating expenses. If exchange rates relative to the U.S. dollar had been the same as one year ago, which were on average euro 0.92, Russian ruble 81, Japanese yen 137 and Chinese yuan 7.01, respectively, we estimate that net sales for the three months ended June 30, 2024 would have been $5.9 million higher, gross profit would have been $2.8 million higher and total operating expenses would have been $1.3 million higher.

Loss on foreign exchange. We incurred a foreign exchange transaction loss of $3.2 million for the three months ended June 30, 2024 as compared to a $1.3 million loss for the three months ended June 30, 2023. Our European subsidiaries have certain net assets denominated in U.S. dollars, and our Chinese subsidiary has certain net liabilities denominated in U.S. dollars. The foreign exchange loss for the three months ended June 30, 2024 was primarily attributable to a loss related to the depreciation of the Chinese yuan as compared to the U.S. dollar.

Interest income, net. Interest income, net was $12.8 million for the three months ended June 30, 2024 as compared to $9.3 million of income for three months ended June 30, 2023. The change in interest income, net was due to an increase in yields on cash equivalents and short term investments that resulted from higher market interest rates as compared to prior year rates.

Provision for income taxes. Provision for income taxes was $4.9 million for the three months ended June 30, 2024 compared to $19.3 million for the three months ended June 30, 2023, representing an effective tax rate of 19.4% and 23.6% for the three months ended June 30, 2024 and 2023, respectively. The decrease in tax expense was primarily due to a decrease of income before provision for income taxes for 2024 as compared to 2023. There were net discrete tax benefits of $0.1 million for the three months ended June 30, 2024 and $1.8 million for the three months ended June 30, 2023. For 2024, discrete items included additional tax benefits realized in the completion of 2023 tax returns filed in 2024. For 2023, discrete items included a benefit for reductions in tax liability as a result of reductions in tax reserves for the expiration of the statute of limitations and for agreements with tax authorities for prior year audits.

Net income attributable to IPG Photonics Corporation. Net income attributable to IPG Photonics Corporation decreased by $42.1 million to $20.2 million for the three months ended June 30, 2024 compared to $62.3 million for the three months ended June 30, 2023. Net income attributable to IPG Photonics Corporation as a percentage of our net sales decreased by 10.5 percentage points to 7.8% for the three months ended June 30, 2024 from 18.3% for the three months ended June 30, 2023 due to the factors described above.

Results of Operations for the Six Months Ended June 30, 2024 Compared to the Six Months Ended June 30, 2023

Net sales. Net sales decreased by $177.4 million, or 25.8% to $509.7 million for the six months ended June 30, 2024 from $687.1 million for the six months ended June 30, 2023.

The table below sets forth sales by application:

	Six Months Ended June 30,					
	2024		2023		Change	
	(In thousands, except for percentages)					
Sales by Application		% of Total		% of Total		
Materials processing	$ 452,138	88.7 %	$ 627,153	91.3 %	$ (175,015)	(27.9)%
Other applications	57,516	11.3 %	59,992	8.7 %	(2,476)	(4.1)%
Total	$ 509,654	100.0 %	$ 687,145	100.0 %	$ (177,491)	(25.8)%

The table below sets forth sales by type of product and other revenue:

	Six Months Ended June 30,					
	2024		2023		Change	
	(In thousands, except for percentages)					
Sales by Product		% of Total		% of Total		
High Power CW Lasers	$ 173,018	33.9 %	$ 300,026	43.7 %	$ (127,008)	(42.3)%
Medium Power CW Lasers	31,972	6.3 %	36,209	5.3 %	(4,237)	(11.7)%
Pulsed Lasers	77,355	15.2 %	109,149	15.9 %	(31,794)	(29.1)%
QCW Lasers	26,340	5.2 %	25,122	3.6 %	1,218	4.8 %
Laser and Non-Laser Systems	76,171	14.9 %	79,571	11.6 %	(3,400)	(4.3)%
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue	124,798	24.5 %	137,068	19.9 %	(12,270)	(9.0)%
Total	$ 509,654	100.0 %	$ 687,145	100.0 %	$ (177,491)	(25.8)%

Materials processing

Sales for materials processing applications decreased due to decreases in sales of high power CW lasers, medium power CW lasers, pulsed lasers, laser and non-laser systems and other laser products and service, partially offset by higher sales of QCW lasers.

- High power CW laser sales decreased due to lower sales for cutting and welding applications. Within cutting applications, the decrease in sales was attributable to softer industrial demand, increased competition in China and inventory management by OEM customers, while welding application was primarily impacted by a delay in the e-mobility investments.
- Medium power CW laser sales decreased due to a decrease in demand in welding, partially offset by growth in 3D printing applications.
- Pulsed laser sales decreased due to lower demand in solar cell manufacturing applications and foil cutting applications, as well as a decrease in sales for marking and engraving applications.
- QCW laser sales increased due to higher demand in welding for consumer electronics and e-mobility applications.
- Laser and non-laser systems sales decreased driven by lower demand for non-laser systems.

Other Applications

Sales from other applications decreased due to decreased sales in medical procedures and advanced applications.

Cost of sales and gross margin. Cost of sales decreased by $76.6 million, or 19.5%, to $315.9 million for the six months ended June 30, 2024 from $392.5 million for the six months ended June 30, 2023. Our gross margin decreased to 38.0% for the six months ended June 30, 2024 from 42.9% for the six months ended June 30, 2023. Gross margin decreased mainly driven by an increase in unabsorbed manufacturing costs and an increase in inventory provisions as a percentage of sales. The decrease in gross margin was partially offset by a decrease in shipping costs and tariffs, as a percentage of sales. The strong U.S. dollar has negatively affected gross margin because a disproportionate amount of our manufacturing costs are denominated in U.S. dollars as compared to our sales which are predominantly denominated in foreign currencies.

Sales and marketing expense. Sales and marketing expense increased by $4.2 million, or 10.2%, to $45.5 million for the six months ended June 30, 2024 compared with $41.3 million for the six months ended June 30, 2023. The increase is due to higher personnel and related costs, partially offset by lower depreciation and amortization expenses. As a percentage of sales, sales and marketing expense increased to 8.9% from 6.0% for the six months ended June 30, 2024 and 2023, respectively.

Research and development expense. Research and development expense increased by $10.6 million, or 22.9%, to $56.9 million for the six months ended June 30, 2024, compared to $46.3 million for the six months ended June 30, 2023. The increase is due to higher personnel and related costs and premises costs. As a percentage of sales, research and development expense increased to 11.2% from 6.7% for the six months ended June 30, 2024 and 2023, respectively.

General and administrative expense. General and administrative expense increased by $3.0 million, or 5.0%, to $62.8 million for the six months ended June 30, 2024 from $59.8 million for the six months ended June 30, 2023, primarily as a result of increases in consultant, legal, information system, and premises costs, partially offset by a decrease in personnel and related costs. As a percentage of sales, general and administrative expense increased to 12.3% from 8.7% for the six months ended June 30, 2024 and 2023, respectively.

Gain on sale of assets. The gain on sale of assets of $7.5 million for the six months ended June 30, 2024 was related to the sales of a building and land in the U.S. and a building in the U.K.

Effect of exchange rates on net sales, gross profit and operating expenses. We estimate that, if exchange rates relative to the U.S. dollar had been the same as one year ago, which were on average euro 0.93, Russian ruble 77, Japanese yen 135 and Chinese yuan 6.93, respectively, we would have expected net sales for the six months ended June 30, 2024 to be $13.7 million higher, gross profit to be $7.5 million higher and total operating expenses would have been $3.2 million higher.

Loss on foreign exchange. We incurred a foreign exchange transaction loss of $4.9 million for the six months ended June 30, 2024 as compared to a gain of $1.3 million for the six months ended June 30, 2023. Our European subsidiaries have certain net assets denominated in U.S. dollars, and our Asian subsidiaries have certain net liabilities denominated in U.S. dollars. The

loss for the six months ended June 30, 2024 was primarily attributable to loss from the depreciation of the Chinese yuan and the Korean won, as compared to the U.S. dollar.

Interest income, net. Interest income, net, was $27.0 million for the six months ended June 30, 2024 as compared to $16.8 million of income for the six months ended June 30, 2023. The increase in interest income, net, was due to an increase in yields on cash equivalents and short-term investments that resulted from higher market interest rates as compared to prior year rates.

Provision for income taxes. Provision for income taxes was $14.4 million for the six months ended June 30, 2024 compared to $42.4 million for the six months ended June 30, 2023, representing an effective tax rate of 24.5% and 25.7% for the six months ended June 30, 2024 and 2023, respectively. The decrease in tax expense was primarily due to a decrease of income before provision for income taxes for 2024 as compared to 2023. There was a net discrete tax detriment of $1.9 million and a net discrete tax detriment of $0.2 million for the six months ended June 30, 2024 and 2023, respectively. In both years, the detriment related to the tax impact from tax deductions for stock-based compensation that were less than the compensation expense recognized for books; this detriment was substantially offset by reductions in tax liability as a result of reductions in tax reserves for the expiration of the statute of limitations and for agreements with tax authorities for prior year audits.

Net income attributable to IPG Photonics Corporation. Net income attributable to IPG Photonics Corporation decreased by $78.2 million to $44.3 million for the six months ended June 30, 2024 compared to $122.5 million for the six months ended June 30, 2023. Net income attributable to IPG Photonics Corporation as a percentage of our net sales decreased by 9.1 percentage point to 8.7% from 17.8% for the six months ended June 30, 2024 and 2023, respectively, due to the factors described above.

Liquidity and Capital Resources

We believe that our existing cash and cash equivalents, short-term investments, our cash flows from operations and our existing lines of credit provide us with the financial flexibility to meet our liquidity and capital needs. We expect to continue making investments in capital expenditures, to assess acquisition opportunities and to repurchase shares of our stock in accordance with our repurchase program. The extent and timing of such expenditures may vary from period to period. Our future long-term capital requirements will depend on many factors including our level of sales, the impact of the economic environment on our growth, the timing and extent of spending to support development efforts, expansion of global sales and marketing activities, government regulation including trade sanctions, the timing and introductions of new products, the need to ensure access to adequate manufacturing capacity and the continuing market acceptance of our products. In the near term, we will incur capital expenditures related to the expansion of capacity outside of Russia because of the reduction in manufacturing activity and capacity at our Russian factory that we can access due to sanctions. As of June 30, 2024, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on our consolidated financial condition, results of operations, liquidity, capital expenditures or capital resources.

Included in cash and cash equivalents are $78.1 million of cash and cash equivalents located in Russia, and $3.5 million of cash located in Belarus, as of June 30, 2024. Cash and cash equivalents in Russia are subject to capital controls that prevent repatriation by dividend or distribution of capital. There are currently no restrictions on our ability to use cash and cash equivalents in Russia for operating purposes including converting cash to foreign currency for the payment of goods received from vendors outside of Russia. The Russian operations are self-funding. Approximately 8% of our consolidated working capital including cash, cash equivalents and short-term investments is located in Russia. We are making no new investments in Russia.

The following table presents our principal sources of liquidity:

	June 30, 2024	December 31, 2023
	(In thousands)	
Cash and cash equivalents	$ 720,540	$ 514,674
Short-term investments	343,363	662,807
Unused credit lines and overdraft facilities	78,587	78,506
Working capital (excluding cash, cash equivalents and short-term investments)	463,566	522,312

Short-term investments at June 30, 2024 consist of liquid investments including commercial paper, corporate bonds, U.S. Treasury and agency obligations and term deposits with original maturities of greater than three months but less than one year. See Note 4, "Fair Value Measurements" in the notes to the condensed consolidated financial statements for further information about our short-term investments.

The following table details our line-of-credit facilities as of June 30, 2024:

Description	Total Facility	Interest Rate	Maturity	Security
U.S. Revolving Line of Credit [1]	$75.0 million	BSBY plus 0.8% to 1.2%, depending on our performance	April 2025	Unsecured
Euro Credit Facility (Germany) [2]	Euro 5.0 million ($5.4 million)	€STR rate plus 0.97%	December 2028	Unsecured, guaranteed by parent company
Euro Facility [3]	Euro 1.5 million ($1.6 million)	Euribor plus 1.25%	December 2024	Common pool of assets of Italian subsidiary

[1] This facility is available to certain foreign subsidiaries in their respective local currencies. At June 30, 2024, there were no amounts drawn on this line; however, there were $2.2 million of guarantees issued against the line which reduces total availability.
[2] This facility is available to certain foreign subsidiaries in their respective local currencies. At June 30, 2024, there were no amounts drawn on this line; however, there were $1.2 million of guarantees issued against the line which reduces total availability.
[3] At June 30, 2024, there were no drawings.

At June 30, 2024, our committed credit line is with Bank of America N.A. in the amount of $75.0 million and it is not syndicated. We are required to meet certain financial covenants associated with this credit line. These covenants, tested quarterly, include an interest coverage ratio and a funded debt to earnings before interest, taxes, depreciation and amortization ("EBITDA") ratio. The interest coverage covenant requires that we maintain a trailing twelve-month ratio of EBITDA to interest on all obligations that is at least 3.0:1.0. The funded debt to EBITDA covenant requires that the sum of all indebtedness for borrowed money on a consolidated basis be less than three times our trailing twelve months EBITDA. Funded debt is decreased by our cash and available marketable securities not classified as long-term investments in the U.S.A. in excess of $50 million up to a maximum of $500 million. We were in compliance with all such financial covenants as of and for the three months ended June 30, 2024.

The financial covenants in our loan documents may cause us to not make or to delay investments and actions that we might otherwise undertake because of limits on capital expenditures and amounts that we can borrow or lease. In the event that we do not comply with any one of these covenants, we would be in default under the loan agreement or loan agreements, which may result in acceleration of the debt, cross-defaults on other debt or a reduction in available liquidity, any of which could harm our results of operations and financial condition.

See Note 9, "Financing Arrangements" in the notes to the condensed consolidated financial statements for further information about our facilities.

The following table presents cash flow activities:

	Six Months Ended June 30,	
	2024	2023
	(In thousands)	
Cash provided by operating activities	$ 108,054	$ 103,946
Cash provided by (used in) investing activities	308,644	(90,541)
Cash used in financing activities	(210,228)	(129,793)

Operating activities. Net cash provided by operating activities increased by $4.2 million to $108.1 million for the six months ended June 30, 2024 from $103.9 million for the six months ended June 30, 2023, primarily due to an increase in cash provided by working capital. Our largest working capital items typically are inventory and accounts receivable. Items such as accounts payable to third parties, prepaid expenses and other current assets and accrued expenses and other liabilities are not as significant as our working capital investment in accounts receivable and inventory because of the amount of value added within IPG due to our vertically integrated structure. Accruals and payables for personnel costs including bonuses and income and other taxes payable are largely dependent on the timing of payments for those items. The increase in cash flow from operating activities in 2024 primarily resulted from:

- an increase in cash provided by accounts receivable due to timing of collection and lower accounts receivable resulting from lower sales;

- an increase in cash provided by inventory, as we moderate investment in safety stock related to supply chain disruptions for third party electronic parts and internally manufactured components and reduce inventory levels;
- an increase in cash provided by accounts payable due to timing of payments; and
- a decrease in cash used by prepaid expenses and other assets due to timing of bank acceptance drafts and billings on custom systems.

The increases in cash provided by operating activities were partially offset by:

- a decrease in cash provided by net income after adjusting for non-cash operating activities, mainly due to lower sales; and
- an increase in cash used by income and other taxes payable due to the timing of estimated tax payments made and refunds received from filing tax returns, including an installment due on the company's transition tax liability from the Tax Reform Act of 2017.

Investing activities. Net cash provided by investing activities was $308.6 million for the six months ended June 30, 2024 as compared to cash used in investing activities of $90.5 million in 2023. The cash provided by investing activities in 2024 related to $332.5 million of net proceeds of short-term investments and $28.3 million of cash provided by sales of property, plant and equipment; partially offset by $52.3 million of cash used for capital expenditures. The cash used in investing activities in 2023 related to $33.5 million of net purchases of short-term investments and $59.1 million of cash used for capital expenditures.

In 2024, we expect to invest approximately $120 million to $130 million in capital expenditures, net of asset divestitures. Capital expenditures include investments in property, facilities and equipment to replace capacity in Russia that we can no longer use to manufacture optical components and finished goods and upgrade or replace equipment at other facilities that is beyond its useful life. Capital expenditures also include investments to increase vertical integration, increase redundant manufacturing capacity for critical components and enhance research and development capabilities. The timing and extent of any capital expenditures in and between periods can have a significant effect on our cash flow. If we obtain financing for certain projects, our cash expenditures would be reduced in the year of expenditure. Many of the capital expenditure projects that we undertake have long lead times and are difficult to cancel or defer to a later period. We intend to finance our capital expenditures with existing cash, cash equivalents and short term investments as well as with cash generated from operations.

Financing activities. Net cash used in financing activities was $210.2 million for the six months ended June 30, 2024 as compared to net cash used of $129.8 million in 2023. The cash used in financing activities in 2024 primarily related to the purchase of treasury stock of $212.0 million. The cash used in financing activities in 2023 primarily related to the purchase of treasury stock of $113.0 million and principal payments on our long-term borrowings of $16.0 million.

Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and we intend that such forward-looking statements be subject to the safe harbors created thereby. For this purpose, any statements contained in this Quarterly Report on Form 10-Q except for historical information are forward-looking statements. Without limiting the generality of the foregoing, words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate," or "continue" or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. In addition, any statements that refer to projections of our future financial performance, trends in our businesses, or other characterizations of future events or circumstances are forward-looking statements.

The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to accurately predict and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Factors that may cause or contribute to such differences include, but are not limited to, those discussed in more detail in Item 1, "Business" and Item 1A, "Risk Factors" of Part I of the Form 10-K filed with the SEC for the year ended December 31, 2023 (the "Annual Report"). Readers should carefully review these risks, as well as the additional risks described in other documents we file from time to time with the Securities and Exchange Commission. In light of the significant risks and uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to rely on such forward-looking information. We undertake no obligation to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

Recent Accounting Pronouncements

See Note 2 in the Notes to Condensed Consolidated Financial Statements for a full description of recent accounting pronouncements, including the respective dates of adoption or expected adoption and effects on our condensed consolidated financial statements contained in Item 1 of this Quarterly Report.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk in the ordinary course of business, which consists primarily of interest rate risk associated with our cash and cash equivalents and foreign exchange rate risk.

Interest rate risk. Certain interest rates are variable and fluctuate with current market conditions. Our investments have limited exposure to market risk. We maintain a portfolio of cash, cash equivalents and short-term investments consisting primarily of bank deposits, money market funds, certificates of deposit, commercial paper, corporate bonds and U.S treasury and agency obligations. None of these investments have a maturity date in excess of one year. Because of the short-term nature of these instruments, a sudden change in market interest rates would not be expected to have a material impact on our financial condition or results of operations.

We are also exposed to market risk as a result of increases or decreases in the amount of interest expense we must pay on our borrowings on our bank credit facilities. Although our U.S. revolving line of credit have variable rates, we do not believe that a 10% change in market interest rates would have a material impact on our financial position or results of operations.

Exchange rates. Due to our international operations, a significant portion of our net sales, cost of sales and operating expenses are denominated in currencies other than the U.S. dollar, principally the euro, the Russian ruble, and the Chinese yuan. Changes in the exchange rate of the U.S. dollar versus the functional currencies of our subsidiaries affect the translated value and relative level of sales and net income that we report from one period to the next. In addition, our subsidiaries may have assets or liabilities denominated in a currency other than their functional currency which results in foreign exchange transaction gains and losses due to changes in the value of the functional currency versus the currency the assets and liabilities are denominated in. The loss on foreign exchange transactions totaled $3.2 million for the three months ended June 30, 2024 compared to a loss of $1.3 million for the three months ended June 30, 2023. Management attempts to minimize these exposures by partially or fully off-setting foreign currency denominated assets and liabilities at our subsidiaries that operate in different functional currencies. The effectiveness of this strategy can be limited by the volume of underlying transactions at various subsidiaries and by our ability to accelerate or delay inter-company cash settlements. As a result, we are unable to create a perfect offset of the foreign currency denominated assets and liabilities.

At June 30, 2024, our material foreign currency exposure is net U.S. dollar denominated assets at subsidiaries where the euro is the functional currency and U.S. dollar denominated liabilities where the Chinese yuan or the Russian ruble is the functional currency. The net U.S. dollar denominated assets are comprised of cash, third party receivables and inter-company receivables offset by third party and inter-company payables denominated in U.S. dollar. The U.S. dollar denominated liabilities are comprised of inter-company payables. A 5% change in the relative exchange rate of the U.S. dollar to the euro as of June 30, 2024 applied to the net U.S. dollar asset balances, would result in a foreign exchange gain of $1.5 million if the U.S. dollar appreciated and a $1.6 million foreign exchange loss if the U.S. dollar depreciated. A 5% change in the relative exchange rate of the U.S. dollar to the Russian ruble as of June 30, 2024 applied to the net U.S. dollar liability balances, would result in a foreign exchange loss of $0.1 million if the U.S. dollar appreciated and a $0.1 million foreign exchange gain if the U.S. dollar depreciated. A 5% change in the relative exchange rate of the U.S. dollar to the Chinese yuan as of June 30, 2024 applied to the net U.S. dollar liabilities balances, would result in a foreign exchange loss of $1.0 million if the U.S. dollar appreciated and a $1.1 million foreign exchange gain if the U.S. dollar depreciated. Volatility between the U.S. dollar and the currencies to which we are exposed may be increased by sanctions on the Russian government and changes in central bank policy, primarily, related to interest rates.

In addition, we are exposed to foreign currency translation risk for those subsidiaries whose functional currency is not the U.S. dollar as changes in the value of their functional currency relative to the U.S. dollar affect the translated amounts of our assets and liabilities. Changes in the translated value of assets and liabilities due to changes in functional currency exchange rates relative to the U.S. dollar result in foreign currency translation adjustments that are a component of other comprehensive income or loss on the condensed consolidated statements of comprehensive income.

Foreign currency derivative instruments can also be used to hedge exposures and reduce the risks of certain foreign currency transactions; however, these instruments provide only limited protection and can carry significant cost. We have no foreign currency derivative instruments as of June 30, 2024. We will continue to analyze our exposure to currency exchange rate fluctuations and may engage in financial hedging techniques in the future to attempt to minimize the effect of these potential fluctuations. Exchange rate fluctuations may adversely affect our financial results in the future.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision of our chief executive officer and our chief financial officer, our management has evaluated the effectiveness of the design and operation of our "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), as of the end of the period covered by this Quarterly Report on Form 10-Q (the "Evaluation Date"). Based upon that evaluation, our chief executive officer and our chief financial officer have concluded that, as of the Evaluation Date, our disclosure controls and procedures are effective.

Changes in Internal Controls

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act) that occurred during the quarter ended June 30, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Information with respect to this item may be found in Note 10, "Commitments and Contingencies" in the Notes to Condensed Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report and is incorporated herein by reference.

ITEM 1A. RISK FACTORS

In addition to the other information in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2023, which could materially and adversely affect our financial condition, results of operations or cash flows, or cause our actual results to differ materially from those projected in any forward-looking statements. We may also face other risks and uncertainties that are not presently known, are not currently believed to be material, or are not identified in our Annual Report or Quarterly Reports because they are common to all businesses.

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

Recent Sales of Unregistered Securities; Use of Proceeds from Registered Securities

There have been no sales of unregistered securities for the three months ended June 30, 2024.

Issuer Purchases of Equity Securities

The following table reflects issuer purchases of equity securities for the three months ended June 30, 2024:

	Total Number of Shares (or Units) Purchased		Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
April 1, 2024 — April 30, 2024	408,561	(2)	$ 86.77	408,561	$ 264,548
May 1, 2024 — May 31, 2024	532,915	(2)	87.46	530,925	219,809
June 1, 2024 — June 30, 2024	464,763	(2)	84.61	464,763	180,484
Total	1,406,239		$ 86.32	1,404,249	$ 180,484

(1) Share repurchases relating to "withhold to cover" tax liabilities upon vesting of restricted stock awards are excluded from our share repurchase program. For the three months ended June 30, 2024, a total of 1,990 shares were withheld at an average price of $88.80.

(2) On May 2, 2023, we announced that our Board of Directors authorized the purchase of up to $200 million of IPG common stock (the "May 2023 authorization"), exclusive of any fees, commissions or other expenses. On February 13, 2024, we announced that our Board of Directors authorized the purchase of up to $300 million of IPG common stock (the "February 2024 authorization"), exclusive of any fees, commissions or other expenses. Share repurchases under these purchase authorization were made periodically in open-market transactions using our working capital, and were subject to market conditions, legal requirements and other factors. The share purchase program authorizations did not obligate us to repurchase any dollar amount or number of our shares, and repurchases could be commenced or suspended from time to time without prior notice.

We repurchased 1,404,249 shares in the second quarter of 2024 under the May 2023 authorization and February 2024 authorization. As of June 30, 2024, we completed all the repurchases under the May 2023 authorization.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

During the Registrant's last fiscal quarter, the following director of the Registrant adopted a Rule 10b5-1 trading arrangement plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) (the "Rule 10b5-1 trading arrangement"):

- on May 3, 2024, Mr. Eric Meurice, Director, adopted a Rule 10b5-1 trading arrangement for the sale of up to 2,255 shares, including shares acquired upon exercise of stock options, over a period beginning August 2, 2024 and ending June 1, 2025 on the open market at prevailing prices, subject to minimum price thresholds.

Other than those disclosed above, none of our directors or officers adopted, modified, or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," in each case as defined in Item 408 of Regulation S-K.

ITEM 6. EXHIBITS

(a) Exhibits

Exhibit No.	Description
10.1	Employment Agreement dated April 25, 2024 between the Registrant and Dr. Mark Gitin (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Commission on April 30, 2024)
10.2	Transition Agreement dated April 25, 2024 between the Registrant, IPG Laser GmbH & Co. KG and Dr. Eugene Scherbakov (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Commission on April 30, 2024)
10.3	Advisor Agreement dated April 25, 2024 between the Registrant and Dr. Eugene Scherbakov (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the Commission on April 30, 2024)
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)
32	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 1350
101.INS	Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

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.

IPG PHOTONICS CORPORATION

Date: July 30, 2024

By: /s/ Mark M. Gitin

Mark M. Gitin
Chief Executive Officer
(Principal Executive Officer)

Date: July 30, 2024

By: /s/ Timothy P.V. Mammen

Timothy P.V. Mammen
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)