

**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, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to .
Commission File Number 001-33155



IPG PHOTONICS CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

04-3444218

*(I.R.S. Employer
Identification Number)*

377 Simarano Drive, Marlborough, Massachusetts

(Address of principal executive offices)

01752

(Zip code)

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

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

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
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 31, 2023, there were 47,367,033 shares of the registrant's common stock outstanding.

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PART I—FINANCIAL INFORMATION
ITEM 1. UNAUDITED INTERIM FINANCIAL STATEMENTS

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS

	June 30, 2023	December 31, 2022
	(In thousands, except share and per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 573,071	\$ 698,209
Short-term investments	523,341	479,374
Accounts receivable, net	231,125	211,347
Inventories	491,301	509,363
Prepaid income taxes	50,748	40,934
Prepaid expenses and other current assets	54,482	47,047
Total current assets	1,924,068	1,986,274
Deferred income taxes, net	69,644	75,152
Goodwill	38,494	38,325
Intangible assets, net	30,086	34,120
Property, plant and equipment, net	609,344	580,561
Other assets	24,781	28,848
Total assets	\$ 2,696,417	\$ 2,743,280
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ —	\$ 16,031
Accounts payable	37,418	46,233
Accrued expenses and other current liabilities	184,156	202,764
Income taxes payable	6,613	9,618
Total current liabilities	228,187	274,646
Other long-term liabilities and deferred income taxes	69,680	83,274
Total liabilities	297,867	357,920
Commitments and contingencies (Note 11)		
IPG Photonics Corporation equity:		
Common stock, \$0.0001 par value, 175,000,000 shares authorized; 56,242,504 and 47,364,320 shares issued and outstanding, respectively, at June 30, 2023; 56,017,672 and 48,138,257 shares issued and outstanding, respectively, at December 31, 2022.	6	6
Treasury stock, at cost, 8,878,184 and 7,879,415 shares held at June 30, 2023 and December 31, 2022, respectively.	(1,051,040)	(938,009)
Additional paid-in capital	969,889	951,371
Retained earnings	2,698,972	2,576,516
Accumulated other comprehensive loss	(219,277)	(204,524)
Total equity	2,398,550	2,385,360
Total liabilities and equity	\$ 2,696,417	\$ 2,743,280

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,	
	2023	2022	2023	2022
(In thousands, except per share data)				
Net sales	\$ 339,971	\$ 377,023	\$ 687,145	\$ 747,002
Cost of sales	192,280	204,679	392,516	402,837
Gross profit	147,691	172,344	294,629	344,165
Operating expenses:				
Sales and marketing	20,187	19,010	41,275	39,384
Research and development	23,512	30,608	46,282	64,058
General and administrative	29,660	33,411	59,788	64,075
Other restructuring charges	963	—	1,144	—
Loss (gain) on foreign exchange	1,306	17,640	(1,349)	11,830
Total operating expenses	75,628	100,669	147,140	179,347
Operating income	72,063	71,675	147,489	164,818
Other income, net:				
Interest income, net	9,264	1,177	16,797	1,107
Other income, net	285	618	616	382
Total other income	9,549	1,795	17,413	1,489
Income before provision for income taxes	81,612	73,470	164,902	166,307
Provision for income taxes	19,291	16,139	42,446	39,348
Net income	62,321	57,331	122,456	126,959
Less: net income attributable to non-controlling interests	—	363	—	419
Net income attributable to IPG Photonics Corporation common stockholders	\$ 62,321	\$ 56,968	\$ 122,456	\$ 126,540
Net income attributable to IPG Photonics Corporation per common share:				
Basic	\$ 1.32	\$ 1.10	\$ 2.58	\$ 2.42
Diluted	\$ 1.31	\$ 1.10	\$ 2.57	\$ 2.41
Weighted average common shares outstanding:				
Basic	47,316	51,687	47,429	52,111
Diluted	47,453	51,795	47,618	52,311

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,	
	2023	2022	2023	2022
	(In thousands)			
Net income	\$ 62,321	\$ 57,331	\$ 122,456	\$ 126,959
Other comprehensive (loss) income, net of tax:				
Foreign currency translation adjustments and other	(15,082)	94,244	(14,601)	54,918
Unrealized (loss) gain on derivatives	(63)	119	(152)	332
Total other comprehensive (loss) income	(15,145)	94,363	(14,753)	55,250
Comprehensive income	47,176	151,694	107,703	182,209
Less: comprehensive income attributable to non-controlling interests	—	135	—	496
Comprehensive income attributable to IPG Photonics Corporation	\$ 47,176	\$ 151,559	\$ 107,703	\$ 181,713

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	Six Months Ended June 30,	
	2023	2022
	(In thousands)	
Cash flows from operating activities:		
Net income	\$ 122,456	\$ 126,959
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	35,343	47,104
Deferred income taxes	5,065	(11,204)
Stock-based compensation	19,249	20,439
Unrealized (gain) loss on foreign currency transactions	(1,816)	12,584
Provisions for inventory, warranty and bad debt	31,846	38,644
Other	(8,883)	3,760
Changes in assets and liabilities that (used) provided cash, net of acquisitions:		
Accounts receivable	(23,876)	1,560
Inventories	(12,103)	(99,233)
Prepaid expenses and other assets	(15,480)	4,922
Accounts payable	(7,472)	3,131
Accrued expenses and other liabilities	(27,736)	(35,842)
Income and other taxes payable	(12,647)	(17,663)
Net cash provided by operating activities	<u>103,946</u>	<u>95,161</u>
Cash flows from investing activities:		
Purchases of and deposits on property, plant and equipment	(59,139)	(59,903)
Proceeds from sales of property, plant and equipment	1,740	645
Purchases of short-term investments	(583,347)	(583,828)
Proceeds from short-term investments	549,879	925,657
Acquisitions of businesses, net of cash acquired	—	(2,000)
Other	326	(350)
Net cash (used in) provided by investing activities	<u>(90,541)</u>	<u>280,221</u>
Cash flows from financing activities:		
Principal payments on long-term borrowings	(16,031)	(1,932)
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	(731)	2,088
Purchase of treasury stock, at cost	(113,031)	(311,606)
Net cash used in financing activities	<u>(129,793)</u>	<u>(311,450)</u>
Effect of changes in exchange rates on cash and cash equivalents	(8,750)	(1,249)
Net (decrease) increase in cash and cash equivalents	(125,138)	62,683
Cash and cash equivalents — Beginning of period	698,209	709,105
Cash and cash equivalents — End of period	<u>\$ 573,071</u>	<u>\$ 771,788</u>
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 947	\$ 1,600
Cash paid for income taxes	\$ 58,178	\$ 61,715
Non-cash transactions:		
Demonstration units transferred from inventory to other assets	\$ 2,737	\$ 2,204
Inventory transferred to machinery and equipment	\$ 1,731	\$ 1,764
Changes in accounts payable related to property, plant and equipment	\$ 1,189	\$ 92
Leased assets obtained in exchange for new operating lease liabilities	\$ 788	\$ 5,697

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		Treasury Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Non- controlling Interest	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
Balance, April 1, 2023	47,305,551	\$ 6	(8,878,184)	\$ (1,051,103)	\$ 957,103	\$ 2,636,651	\$ (204,132)	\$ —	\$ 2,338,525
Exercise of stock options and vesting of RSUs and PSUs, net of shares withheld for taxes	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
Balance, April 1, 2022	52,542,466	\$ 6	(3,379,096)	\$ (517,260)	\$ 917,693	\$ 2,536,179	\$ (229,369)	\$ 1,000	\$ 2,708,249
Exercise of stock options and vesting of RSUs and PSUs, net of shares withheld for taxes	16,515	—	—	—	478	—	—	—	478
Common stock issued under employee stock purchase plan	29,177	—	—	—	2,334	—	—	—	2,334
Purchased common stock	(2,381,903)	—	(2,381,903)	(232,849)	—	—	—	—	(232,849)
Stock-based compensation	—	—	—	—	10,445	—	—	—	10,445
Net income	—	—	—	—	—	56,968	—	363	57,331
Foreign currency translation adjustments and other	—	—	—	—	—	—	94,472	(228)	94,244
Unrealized gain on derivatives, net of tax	—	—	—	—	—	—	119	—	119
Balance, June 30, 2022	50,206,255	\$ 6	(5,760,999)	\$ (750,109)	\$ 930,950	\$ 2,593,147	\$ (134,778)	\$ 1,135	\$ 2,640,351

Six Months Ended June 30,

(In thousands, except share data)	Common Stock		Treasury Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Non- controlling Interest	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
Balance, January 1, 2023	48,138,257	\$ 6	(7,879,415)	\$ (938,009)	\$ 951,371	\$ 2,576,516	\$ (204,524)	\$ —	\$ 2,385,360
Exercise of stock options and vesting of RSUs and PSUs, net of shares withheld for taxes	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
Balance, January 1, 2022	53,010,265	\$ 6	(2,777,981)	\$ (438,503)	\$ 908,423	\$ 2,466,607	\$ (189,951)	\$ 639	\$ 2,747,221
Exercise of stock options and vesting of RSUs and PSUs, net of shares withheld for taxes	149,831	—	—	—	(246)	—	—	—	(246)
Common stock issued under employee stock purchase plan	29,177	—	—	—	2,334	—	—	—	2,334
Purchased common stock	(2,983,018)	—	(2,983,018)	(311,606)	—	—	—	—	(311,606)
Stock-based compensation	—	—	—	—	20,439	—	—	—	20,439
Net income	—	—	—	—	—	126,540	—	419	126,959
Foreign currency translation adjustments and other	—	—	—	—	—	—	54,841	77	54,918
Unrealized gain on derivatives, net of tax	—	—	—	—	—	—	332	—	332
Balance, June 30, 2022	50,206,255	\$ 6	(5,760,999)	\$ (750,109)	\$ 930,950	\$ 2,593,147	\$ (134,778)	\$ 1,135	\$ 2,640,351

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, 2022.

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 Doubtful Accounts — 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,	
	2023	2022	2023	2022
Balance, beginning of period	\$ 2,363	\$ 1,937	\$ 2,639	\$ 2,108
Provision for bad debts, net of (recoveries)	58	(15)	(151)	(161)
Uncollectable accounts written off	(191)	(78)	(241)	(79)
Foreign currency translation	(61)	28	(78)	4
Balance, end of period	<u>\$ 2,169</u>	<u>\$ 1,872</u>	<u>\$ 2,169</u>	<u>\$ 1,872</u>

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 adjustment and unrealized gains or losses on derivatives. These adjustments are accumulated within the condensed consolidated statements of comprehensive income.

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

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, 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)
Balance, April 1, 2022	\$ (229,398)	\$ 29	\$ (229,369)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments and other, net of tax expense of \$98	94,472	—	94,472
Unrealized gain on derivatives, net of tax expense of \$37	—	119	119
Total other comprehensive income (loss)	94,472	119	94,591
Balance, June 30, 2022	\$ (134,926)	\$ 148	\$ (134,778)
	Foreign currency translation adjustments and other	Unrealized gain (loss) on derivatives, net of tax	Total
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)
Balance, January 1, 2022	\$ (189,767)	\$ (184)	\$ (189,951)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments and other, net of tax expense of \$142	54,841	—	54,841
Unrealized gain on derivatives, net of tax expense of \$103	—	332	332
Total other comprehensive income (loss)	54,841	332	55,173
Balance, June 30, 2022	\$ (134,926)	\$ 148	\$ (134,778)

2. 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.

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
<u>Sales by Application</u>				
Materials processing	\$ 314,184	\$ 343,357	\$ 627,153	\$ 682,320
Other applications	25,787	33,666	59,992	64,682
Total	<u>\$ 339,971</u>	<u>\$ 377,023</u>	<u>\$ 687,145</u>	<u>\$ 747,002</u>

<u>Sales by Product</u>				
High Power Continuous Wave ("CW") Lasers	\$ 145,992	\$ 162,997	\$ 300,026	\$ 330,688
Medium Power CW Lasers	22,370	18,923	36,209	42,591
Pulsed Lasers	53,002	69,852	109,149	136,784
Quasi-Continuous Wave ("QCW") Lasers	13,840	14,079	25,122	26,859
Laser and Non-Laser Systems	38,187	38,443	79,571	73,040
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue	66,580	72,729	137,068	137,040
Total	<u>\$ 339,971</u>	<u>\$ 377,023</u>	<u>\$ 687,145</u>	<u>\$ 747,002</u>

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
<u>Sales by Geography</u>				
North America	\$ 78,220	\$ 88,151	\$ 154,300	\$ 165,376
Europe:				
Germany	28,962	22,792	48,795	50,209
Other Europe	72,865	75,407	153,285	155,407
Asia:				
China	98,567	137,380	199,854	267,128
Japan	16,749	14,741	38,367	27,627
Other	38,062	33,695	81,716	72,370
Rest of World	6,546	4,857	10,828	8,885
Total	<u>\$ 339,971</u>	<u>\$ 377,023</u>	<u>\$ 687,145</u>	<u>\$ 747,002</u>

<u>Timing of Revenue Recognition</u>				
Goods and services transferred at a point in time	\$ 329,571	\$ 363,255	\$ 662,696	\$ 718,670
Goods and services transferred over time	10,400	13,768	24,449	28,332
Total	<u>\$ 339,971</u>	<u>\$ 377,023</u>	<u>\$ 687,145</u>	<u>\$ 747,002</u>

One of the Company's customers accounted for 15% and 14% of the Company's net accounts receivable as of June 30, 2023 and December 31, 2022, 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

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

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, 2023 and 2022:

	June 30, 2023	January 1, 2023	Change	June 30, 2022	January 1, 2022	Change
Contract assets						
Contract assets	\$ 17,460	\$ 8,620	\$ 8,840	\$ 10,896	\$ 9,345	\$ 1,551
Contract liabilities						
Contract liabilities - current	75,785	80,068	(4,283)	87,155	89,659	(2,504)
Contract liabilities - long-term	3,054	3,142	(88)	2,728	2,691	37

During the three months ended June 30, 2023 and 2022 the Company recognized revenue of \$14,431 and \$13,507, respectively, that was included in contract liabilities at the beginning of each period. During the six months ended June 30, 2023 and 2022 the Company recognized revenue of \$43,443 and \$34,531 respectively, that was included in contract liabilities at the beginning of each period.

The following table represents the Company's remaining performance obligations from contracts that are recognized over time as of June 30, 2023:

	Remaining Performance Obligations						
	2023 ^(a)	2024	2025	2026	2027	Thereafter	Total
Revenue expected to be recognized for extended warranty agreements	\$ 2,149	\$ 1,936	\$ 1,055	\$ 800	\$ 417	\$ 62	\$ 6,419
Revenue to be earned over time from contracts to sell large scale materials processing systems	10,333	11,884	—	—	—	—	22,217
Total	<u>\$ 12,482</u>	<u>\$ 13,820</u>	<u>\$ 1,055</u>	<u>\$ 800</u>	<u>\$ 417</u>	<u>\$ 62</u>	<u>\$ 28,636</u>

^(a) For the six-month period beginning July 1, 2023.

3. FAIR VALUE MEASUREMENTS

The Company's financial instruments consist of cash equivalents, short-term investments, accounts receivable, accounts payable, drawings on revolving lines of credit, long-term debt and interest rate swaps.

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, 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.

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

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 with the exception of the interest rate swap, which was measured at fair value:

		Fair Value Measurements at June 30, 2023			
		Total	Level 1	Level 2	Level 3
Assets					
Cash equivalents:					
Money market fund deposits	\$	150,417	\$ 150,417	\$ —	\$ —
Commercial paper		93,559	—	93,559	—
Term deposits		40,326	—	40,326	—
U.S. Treasury and agency obligations		11,910	—	11,910	—
Corporate bonds		1,496	—	1,496	—
Short-term investments:					
Commercial paper		373,265	—	373,265	—
U.S. Treasury and agency obligations		82,803	—	82,803	—
Corporate bonds		63,631	—	63,631	—
Term deposits		3,009	—	3,009	—
Total assets	\$	820,416	\$ 150,417	\$ 669,999	\$ —
		Fair Value Measurements at December 31, 2022			
		Total	Level 1	Level 2	Level 3
Assets					
Cash equivalents:					
Money market fund deposits	\$	195,654	\$ 195,654	\$ —	\$ —
Commercial paper		94,661	—	94,661	—
Term deposits		68,827	—	68,827	—
Corporate bonds		1,497	—	1,497	—
Short-term investments:					
Commercial paper		363,991	—	363,991	—
Corporate bonds		65,022	—	65,022	—
U.S. Treasury and agency obligations		39,611	—	39,611	—
Term deposits		10,113	—	10,113	—
Other assets:					
Interest rate swaps		198	—	198	—
Total assets	\$	839,574	\$ 195,654	\$ 643,920	\$ —
Liabilities					
Term debt	\$	16,031	\$ —	\$ 16,031	\$ —
Total liabilities	\$	16,031	\$ —	\$ 16,031	\$ —

Short-term investments consist of liquid investments with original maturities of greater than three months but less than one year and are recorded at amortized cost. There were no impairments for the investments considered held-to-maturity during the quarters ended June 30, 2023 and 2022. There were no current expected credit loss allowances for the investments considered held-to-maturity at June 30, 2023 and 2022. The Company holds highly-rated held-to-maturity instruments that are within one year of maturity.

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

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

	June 30, 2023		December 31, 2022	
	Book Value	Fair Value	Book Value	Fair Value
Investment maturity				
Less than 1 year	\$ 523,341	\$ 522,708	\$ 479,374	\$ 478,737

The Company entered into an interest rate swap that was designated as a cash flow hedge associated with a long-term note issued during the second quarter of 2016. The Company terminated the interest rate swap as the long-term note matured in May 2023. The fair value at December 31, 2022 for the interest rate swap considered pricing models whose inputs are observable for the securities held by the Company.

In May 2023, the Company's long-term variable rate note matured. At December 31, 2022, the carrying value of the note approximates the estimated fair value of \$16,031. The long-term note was reported at amortized cost on the condensed consolidated balance sheets and was classified within Level 2 of the fair value hierarchy.

4. INVENTORIES

Inventories consist of the following:

	June 30, 2023	December 31, 2022
Components and raw materials	\$ 295,166	\$ 322,506
Work-in-process	58,546	18,911
Finished goods	137,589	167,946
Total	\$ 491,301	\$ 509,363

The Company recorded inventory provisions totaling \$11,218 and \$14,700 for the three months ended June 30, 2023 and 2022, respectively, and \$23,314 and \$25,480 for the six months ended June 30, 2023 and 2022. 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.

5. RESTRUCTURING

In the fourth quarter of 2022, the Company implemented a restructuring program at its Russian subsidiary. The program resulted in personnel-related restructuring charges of \$963 and \$1,144 for the three and six months ended June 30, 2023, respectively. All personnel-related restructuring charges are expected to be paid within 6 months. There was no restructuring related activity for the three or six months ended June 30, 2022.

The restructuring accrual was included in accrued expenses and other current liabilities in the Company's condensed consolidated balance sheets. Activity related to the restructuring accrual was as follows:

	Six Months Ended June 30, 2023
Balance, beginning of period	\$ 4,869
Charges	1,144
Cash payments	(3,384)
Foreign exchange adjustment	(669)
Balance, end of period	\$ 1,960

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

6. GOODWILL AND INTANGIBLES

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

	Six Months Ended June 30,	
	2023	2022
Balance, beginning of period	\$ 38,325	\$ 38,609
Goodwill arising from business combinations	—	1,000
Foreign exchange adjustment	169	(324)
Balance, end of period	<u>\$ 38,494</u>	<u>\$ 39,285</u>

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

	June 30, 2023				December 31, 2022			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Lives	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Lives
Customer relationships	\$ 48,189	\$ (23,873)	\$ 24,316	11 years	\$ 48,155	\$ (21,734)	\$ 26,421	11 years
Technology, trademark and trade name	30,039	(24,549)	5,490	7 years	30,360	(23,189)	7,171	7 years
Production know-how	9,134	(8,996)	138	7 years	9,109	(8,818)	291	7 years
Patents	8,034	(7,892)	142	8 years	8,034	(7,797)	237	8 years
Total	<u>\$ 95,396</u>	<u>\$ (65,310)</u>	<u>\$ 30,086</u>		<u>\$ 95,658</u>	<u>\$ (61,538)</u>	<u>\$ 34,120</u>	

Amortization expense for the three months ended June 30, 2023 and 2022 was \$2,021 and \$2,909, respectively. Amortization expense for the six months ended June 30, 2023 and 2022 was \$4,042 and \$5,930, respectively. The estimated future amortization expense for intangibles for the remainder of 2023 and subsequent years is as follows:

2023 ^(a)	2024	2025	2026	2027	Thereafter	Total
\$ 3,855	\$ 5,556	\$ 4,977	\$ 4,217	\$ 4,004	\$ 7,477	\$ 30,086

^(a) For the six-month period beginning July 1, 2023.

7. OTHER LIABILITIES

Accrued expenses and other current liabilities consist of the following:

	June 30, 2023	December 31, 2022
Contract liabilities	\$ 75,785	\$ 80,068
Accrued compensation	64,369	78,251
Current portion of accrued warranty	28,428	28,504
Short-term lease liabilities	4,309	5,234
Other	11,265	10,707
Total	<u>\$ 184,156</u>	<u>\$ 202,764</u>

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

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

	June 30, 2023	December 31, 2022
Accrued warranty	\$ 23,206	\$ 24,358
Transition tax related to 2017 U.S. tax reform act	11,010	19,874
Long-term lease liabilities	13,836	16,787
Unrealized tax benefits	15,036	15,841
Deferred income taxes	1,477	1,469
Other	5,115	4,945
Total	<u>\$ 69,680</u>	<u>\$ 83,274</u>

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, 2023	2022
Balance, beginning of period	\$ 52,862	\$ 49,864
Provision for warranty accrual	7,089	12,179
Warranty claims	(8,533)	(8,971)
Foreign currency translation	216	(1,822)
Balance, end of period	<u>\$ 51,634</u>	<u>\$ 51,250</u>

Accrued warranty reported in the accompanying condensed consolidated financial statements as of June 30, 2023 and December 31, 2022 consist of \$28,428 and \$28,504 in accrued expenses and other current liabilities, respectively, and \$23,206 and \$24,358 in other long-term liabilities and deferred income taxes, respectively.

9. FINANCING ARRANGEMENTS

Term Debt:

The Company's unsecured long-term note matured and was paid in May 2023, at which time the outstanding principal balance was \$15,438. At June 30, 2023, the Company has no long-term note outstanding.

Revolving Line of Credit Facilities:

The Company maintains a \$75,000 U.S. revolving line of credit and a €50,000 (\$54,422) line-of-credit in Germany, both of which are available to certain foreign subsidiaries and allow for borrowings in the local currencies of those subsidiaries. The German line-of-credit expired on July 31, 2023. The Company also maintains a €1,500 (\$1,633) Italian overdraft facility. At June 30, 2023 and December 31, 2022, there were no amounts drawn on the U.S. line-of-credit, and there were \$2,512 and \$2,396, respectively, of guarantees issued against the facility, which reduce the amount of the facility available to draw. At June 30, 2023 and December 31, 2022, there were no amounts drawn on the euro line-of-credit, and there were \$2,014 and \$1,737, respectively, of guarantees issued against those facilities, which reduce the amount available to draw. At June 30, 2023 and December 31, 2022, there were no amounts drawn on the euro overdraft facility. After providing for the guarantees used, the total unused lines-of-credit and overdraft facilities are \$126,529 at June 30, 2023.

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

10. DERIVATIVE FINANCIAL INSTRUMENTS

The Company's previous outstanding derivative financial instrument was an interest rate swap that was classified as a cash flow hedge of its variable rate debt. The interest rate swap matured with the long-term note in May 2023.

The derivative gains and losses in the condensed consolidated financial statements related to the Company's previous interest rate swap contract were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Effective portion recognized in other comprehensive income, pretax:				
Interest rate swap	\$ (83)	\$ 156	\$ (198)	\$ 435

11. 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, 2023 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 Consolidated Financial Statements.

The Company has submitted a limited number of voluntary self-disclosures regarding compliance with export control laws and regulations to the Bureau of Industry and Security of the U.S. Department of Commerce. In October 2021, the U.S. Department of Justice ("DOJ") advised the Company it was conducting an investigation into certain shipments of equipment. The Company believes the DOJ's investigation has concluded; however, other agencies of the Federal government continue an investigation regarding our export practices. At this time, the Company is not able to conclude whether it is probable that the Federal government will assert a claim or assessment against the Company, nor can the Company estimate expenses that the Company may incur as a result of the investigation.

12. INCOME TAXES

The effective tax rates were 23.6% and 22.0% for the three months ended June 30, 2023 and 2022, respectively, and 25.7% and 23.7% for the six months ended June 30, 2023 and 2022 respectively. There were net discrete tax benefits of \$1,751 for the three months ended June 30, 2023 and \$2,909 for the three months ended June 30, 2022. There was a net discrete tax detriment of \$221 and a net discrete tax benefit of \$3,162 for the six months ended June 30, 2023 and 2022, respectively. In 2023, the detriment related to the tax impact from tax deductions for stock-based compensation that was 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. The 2022 discrete items include a reduction in taxes as a result of filing amended returns to obtain foreign tax incentives for capital investments in prior years and to changes in tax position agreed to with tax authorities for prior year audits which were partly offset by the impact from tax deductions for equity-based compensation that were less than the compensation expense recognized for books.

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, 2023 and 2022:

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

	Six Months Ended June 30,	
	2023	2022
Balance, beginning of period	\$ 15,841	\$ 19,209
Change in prior period positions	(1,273)	(603)
Additions for tax positions in current period	950	500
Foreign currency translation	(482)	1,876
Balance, end of period	<u>\$ 15,036</u>	<u>\$ 20,982</u>

The liability for uncertain tax benefits is included in other long-term liabilities and deferred income taxes at June 30, 2023 and December 31, 2022. 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 recognized.

13. 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,	
	2023	2022	2023	2022
Net income attributable to IPG Photonics Corporation common stockholders	\$ 62,321	\$ 56,968	\$ 122,456	\$ 126,540
Basic weighted average common shares	47,316,342	51,687,494	47,428,639	52,111,167
Dilutive effect of common stock equivalents	136,918	107,454	189,523	199,374
Diluted weighted average common shares	47,453,260	51,794,948	47,618,162	52,310,541
Basic net income attributable to IPG Photonics Corporation per common share	<u>\$ 1.32</u>	<u>\$ 1.10</u>	<u>\$ 2.58</u>	<u>\$ 2.42</u>
Diluted net income attributable to IPG Photonics Corporation per common share	<u>\$ 1.31</u>	<u>\$ 1.10</u>	<u>\$ 2.57</u>	<u>\$ 2.41</u>

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, 2023 and 2022 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Non-qualified stock options	538,442	609,132	540,912	611,034
Restricted stock units	420,750	429,455	397,861	367,900
Performance stock units	64,590	95,562	47,818	76,697
Total weighed average anti-dilutive shares outstanding	<u>1,023,782</u>	<u>1,134,149</u>	<u>986,591</u>	<u>1,055,631</u>

On May 2, 2023, the Company announced that its Board of Directors has authorized the purchase of up to \$200,000 of IPG common stock.

For the three months ended June 30, 2023, the Company has no repurchase under the May 2023 authorization. For the six months ended June 30, 2023, the Company repurchased 998,769 shares of common stock under a \$300,000 purchase plan approved by the Board of Directors in August 2022 at a weighted average price of \$112.29 per share in the open market. The impact on the reduction of weighted average shares for the six months ended June 30, 2023 was 831,221 shares.

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 and advanced applications. 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 Italy and Poland 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.

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 conflict and the risk of additional sanctions has also increased the levels of uncertainty and risks facing the Company due to our manufacturing operations in Belarus. 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. In 2022, we began hiring and training additional employees, expanding capacity for increased production, and running additional shifts in the U.S. and Germany and adding additional manufacturing capacity in Italy and Poland.

In October 2022, the European Union introduced new sanctions that restrict our ability to ship and receive components from our factory in Russia to the E.U. beginning in January 2023. We believe the contingency measures outlined above that we have already put in place mitigate substantially all the effects of the recent sanctions on our ability to supply finished products to customers. 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 II of Form 10-K for the year ended December 31, 2022.

Sales to third-parties in Russia were approximately 3% of our revenue for both the first half of 2023 and the full year ended December 31, 2022. 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 \$9 million for the six months ended June 30, 2023 and \$62 million for the full year ended December 31, 2022.

Given the sanctions introduced by the European Union in October 2022, which imposed further restrictions on our Russian operations, 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. Refer to Note 5 "Restructuring" in the notes to the condensed consolidated financial statements for further information. At June 30, 2023, we had working capital excluding cash and cash equivalents of \$22.0 million in Russia of which \$19.2 million is inventory. We had \$63.4 million of cash and cash equivalents in Russia. The net asset value of our long lived assets was \$2.7 million. In addition to the impairment charges referenced above, the net value of assets in Russia has been reduced by \$136.9 million due to the cumulative translation effect of the Russian ruble compared to the U.S. dollar, which is included in the accumulated comprehensive loss component of stockholders' equity. Depending upon the outcome of our review of our Russian operations, the cumulative translation effect of foreign exchange fluctuations that is currently included in accumulated comprehensive loss on 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. Trade sanctions to date have not significantly affected our ability to supply these items from Belarus to other manufacturing locations. The value of the long lived assets in Belarus was \$34.3 million at June 30, 2023, and we had working capital excluding cash of \$5.2 million in Belarus of which \$4.9 million is inventory. In addition, we had \$5.7 million of cash in Belarus.

COVID-19. Global demand trends have been impacted by the ongoing COVID-19 pandemic. While business conditions generally improved from the severe contraction experienced in 2020, it is difficult to predict whether conditions could change if there are additional restrictions imposed as a result of a resurgence in COVID-19 infections. To date, we have been able to accommodate these changes to our business operations and continue to meet customer demand. If guidelines or mandates from relevant authorities becomes more restrictive due to a resurgence of COVID-19 in a particular region, the effect on our operations could be more significant.

Supply Chain. We and our customers are experiencing increased lead times and costs for certain components purchased from third party suppliers; particularly electronic components. We, our customers and our suppliers continue to face constraints related to supply chain and logistics, including availability of capacity, materials, air cargo space, sea containers and higher freight rates. While supply chain and logistics constraints have moderated, they have not yet fully returned to pre-pandemic conditions. Supply chain constraints have not significantly affected our business but they have moderately increased our freight costs, caused us to carry higher levels of safety stock for certain inventory items, and increased the cost of certain electronic components.

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 91% and 90% of our revenues for the first half of 2023 and the full 2022 fiscal year, respectively, 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, some global central banks are adopting less accommodative monetary policy and have or expect to increase benchmark interest rates. An increase in interest rates could impact global demand and/or could lead to a recession that may reduce the demand for our products. In addition, an increase in interest rates would increase the cost of equipment financed with leases or debt.

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, macroeconomic concerns and the impact of the COVID-19 outbreak that affect the level of capital expenditures or global commerce. With respect to the COVID-19 outbreak specifically, the possible affect over the longer term remains uncertain and dependent on future developments that cannot be accurately predicted at this time, such as the severity and transmission rate of COVID-19 or new variants, the extent and effectiveness of containment actions taken, the approval, effectiveness, timing and widespread vaccination of the global population, and the impact of these and other factors on our customer base and general commercial activity.

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 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 affect other capital equipment manufacturers broadly and the machine tool and industrial laser industries more specifically.

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 laser, 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; and finally,
- Changes in relative exchange rates between currencies we receive when selling our products and currencies we use to pay our manufacturing expenses.

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 \$11.2 million and \$14.7 million for the three months ended June 30, 2023 and 2022, respectively, and \$23.3 million and \$25.5 million for the six months ended June 30, 2023 and 2022, 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, divestitures and litigation.

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 are evaluating certain U.S.-based assets for sale, including land and buildings. If the estimated sales value of any of these assets is below carrying value, then we may need to record an asset impairment charge when they are classified as held-for-sale. We have long-lived assets in Belarus with a carrying value of \$34.3 million. If sanctions increase or if the geopolitical situation changes such that we can no longer use Belarus as a source of supply for our laser cabinets and other mechanical components, we may need to evaluate those assets for impairment, which may result in impairment charges.

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, and the Chinese yuan have had and could have an additional significant impact on our sales, costs and earnings. For the quarter ended June 30, 2023, the foreign exchange loss primarily created by depreciation of the Chinese yuan was partially offset by a foreign exchange gain created by the depreciation of the Russian ruble as compared to the U.S. dollar. Our European and Russian subsidiaries have certain net assets denominated in U.S. dollars, and our Chinese subsidiary has 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.

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 17% for the six months ended June 30, 2023 and 15%, and 19% for the full years 2022 and 2021, respectively. One of our customers accounted for 15% and 14% of our net accounts receivable at June 30, 2023 and December 31, 2022, 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, 2023 Compared to the Three Months Ended June 30, 2022

Net sales. Net sales decreased by \$37.0 million, or 9.8%, to \$340.0 million for the three months ended June 30, 2023 from \$377.0 million for the three months ended June 30, 2022.

The table below sets forth sales by application:

	Three Months Ended June 30,				Change	
	2023		2022			
	(In thousands, except for percentages)					
<u>Sales by Application</u>	% of Total		% of Total			
Materials processing	\$ 314,184	92.4 %	\$ 343,357	91.1 %	\$ (29,173)	(8.5)%
Other applications	25,787	7.6 %	33,666	8.9 %	(7,879)	(23.4)%
Total	\$ 339,971	100.0 %	\$ 377,023	100.0 %	\$ (37,052)	(9.8)%

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

	Three Months Ended June 30,						
	2023		2022		Change		
	(In thousands, except for percentages)						
Sales by Product	% of Total		% of Total				
High Power Continuous Wave ("CW") Lasers	\$	145,992	42.9 %	\$	162,997	43.2 %	\$ (17,005) (10.4)%
Medium Power CW Lasers		22,370	6.6 %		18,923	5.0 %	3,447 18.2 %
Pulsed Lasers		53,002	15.6 %		69,852	18.5 %	(16,850) (24.1)%
Quasi-Continuous Wave ("QCW") Lasers		13,840	4.1 %		14,079	3.8 %	(239) (1.7)%
Laser and Non-Laser Systems		38,187	11.2 %		38,443	10.2 %	(256) (0.7)%
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue		66,580	19.6 %		72,729	19.3 %	(6,149) (8.5)%
Total	\$	339,971	100.0 %	\$	377,023	100.0 %	\$ (37,052) (9.8)%

Materials processing

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

- High power CW laser sales decreased due to lower sales for flat sheet cutting applications, primarily in China. This was partially offset by a moderate increase in sales of high power CW lasers used in welding applications.
- Medium power CW laser sales increased driven by higher demand in welding and additive manufacturing applications.
- Pulsed laser sales, including high power pulsed lasers, decreased due to lower sales for foil cutting, marking and engraving applications, partially offset by an increase in sales for pulsed lasers used for solar cell manufacturing and cleaning and ablation applications.

- QCW laser sales decreased due to lower demand in marking and engraving applications.
- Laser and non-laser systems sales decreased due to decreased revenue in non-laser systems, partially offset by higher demand for LightWELD.
- Other revenue for materials processing increased due to higher sales of options, accessories and parts and services.

Other Applications

Sales from other applications decreased due to decreased demand for lasers used in medical procedures and advanced applications, and a decrease in telecom sales due to the divestiture of the telecommunications transmission product line in the third quarter of 2022.

Cost of sales and gross margin. Cost of sales decreased by \$12.4 million, or 6.1%, to \$192.3 million for the three months ended June 30, 2023 from \$204.7 million for the three months ended June 30, 2022. Our gross margin decreased to 43.4% for the three months ended June 30, 2023 from 45.7% for the three months ended June 30, 2022. The decrease in gross margin was driven by an increase in costs of products sold from inventory and scrap expenses, partially offset by an increase in absorption of manufacturing costs, a decrease in provisions for excess and obsolete inventory and 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 in foreign currency.

Sales and marketing expense. Sales and marketing expense increased by \$1.2 million, or 6.3%, to \$20.2 million for the three months ended June 30, 2023 compared with \$19.0 million for the three months ended June 30, 2022. The increase is due to higher personnel and related costs, offset by lower depreciation and amortization expenses. As a percentage of sales, sales and marketing expense increased to 5.9% from 5.0% for the three months ended June 30, 2023 and 2022, respectively.

Research and development expense. Research and development expense decreased by \$7.1 million, or 23.2%, to \$23.5 million for the three months ended June 30, 2023, compared to \$30.6 million for the three months ended June 30, 2022. Decreases in personnel and related costs, amortization of production licenses, and other R&D expense are primarily the result of the divestiture of our telecommunications transmission product line in the third quarter of 2022. Further, depreciation expenses decreases are primarily the result of impairment of Russian long-lived assets in the fourth quarter of 2022. The decrease in expense is partially offset by an increase in materials expense used for research and development projects. As a percentage of sales, research and development expense decreased to 6.9% for the three months ended June 30, 2023 from 8.1% for the three months ended June 30, 2022.

General and administrative expense. General and administrative expense decreased by \$3.7 million, or 11.1%, to \$29.7 million for the three months ended June 30, 2023 from \$33.4 million for the three months ended June 30, 2022. This change was primarily a result of lower depreciation expenses which were driven by impairment of Russian long-lived assets and the sale of our corporate aircraft in the fourth quarter of 2022, lower consultant expenses and lower repairs and maintenance expense; partially offset by higher personnel and related costs. As a percentage of sales, general and administrative expense decreased to 8.7% from 8.9% for the three months ended June 30, 2023 and 2022, respectively.

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 0.94, Russian ruble 66, Japanese yen 130 and Chinese yuan 6.61, respectively, we estimate that net sales for the three months ended June 30, 2023 would have been \$8.8 million higher, gross profit would have been \$4.9 million higher and total operating expenses would have been \$1.9 million higher.

Other restructuring charges. Other restructuring charges of \$1.0 million for the three months ended June 30, 2023 were related to personnel related restructuring charges and other post employment benefits in Russia. Refer to above "Factors and Trends That Affect Our Operations and Financial Results", section *Russia-Ukraine Conflict* for further detail.

Loss on foreign exchange. We incurred a foreign exchange transaction loss of \$1.3 million for the three months ended June 30, 2023 as compared to a \$17.6 million loss for the three months ended June 30, 2022. Our European and Russian 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, 2023 was primarily attributable to loss from the depreciation of Chinese yuan and appreciation of the euro, partially offset by gain from the depreciation of Russian ruble as compared to the U.S. dollar.

Interest income, net. Interest income, net was \$9.3 million for the three months ended June 30, 2023 as compared to \$1.2 million of income for three months ended June 30, 2022. 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 \$19.3 million for the three months ended June 30, 2023 compared to \$16.1 million for the three months ended June 30, 2022, representing an effective tax rate of 23.6% and 22.0% for the three months ended June 30, 2023 and 2022, respectively. There were net discrete tax benefits of \$1.8 million for the three months ended June 30, 2023 and \$2.9 million for the three months ended June 30, 2022. The 2023 discrete benefit 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 which were partially offset by a detriment related to tax deductions for equity-based compensation that was less than the compensation expense recognized for books. The 2022 discrete items include a reduction in taxes as a result of filing amended returns to obtain foreign tax incentives for capital investments in prior years and to changes in tax position agreed to with tax authorities for prior year audits which was partly offset by the impact from tax deductions for equity-based compensation that were less than the compensation expense recognized for books.

Net income attributable to IPG Photonics Corporation. Net income attributable to IPG Photonics Corporation increased by \$5.3 million to \$62.3 million for the three months ended June 30, 2023 compared to \$57.0 million for the three months ended June 30, 2022. Net income attributable to IPG Photonics Corporation as a percentage of our net sales increased by 3.2 percentage points to 18.3% for the three months ended June 30, 2023 from 15.1% for the three months ended June 30, 2022 due to the factors described above.

Results of Operations for the Six Months Ended June 30, 2023 Compared to the Six Months Ended June 30, 2022

Net sales. Net sales decreased by \$59.9 million, or 8.0% to \$687.1 million for the six months ended June 30, 2023 from \$747.0 million for the six months ended June 30, 2022.

The table below sets forth sales by application:

<u>Sales by Application</u>	Six Months Ended June 30,						Change
	2023		2022				
	(In thousands, except for percentages)						
		% of Total		% of Total			
Materials processing	\$	627,153	91.3 %	\$	682,320	91.3 %	\$ (55,167) (8.1)%
Other applications		59,992	8.7 %		64,682	8.7 %	(4,690) (7.3)%
Total	\$	687,145	100.0 %	\$	747,002	100.0 %	\$ (59,857) (8.0)%

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

Sales by Product	Six Months Ended June 30,						Change
	2023			2022			
	(In thousands, except for percentages)						
		% of Total		% of Total			
High Power CW Lasers	\$ 300,026	43.7 %	\$ 330,688	44.2 %	\$ (30,662)	(9.3)%	
Medium Power CW Lasers	36,209	5.3 %	42,591	5.7 %	(6,382)	(15.0)%	
Pulsed Lasers	109,149	15.9 %	136,784	18.3 %	(27,635)	(20.2)%	
QCW Lasers	25,122	3.6 %	26,859	3.6 %	(1,737)	(6.5)%	
Laser and Non-Laser Systems	79,571	11.6 %	73,040	9.8 %	6,531	8.9 %	
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue	137,068	19.9 %	137,040	18.4 %	28	— %	
Total	\$ 687,145	100.0 %	\$ 747,002	100.0 %	\$ (59,857)	(8.0)%	

Materials processing

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

- High power CW laser sales decreased due to lower sales for cutting applications, partially offset by an increase in sales for welding applications. Within cutting applications, the decrease in sales was attributable to softer demand in China and North America. The increase in sales of high power CW lasers used in welding applications was driven by higher sales supporting E-mobility including electric vehicles, battery manufacturing and electric motors.
- The decrease in medium power CW sales related to a decrease in demand for cutting and welding applications.
- Pulsed laser sales, including high power pulsed lasers, decreased due to a decrease in sales for foil cutting, marking and engraving applications, partially offset by growth in sales for cleaning and ablation applications and green pulsed lasers used for solar cell manufacturing applications.
- QCW laser sales decreased due to lower demand in fine processing for consumer electronics applications.
- Laser and non-laser systems sales increased driven by higher demand for LightWELD, partially offset by lower demand for other laser and non-laser systems.
- Other revenue for materials processing increased due to higher sales of options, accessories, and parts and services.

Other Applications

Sales from other applications decreased due to decreased sales in telecommunications products, as a result of the business divestiture during the third quarter of 2022, and decreased demand for lasers used in medical procedures, partially offset by increased demand for lasers used in advanced applications.

Cost of sales and gross margin. Cost of sales decreased by \$10.3 million, or 2.6%, to \$392.5 million for the six months ended June 30, 2023 from \$402.8 million for the six months ended June 30, 2022. Our gross margin decreased to 42.9% for the six months ended June 30, 2023 from 46.1% for the six months ended June 30, 2022. Gross margin decreased mainly due to an increase in cost of product sold from inventory and scrap expenses, partially offset by an increase in absorption of manufacturing costs and 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. dollar as compared to our sales which are predominantly in foreign currency.

Sales and marketing expense. Sales and marketing expense increased by \$1.9 million, or 4.8%, to \$41.3 million for the six months ended June 30, 2023 compared with \$39.4 million for the six months ended June 30, 2022. The increase is due to personnel and related costs, offset by lower depreciation and amortization expenses. As a percentage of sales, sales and marketing expense increased to 6.0% from 5.3% for the six months ended June 30, 2023 and 2022, respectively.

Research and development expense. Research and development expense decreased by \$17.8 million, or 27.8%, to \$46.3 million for the six months ended June 30, 2023, compared to \$64.1 million for the six months ended June 30, 2022. Decreases in personnel and related costs, amortization of production licenses, and other R&D expense are primarily the result of the divestiture of our telecommunications transmission product line in the third quarter of 2022. Further, depreciation expenses decreased primarily as a result of the Russia long-lived asset impairment in 2022. Lastly, we did not incur as much information systems expenses as last year. As a percentage of sales, research and development expense decreased to 6.7% for the six months ended June 30, 2023 from 8.6% for the six months ended June 30, 2022.

General and administrative expense. General and administrative expense decreased by \$4.3 million, or 6.7%, to \$59.8 million for the six months ended June 30, 2023 from \$64.1 million for the six months ended June 30, 2022, primarily as a result of decreases in consultant costs, repairs and maintenance costs, depreciation expenses and information systems costs, partially offset by increases in personnel and related costs. As a percentage of sales, general and administrative expense increased to 8.7% for the six months ended June 30, 2023 from 8.6% for the six months ended June 30, 2022.

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 0.92, Russian ruble 76, Japanese yen 123 and Chinese yuan 6.48, respectively, we would have expected net sales for the six months ended June 30, 2023 to be \$24.1 million higher, gross profit to be \$13.2 million higher and total operating expenses would have been \$2.1 million higher.

Other restructuring charges. Other restructuring charges of \$1.1 million for the six months ended June 30, 2023 were related to personnel related restructuring charges and other post employment benefits in Russia. Refer to above "Factors and Trends That Affect Our Operations and Financial Results", section *Russia-Ukraine Conflict* for further detail.

Gain on foreign exchange. We benefited from a foreign exchange transaction gain of \$1.3 million for the six months ended June 30, 2023 as compared to a loss of \$11.8 million for the six months ended June 30, 2022. Our European and Russian subsidiaries have certain net assets denominated in U.S. dollars, and our Chinese subsidiary has certain net liabilities denominated in U.S. dollars. The gain for the six months ended June 30, 2023 was primarily attributable to gain from depreciation of the Russian ruble, partially offset by loss from the appreciation of the euro and the depreciation of Chinese yuan as compared to the U.S. dollar.

Interest income, net. Interest income, net, was \$16.8 million for the six months ended June 30, 2023 as compared to \$1.1 million of income for the six months ended June 30, 2022. 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 \$42.4 million for the six months ended June 30, 2023 compared to \$39.3 million for the six months ended June 30, 2022, representing an effective tax rate of 25.7% and 23.7% for the six months ended June 30, 2023 and 2022, respectively. There was a net discrete tax detriment of \$0.2 million and a net discrete tax benefit of \$3.2 million for the six months ended June 30, 2023 and 2022, respectively. In 2023, 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. The 2022 discrete items include a reduction in taxes as a result of filing amended returns to obtain foreign tax incentives for capital investments in prior years and to changes in tax position agreed to with tax authorities for prior year audits which was partly offset by the impact from tax deductions for equity-based compensation that were less than the compensation expense recognized for books.

Net income attributable to IPG Photonics Corporation. Net income attributable to IPG Photonics Corporation decreased by \$4.0 million to \$122.5 million for the six months ended June 30, 2023 compared to \$126.5 million for the six months ended June 30, 2022. Net income attributable to IPG Photonics Corporation as a percentage of our net sales increased by 0.9 percentage point to 17.8% for the six months ended June 30, 2023 from 16.9% for the six months ended June 30, 2022 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 at our Russian factory due to sanctions. As of June 30, 2023, 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 \$63.4 million of cash and cash equivalents located in Russia, and \$5.7 million of cash and cash equivalents located in Belarus, as of June 30, 2023. 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 5% 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, 2023	December 31, 2022
	(In thousands)	
Cash and cash equivalents	\$ 573,071	\$ 698,209
Short-term investments	523,341	479,374
Unused credit lines and overdraft facilities	126,529	125,965
Working capital (excluding cash, cash equivalents and short-term investments)	599,469	534,045

Short-term investments at June 30, 2023 consist of liquid investments including commercial paper, U.S. Treasury and agency obligations, corporate bonds and term deposits with original maturities of greater than three months but less than one year. See Note 3, "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, 2023:

Description	Total Facility/ Note	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 50.0 million (\$54.4 million)	ESTR plus 0.8% or Euribor plus 0.65%	July 2023	Unsecured, guaranteed by parent company and German subsidiary
Other Euro Facility ⁽³⁾	Euro 1.5 million (\$1.6 million)	4.65%	August 2023	Common pool of assets of Italian subsidiary

⁽¹⁾ This facility is available to certain foreign subsidiaries in their respective local currencies. At June 30, 2023, there were no amounts drawn on this line; however, there were \$2.5 million of guarantees issued against the line which reduces total availability.

⁽²⁾ This facility is also available to certain foreign subsidiaries in their respective local currencies. At June 30, 2023, there were no drawings on this facility; however, there were \$2.0 million of guarantees issued against the line which reduces total availability. We are evaluating options for replacing this facility which is not material to our liquidity needs.

⁽³⁾ At June 30, 2023, there were no drawings.

At June 30, 2023, our largest committed credit lines are with Bank of America N.A. and Deutsche Bank AG in the amounts of \$75.0 million and \$54.4 million (or €50.0 million as described above), respectively, and neither of them is syndicated.

We are required to meet certain financial covenants associated with our U.S. revolving line of credit facility. 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, 2023.

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 and term debt.

The following table presents cash flow activities:

	Six Months Ended June 30,	
	2023	2022
	(In thousands)	
Cash provided by operating activities	\$ 103,946	\$ 95,161
Cash (used in) provided by investing activities	(90,541)	280,221
Cash used in financing activities	(129,793)	(311,450)

Operating activities. Net cash provided by operating activities increased by \$8.7 million to \$103.9 million for the six months ended June 30, 2023 from \$95.2 million for the six months ended June 30, 2022, primarily due to a decrease in cash used in 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 2023 primarily resulted from:

- a decrease in cash used by inventory, as the company is moderating additions to safety stocks for supply chain disruptions related to third party electronic parts and components internally manufactured by our factory in Russia;
- a decrease in cash used by accrued expenses due to lower bonus payments, partially offset by an increase in cash used by contract liabilities; and
- a decrease in cash used by income and other taxes payable driven by the timing of estimated tax payments made and refunds received from filing tax returns;

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;
- an increase in cash used by accounts receivable due to timing of collection;
- an increase in cash used by prepaid expenses and other assets due to timing of billings on custom systems; and
- an increase in cash used by accounts payable due to timing of payments.

Investing activities. Net cash used in investing activities was \$90.5 million for the six months ended June 30, 2023 as compared to cash provided by investing activities of \$280.2 million in 2022. 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. The cash provided by investing activities in 2022 related to \$341.8 million of net proceeds from short-term investments, partially offset by \$59.9 million of cash used for capital expenditures.

In 2023, we expect to invest approximately \$130 million to \$140 million in capital expenditures, excluding acquisitions. Capital expenditures include investments in property, facilities and equipment to add capacity worldwide to support anticipated revenue growth, 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 once a project has been started.

Financing activities. Net cash used in financing activities was \$129.8 million for the six months ended June 30, 2023 as compared to net cash used of \$311.5 million in 2022. 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. The cash used in financing activities in 2022 primarily related to the purchase of treasury stock of \$311.6 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, 2022 (the "Annual Report") and in Item 1A, "Risk Factors" of Part II of Quarterly Report for the quarter ended March 31, 2023. 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

None.

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 and our euro credit facility 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 \$1.3 million for the three months ended June 30, 2023 compared to a loss of \$17.6 million for the three months ended June 30, 2022. 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, 2023, our material foreign currency exposure is net U.S. dollar denominated assets at subsidiaries where the euro or the Russian ruble is the functional currency and U.S. dollar denominated liabilities where the Chinese yuan is the functional currency. The U.S. dollar denominated assets are comprised of cash, third party receivables and inter-company receivables. 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, 2023 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 \$1.5 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, 2023 applied to the net U.S. dollar asset balances, would result in a foreign exchange gain of \$0.4 million if the U.S. dollar appreciated and a \$0.4 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 Chinese yuan as of June 30, 2023 applied to the net U.S. dollar liabilities balances, would result in a foreign exchange loss of \$1.5 million if the U.S. dollar appreciated and a \$1.6 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 the COVID-19 pandemic, sanctions on the Russian government and changes in central bank policy.

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.

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, 2023. 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, 2023 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 11, "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, 2022, and in Item 1A of Part II of our Quarterly Report on Form 10-Q for the quarterly period ended March 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, 2023.

Issuer Purchases of Equity Securities

The following table reflects issuer purchases of equity securities for the three months ended June 30, 2023:

	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	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
April 1, 2023 — April 30, 2023	—	\$ —	—	\$ —
May 1, 2023 — May 31, 2023	1,053 (1)	117.28	—	200,000
June 1, 2023 — June 30, 2023	—	—	—	200,000
Total	1,053	\$ 117.28	—	\$ 200,000

- (1) In 2012, our Board of Directors approved "withhold to cover" as a tax payment method for vesting of restricted stock awards for certain employees. Pursuant to the "withhold to cover" method, we withheld from such employees the shares noted in the table above to cover tax withholding related to the vesting of their awards. For the three months ended June 30, 2023, a total of 1,053 shares were withheld at an average price of \$117.28.

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 directors and officers of the Registrant adopted Rule 10b5-1 trading arrangement plans intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) (each, a "Rule 10b5-1 trading arrangement"):

- on May 10, 2023, Dr. Eugene Scherbakov, Director and CEO, adopted a Rule 10b5-1 trading arrangement for the sale of up to 13,000 shares, including shares acquired upon exercise of stock options, over a period beginning August 13, 2023 and ending February 28, 2024 on the open market at prevailing prices, subject to minimum price thresholds; and

- on June 15, 2023, Ms. Agnes Tang, Director, adopted a Rule 10b5-1 trading arrangement for the sale of up to 900 shares over a period beginning September 13, 2023 and ending March 31, 2024 on the open market at prevailing prices, subject to minimum price thresholds.

ITEM 6. EXHIBITS

(a) Exhibits

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of the Registrant
10.1	2006 Incentive Compensation Plan, as amended and restated effective May 23, 2023
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: August 1, 2023

By: /s/ Eugene A. Scherbakov

Eugene A. Scherbakov
Chief Executive Officer
(Principal Executive Officer)

Date: August 1, 2023

By: /s/ Timothy P.V. Mammen

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

**RESTATED CERTIFICATE OF INCORPORATION
OF
IPG PHOTONICS CORPORATION**

The present name of the corporation is IPG Photonics Corporation. The corporation was incorporated by the filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware on December 2, 1998. This Restated Certificate of Incorporation of the corporation only restates and integrates and does not further amend the provisions of the corporation's Certificate of Incorporation as theretofore amended or supplemented and there is no discrepancy between the provisions of the Certificate of Incorporation as theretofore amended and supplemented and the provisions of this Restated Certificate of Incorporation. This Restated Certificate of Incorporation was duly adopted in accordance with the provisions of Section 245 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is "IPG Photonics Corporation."

SECOND: The address of the registered office of the Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, Delaware, County of New Castle, and the name of the its registered agent at such address is Corporation Service Company.

THIRD: The purpose for which the Corporation is organized is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number shares which the Corporation shall have authority to issue is 180,000,000 shares of which 175,000,000 shares shall be designated Common Stock, par value of \$.0001 per share ("Common Stock"), and 5,000,000 shares shall be designated Preferred Stock, par value of \$.0001 per share ("Preferred Stock").

The Preferred Stock may be issued from time to time in one or more series. The Board of Directors is hereby authorized to provide for the issuance of shares of Preferred Stock in one or more series and, by filing a certificate pursuant to the applicable law of the State of Delaware (hereinafter referred to as "Preferred Stock Designation"), to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations and restrictions thereof. The authority of the Board of Directors with respect to each series shall include, but not be limited to, determination of the following:

- (a) The designation of the series, which may be by distinguishing number, letter or title.
 - (b) The number of shares of the series, which number the Board of Directors may thereafter (except where otherwise provided in the Preferred Stock Designation) increase or decrease (but not below the number of shares thereof then outstanding).
 - (c) The amounts payable on, and the preferences, if any, of shares of the series in respect of dividends, and whether such dividends, if any, shall be cumulative or noncumulative.
 - (d) Dates at which dividends, if any, shall be payable.
-

- (e) The redemption rights and price or prices, if any, for shares of the series.
- (f) The terms and amount of any sinking fund provided for the purchase or redemption of shares of the series.
- (g) The amounts payable on, and the preferences, if any, of shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Corporation.
- (h) Whether the shares of the series shall be convertible into or exchangeable for shares of any other class or series, or any other security, of the Corporation or any other corporation, and, if so, the specification of such other class or series or such other security, the conversion or exchange price or prices or rate or rates, any adjustments thereof, the date or dates at which such shares shall be convertible or exchangeable and all other terms and conditions upon which such conversion or exchange may be made.
- (i) Restrictions on the issuance of shares of the same series or of any other class or series.
- (j) The voting rights, if any, of the holders of shares of the series.

The Common Stock shall be subject to the express terms of the Preferred Stock and any series thereof. Except as may otherwise be provided in this Amended and Restated Certificate of Incorporation, in a Preferred Stock Designation or by applicable law, the holders of shares of Common Stock shall be entitled to one vote for each such share upon all questions presented to the stockholders, the Common Stock shall have the exclusive right to vote for the election of directors and for all other purposes, and holders of Preferred Stock shall not be entitled to vote at or receive notice of any meeting of stockholders.

The Corporation shall be entitled to treat the person in whose name any share of its stock is registered as the owner thereof for all purposes and shall not be bound to recognize any equitable or other claim to, or interest in, such share on the part of any other person, whether or not the Corporation shall have notice thereof, except as expressly provided by applicable law.

FIFTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, it is further provided that:

- (a) The Board of Directors of the Corporation is expressly authorized to make, alter and repeal the by-laws of the Corporation, subject to the power of the stockholders of the Corporation to alter or repeal any by-law whether adopted by them or otherwise;
- (b) Elections of directors need not be by written ballot unless, and only to the extent, otherwise provided in the by-laws of the Corporation.
- (c) The books of the Corporation may be kept outside the State of Delaware at such location or locations as may be designated by the board of directors of the Corporation or in the by-laws of the Corporation.
- (d) The number of authorized shares of any class or classes of stock may be increased or decreased (but not below the number of shares then outstanding) by the affirmative vote of a majority in voting power of the outstanding capital stock of the Corporation entitled to vote thereon irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

SIXTH: Indemnification and Advancement of Expenses

Section 6.1. Right to Indemnification. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Covered Person. Notwithstanding the preceding sentence, except as otherwise provided in Section 6.3, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation.

Section 6.2. Prepayment of Expenses. The Corporation shall to the fullest extent not prohibited by applicable law pay the expenses (including attorneys' fees) incurred by a Covered Person in defending any proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the Covered Person to repay all amounts advanced if it should be ultimately determined that the Covered Person is not entitled to be indemnified under this Article SIXTH or otherwise.

Section 6.3. Claims. If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article SIXTH is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

Section 6.4. Nonexclusivity of Rights. The rights conferred on any Covered Person by this Article SIXTH shall not be exclusive of any other rights which such Covered Person may have or hereafter acquire under any statute, provision of this Amended and Restated Certificate of Incorporation, the by-laws, agreement, vote of stockholders or disinterested directors or otherwise.

Section 6.5. Other Sources. The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit enterprise.

Section 6.6. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article SIXTH shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

Section 6.7. Other Indemnification and Prepayment of Expenses. This Article SIXTH shall not limit the right of the Corporation, to the extent and in the manner permitted by law, to indemnify and to advance expenses to persons other than Covered Persons when and as authorized by appropriate corporate action.

SEVENTH: Board of Directors

(a) The Board of Directors shall consist of at least 1 and not more than 11 members, the number thereof to be determined from time to time by resolution of the Board of Directors. Directors need not be stockholders.

(b) Unless otherwise provided by law or this Amended and Restated Certificate of Incorporation, any newly created directorship or any vacancy occurring in the Board of Directors for any cause shall be filled by a majority of the remaining members of the Board of Directors, although such majority is less than a quorum, and each director so elected shall hold office until the expiration of the term of office of the director whom he or she has replaced or until his or her successor is elected and qualified.

EIGHTH: No director or officer of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty by such a director or officer, as applicable, except to the extent such exemption from liability or limitation thereof is not permitted under the General Corporation Law of the State of Delaware as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director or officer of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: (a) The Corporation reserves the right at any time, and from time to time, to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted, in the manner now or hereafter prescribed by law; and all rights, preferences and privileges of any nature conferred upon stockholders, directors or any other persons by and pursuant to this Amended and Restated Certificate of Incorporation in its present form or as hereafter amended are granted subject to the rights reserved in this article.

(b) Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation and in addition to any affirmative vote of the holders of any class or series of the Corporation's capital stock required by law or this Amended and Restated Certificate of Incorporation, the affirmative vote of the holders of at least sixty six and two-thirds percent (66 2/3%) in voting power of the shares of the Corporation's outstanding capital stock shall be required in order (i) to alter, amend or repeal any provision of this Amended and Restated Certificate of Incorporation or (ii) for the Corporation's stockholders to alter, amend or repeal any provision of the by-laws.

TENTH: At the first annual meeting of stockholders (the "First Meeting") following the first date that any stockholder (together with its affiliates and associates) which beneficially owned twenty-five percent (25%) or more of the total voting power of the outstanding shares of all classes of capital stock entitled to vote generally in the election of directors of the Corporation on the effective date of this Amended and Restated Certificate of Incorporation ceases at any time to beneficially own at least twenty-five percent (25%) of the total voting power of the outstanding shares of all classes of capital stock entitled to vote generally in the election of directors of the Corporation (and without regard to whether any such stockholder again becomes the beneficial owner of twenty-five percent (25%) or more of such voting power), the directors, other than those who may be elected by the holders of any

outstanding series of shares of Preferred Stock, shall be divided into three classes, as nearly equal in number as possible and designated Class I, Class II and Class III. Class I shall be initially elected for a term expiring at the first annual meeting of stockholders following the First Meeting, Class II shall be initially elected for a term expiring at the second annual meeting of stockholders following the First Meeting, and Class III shall be initially elected for a term expiring at the third annual meeting of stockholders following the First Meeting. Effective upon the First Meeting, any director, or the entire Board of Directors, may be removed only for cause by the affirmative vote of the holders of a majority in voting power of the stock issued and outstanding and entitled to vote at an election of directors. Members of each class shall hold office until their successors are elected and qualified or until such director's earlier resignation or removal. At each succeeding annual meeting of the stockholders of the Corporation, the successors of the class of directors whose term expires at that meeting shall be elected for a term expiring at the annual meeting of stockholders held in the third year following the year of their election. In case of any increase or decrease, from time to time, in the number of directors, other than those who may be elected by the holders of any outstanding series of Preferred Stock or any other series or class of stock as set forth in this Amended and Restated Certificate of Incorporation, the number of directors in each class shall be apportioned as nearly equal as possible. For purposes of this Article TENTH and Article TWELFTH, the term "beneficially own" shall have the meaning set forth in Rule 13d-3 of the Securities Exchange Act of 1934, as amended.

ELEVENTH: The Corporation shall not be governed by Section 203 of the General Corporation Law of the State of Delaware ("Section 203"), and the restrictions contained in Section 203 shall not apply to the Corporation, until the first such time as both of the following conditions exist (if ever): (a) Section 203 by its terms would, but for the provisions of this Article ELEVENTH, apply to the Corporation; and (b) any person that owned more than twenty-five percent (25%) of the outstanding voting stock of the Corporation on the effective date of this Amended and Restated Certificate of Incorporation ceases to own more than twenty-five percent (25%) of the outstanding voting stock of the Corporation. Once the Corporation shall become governed by Section 203 pursuant to the preceding sentence the Corporation shall be governed by Section 203 for so long as Section 203 by its terms shall apply to the Corporation, regardless of whether any person shall thereafter become the owner of more than twenty-five percent (25%) of the outstanding voting stock of the Corporation. For purposes of this Article ELEVENTH, the terms "person", "owners" and "voting stock" shall have the meanings ascribed to them in Section 203, as Section 203 may be amended from time to time.

TWELFTH: Stockholder Action

(a) Except as otherwise provided for or fixed pursuant to the provisions of Article FOURTH of this Amended and Restated Certificate of Incorporation relating to the rights of holders of any series of Preferred Stock, no action that is required or permitted to be taken by the stockholders of the Corporation at any annual or special meeting of stockholders may be effected by written consent of stockholders in lieu of a meeting of stockholders after such time as any stockholder (together with its affiliates and associates) which beneficially owned at least twenty-five percent (25%) or more of the total voting power of the outstanding shares of all classes of capital stock entitled to vote generally in the election of directors of the Corporation on the effective date of this Amended and Restated Certificate of Incorporation ceases to beneficially own twenty-five percent (25%) or more of the total voting power of the outstanding shares of all classes of capital stock entitled to vote generally in an election of directors (and without regard to whether any such stockholder again becomes the beneficial owner of twenty-five percent (25%) or more of such stock).

(b) Special meetings of stockholders for any purpose or purposes may be called at any time by the board of directors, but such special meetings may not be called by any

other person or persons. Business transacted at any special meeting of stockholders shall be limited to the purposes stated in the notice.

(c) Advanced notice of stockholder nominations for the election of directors and of the proposal by stockholders of any other action to be taken by the stockholders shall be given in such manner as shall be provided in the by-laws of the Corporation.

IN WITNESS WHEREOF, IPG PHOTONICS CORPORATION has caused this Restated Certificate of Incorporation to be executed by its duly authorized officer on this 28th day of July, 2023.

IPG PHOTONICS CORPORATION

By: /s/ Angelo P. Lopresti
Name: Angelo P. Lopresti
Office: Secretary

IPG PHOTONICS CORPORATION
2006 INCENTIVE COMPENSATION PLAN
(As Amended and Restated Effective May 23, 2023)

IPG Photonics Corporation (the “Company”) originally established the IPG Photonics Corporation 2006 Incentive Compensation Plan effective February 28, 2006, for the benefit of its eligible Participants for the purposes hereinafter set forth. The Company has amended the Plan from time to time and hereby further amends and restates the Plan as of the Effective Date. The Plan permits the award of Stock Options, Restricted Stock, Performance Shares, Performance Units, Stock Units, Cash, and SARs.

1. DEFINITIONS

The following terms shall have the following meanings unless the context indicates otherwise:

- 1.1. “*Affiliate*” shall mean a corporation that, for purposes of Section 422 of the Code, is a Parent or Subsidiary of the Company within the meaning of Sections 424(e) and 424(f) of the Code.
 - 1.2. “*Award*” shall mean a Stock Option, a SAR, a Restricted Stock Award, a Stock Unit, a Performance Share, a Performance Unit, or a Cash Award.
 - 1.3. “*Award Agreement*” shall mean an agreement between the Company and a Participant that establishes the terms, conditions, restrictions and/or limitations applicable to an Award, in addition to those established by the Plan and by the Committee. The Award Agreement may consist of a written notice, a term sheet, and/or an agreement, and may be provided in electronic form. With respect to any Award, the date of the grant of the Award specified by the Committee in a resolution or other writing, duly adopted, and as set forth in the Award Agreement shall be the “*Award Date*,” provided that such Award Date will not be earlier than the date of the Committee action.
 - 1.4. “*Board*” shall mean the Board of Directors of the Company.
 - 1.5. “*Cash Award*” shall mean a grant by the Committee to a Participant of an award of cash as described in Section 11 below.
 - 1.6. “*Cause*” shall have the same meaning as such term or similar term is used in any employment, consulting, or other written agreement between the Participant and the Company, a Group Company or Affiliate. If there is no employment, consulting, or other written agreement between the Participant and the Company, a Group Company or Affiliate, or if such agreement does not define “Cause” or such similar term, then “Cause” shall have the meaning specified in the Award Agreement; provided, that if the Award Agreement does not so specify, “Cause” shall mean, as determined by the Committee in its sole discretion, the Participant: (i) engages in conduct that cause financial or reputational injury to the Company a Group Company or Affiliate; (ii) engages in any act of dishonesty or misconduct that results in damage to the Company, a Group Company or Affiliate, or their business or reputation or that the Committee determines to adversely affect the value, reliability or performance of the Participant to the Company, a Group Company or Affiliate; (iii) refuses or fails to substantially comply with the human resources rules, policies, directions and/or restrictions relating to harassment and/or discrimination, or with compliance or risk management rules, policies, directions and/or restrictions of the Company, a Group Company or Affiliate; (iv)
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fails to cooperate with the Company, a Group Company or Affiliate in any internal investigation or administrative, regulatory or judicial proceeding; or (v) continuously fails to perform his or her duties to the Company, a Group Company or Affiliate (which may include any sustained and unexcused absence of the Participant from the performance of such duties, which absence has not been certified in writing as due to physical or mental illness or Disability), after a written demand for performance has been delivered to the Participant identifying the manner in which the Participant has failed to substantially perform his or her duties. If any part of the definition of Cause set forth in clauses (i) through (v) above is deemed applicable to a Participant, this shall not preclude or prevent the reliance by the Company or the Committee on any other part of the preceding sentence that also may be applicable. Unless otherwise defined in the Participant's employment, consulting or other written agreement, an act or omission is "willful" for this purpose if it was knowingly done, or knowingly omitted to be done, by the Participant not in good faith and without reasonable belief that the act or omission was in the best interest of the Company. In addition, the Participant's Service will be deemed to have terminated for Cause if, based on facts and circumstances discovered after the Participant's Service has terminated, the Board determines in reasonable good faith, within one year after the Participant's Service has terminated, that the Participant committed an act that would have justified a termination for Cause.

1.7. "*Change in Control*" shall mean the occurrence of any one or more of the following:

- (a) Any "person" (as such term is defined in Section 3(a)(9) of the Exchange Act and as used in Sections 13(d)(3) and 14(d)(2) of the Exchange Act), including a "group" (as defined in Section 13(d)(3) of the Exchange Act), other than (i) the Company, (ii) any wholly-owned subsidiary of the Company, or (iii) any employee benefit plan (or related trust) sponsored or maintained by the Company or any Affiliate, becomes a "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company having fifty percent (50%) or more of the combined voting power of the then-outstanding securities of the Company that may be cast for the election of directors of the Company (other than as a result of an issuance of securities initiated by the Company in the ordinary course of business) (the "Company Voting Securities"); provided, however, that the event described in this paragraph (a) shall not be deemed to be a Change in Control by virtue of any underwriter temporarily holding securities pursuant to an offering of such securities;
- (b) During any period of two consecutive years, individuals who at the beginning of any such period constitute the Board (the "Incumbent Directors") cease for any reason to constitute at least a majority of the Board, unless the election, or the nomination for election by the shareholders of the Company, of each new director of the Company during such period was approved by a vote of at least two-thirds of the Incumbent Directors then still in office;
- (c) As the result of, or in connection with, any cash tender or exchange offer, merger or other business combination, sale of all or substantially all of the assets or contested election, or any combination of the foregoing transactions, less than a majority of the combined voting power of the then-outstanding securities of the Company or any successor corporation or entity entitled to vote generally in the election of the directors of the Company or such other corporation or entity after such transaction is held in the aggregate by the holders of the securities of the

Company entitled to vote generally in the election of directors of the Company immediately prior to such transaction; or

- (d) The shareholders of the Company approve a plan of complete liquidation of the Company.

Notwithstanding the foregoing, a Change in Control shall not be deemed to occur solely because any person acquires beneficial ownership of more than fifty percent (50%) of the Company Voting Securities as a result of the acquisition of Company Voting Securities by the Company which reduces the number of Company Voting Securities outstanding; provided, however, that if after such acquisition by the Company such person becomes the beneficial owner of additional Company Voting Securities that increases the percentage of outstanding Company Voting Securities beneficially owned by such person, a Change in Control transaction shall then occur.

- 1.8. “*Code*” shall mean the Internal Revenue Code of 1986, as amended from time to time.
- 1.9. “*Committee*” shall mean (i) the Board or (ii) a committee or subcommittee of the Board appointed by the Board from among its members. The Committee may be the Board’s Compensation Committee. Unless the Board determines otherwise, the Committee shall be comprised solely of not less than two members who each shall qualify as a “Non-Employee Director” within the meaning of Rule 16b-3(b)(3) (or any successor rule) under the Exchange Act.
- 1.10. “*Common Stock*” shall mean the voting, common stock, \$0.0001 par value per share, of the Company.
- 1.11. “*Company*” shall mean IPG Photonics Corporation, a Delaware corporation.
- 1.12. “*Disability*” means the total and permanent disability of a Participant (incurred while in the active Service of the Company, an Affiliate or a Group Company) based on proof satisfactory to the Committee. Total and permanent disability shall be as defined in the Company’s long-term disability plan, if any, or as otherwise provided by the Company. Notwithstanding the foregoing, for purposes of determining the period of time after termination of Service during which a Participant may exercise an ISO, “Disability” will have the meaning set forth in Code Section 22(e) (3), which is, generally, that the Participant is unable to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of at least twelve (12) months.
- 1.13. “*Dividend Equivalent Right*” shall mean the right to receive an amount equal to the amount of any dividend paid with respect to a share of Common Stock multiplied by the number of shares of Common Stock underlying or with respect to a Stock Unit or a Performance Unit, and which shall be payable in cash, in Common Stock, in the form of Stock Units or Performance Units, or a combination of any or all of the foregoing. Unless the Committee expressly provides otherwise in the Award Agreement, Dividend Equivalent Rights on any portion of an Award shall be payable only if the performance criteria underlying the Award are satisfied.
- 1.14. “*Effective Date*” shall mean May 23, 2023, provided that the Company’s shareholders approve the amended and restated Plan on such date.

- 1.15. “*Employee*” shall mean an employee of the Company or any Affiliate, as described in Treasury Regulation Section 1.421-1(h).
- 1.16. “*Exchange Act*” shall mean the Securities Exchange Act of 1934, as amended from time to time, including applicable regulations thereunder.
- 1.17. “*Exercise Price*” shall mean the price at which each share of Common Stock covered by a Stock Option may be purchased.
- 1.18. “*Fair Market Value*” shall mean:
- (a) if the Common Stock is readily tradable on a national securities exchange or other market system, the closing price of the Common Stock on the date of calculation (or on the last preceding trading date if Common Stock was not traded on such date), or
 - (b) if the Common Stock is not readily tradable on a national securities exchange or other market system, the value as determined by the reasonable and consistent application of a reasonable valuation method, in good faith by the Board, in accordance with Code Section 409A and Treasury Regulation Section 1.409A-1(b)(5)(iv) (or any similar or successor provision), thereunder, as the Board or the Committee will in its discretion select and apply at the time of the Award Date, time of exercise, or other date of calculation.
- 1.19. “*Good Reason*” shall have the meaning set forth in Section 13.1.
- 1.20. “*Group Company*” shall mean any business entity deemed by the Board to be a Group Company, including, but not limited to, any business entity that has a significant financial interest in the Company and any business entity in which the Company has a significant financial interest, such entities to be referred to collectively as the “Group Companies”.
- 1.21. “*Group Employee*” shall mean any employee of a Group Company who is not an Employee.
- 1.22. “*Independent Contractor*” shall mean a person (other than a person who is an Employee, Group Employee or a Nonemployee Director) that renders Services to the Company, an Affiliate or a Group Company.
- 1.23. “*ISO*” shall mean a right to purchase a specified number of shares of Common Stock at a specified price, which is intended to comply with the terms and conditions as an “incentive stock option” as set forth in Code Section 422, as such section may be in effect from time to time.
- 1.24. “*Leave of Absence*” means any leave of absence approved by the Company.
- 1.25. “*Nonemployee Director*” shall mean a member of the Board who is not an Employee.
- 1.26. “*Nonqualified Stock Option*” shall mean a Stock Option to purchase a specified number of shares of Common Stock at a specified price, which does not qualify as an ISO.
- 1.27. “*Parent*” shall mean a corporation or any other business entity that directly or indirectly has an ownership interest of fifty percent (50%) or more of the Voting Stock of the Company.

- 1.28. “*Participant*” shall mean any Employee, Group Employee, Nonemployee Director or Independent Contractor to whom an Award has been granted by the Committee under the Plan.
- 1.29. “*Performance Share*” shall mean the grant by the Committee to a Participant of an Award of shares of Common Stock subject to restrictions on transferability, a risk of forfeiture, and certain other terms and conditions under the Plan or specified by the Committee, as described in Section 10.1 below.
- 1.30. “*Performance Unit*” shall mean the grant by the Committee to a Participant of an Award of a hypothetical share of the value of the Company, represented by a notional account that shall be established and maintained (or caused to be established or maintained) by the Company for such Participant, as described in Section 10.2 below.
- 1.31. “*Plan*” shall mean the IPG Photonics 2006 Incentive Compensation Plan, as amended and restated effective May 23, 2023.
- 1.32. “*Prior Plans*” shall mean the IPG Photonics 2000 Incentive Compensation Plan, as amended, and the IPG Photonics Corporation Non-Employee Directors Stock Plan, as amended.
- 1.33. “*Recapitalization*” shall mean any stock split, stock dividend, recapitalization, combination of shares, exchange of shares or other change affecting the Company’s outstanding shares of capital stock as a class without the Company’s receipt of consideration.
- 1.34. “*Reorganization*” shall mean any of the following: (a) a merger or consolidation in which the Company is not the surviving entity; (b) a sale, transfer or other disposition of all or substantially all of the Company’s assets; (c) a reverse merger in which the Company is the surviving entity but in which the Company’s outstanding voting securities are transferred in whole or in part to a person or persons different from the persons holding those securities immediately prior to the merger; or (d) any transaction effected primarily to change the state in which the Company is incorporated or to create a holding company structure.
- 1.35. “*Restricted Stock Award*” shall mean a grant by the Committee to a Participant of an Award of shares of Common Stock subject to restrictions on transferability, a risk of forfeiture, and certain other terms and conditions under the Plan or specified by the Committee, as described in Section 9.1 below.
- 1.36. “*Stock Appreciation Right*” or “*SAR*” shall mean a grant by the Committee to a Participant of a contingent right to receive Common Stock or cash, as specified in the Award Agreement, in the future, based on the value, or the appreciation in the value, of Common Stock, as described in Section 8 below.
- 1.37. “*Service*” means the provision of services to the Company, an Affiliate or a Group Company in the capacity of (i) an Employee, (ii) a Group Employee, (iii) a Nonemployee Director, or (iv) an Independent Contractor.
- 1.38. “*Stock Option*” shall mean a grant by the Committee to a Participant of an option or right to purchase a specified number of shares of Common Stock at a specified price, as described in Section 7 below.

- 1.39. “*Stock Unit*” shall mean a grant by the Committee to a Participant of an Award of a hypothetical share of Common Stock represented by a notional account established and maintained (or caused to be established or maintained) by the Company for such Participant, as described in Section 9.3 below.
- 1.40. “*Substitute Award*” shall have the meaning set forth in Section 5.1(c) below.
- 1.41. “*Subsidiary*” shall mean a corporation of which the Company directly or indirectly owns fifty percent (50%) or more of the Voting Stock or any other business entity in which the Company directly or indirectly has an ownership interest of fifty percent (50%) or more.
- 1.42. “*Treasury Regulations*” shall mean the regulations promulgated under the Code by the United States Department of the Treasury, as amended from time to time.
- 1.43. “*Vest*” shall mean:
- (a) with respect to Stock Options and SARs, when the Stock Option or SAR (or a portion of such Stock Option or SAR) first becomes exercisable and remains exercisable subject to the terms and conditions of such Stock Option or SAR; or
 - (b) with respect to Awards other than Stock Options and SARs, when the Participant has:
 - (i) an unrestricted right, title and interest to receive the compensation (whether payable in Common Stock, cash or a combination of both) attributable to an Award (or a portion of such Award) or to otherwise enjoy the benefits underlying such Award; and
 - (ii) a right to transfer an Award subject to no Company-imposed restrictions or limitations other than restrictions and/or limitations imposed by Section 14 below.
- 1.44. “*Vesting Date*” shall mean the date or dates on which an Award Vests, at which time the Award shall be deemed “*Vested*.” Stock Options, SARs, Restricted Stock Awards, Stock Units, Performance Shares, Performance Units, and other equity-based Awards under the Plan shall have a minimum required vesting period of one year, except that up to five percent (5%) of the Common Stock reserved for issuance under the Plan may be granted to Participants without regard to any minimum vesting periods. In addition, notwithstanding the foregoing, the vesting of annual Awards to Non-Employee Directors that are made in connection with the Company’s annual meeting of stockholders will be deemed to satisfy the one-year minimum vesting requirement to the extent the Awards vest on the date of the Company’s next annual meeting of stockholders that is at least 50 weeks after the immediately preceding year’s annual meeting.
- 1.45. “*Voting Stock*” shall mean the capital stock of any class or classes having general voting power under ordinary circumstances, in the absence of contingencies, to elect the directors of a corporation.

2. PURPOSE AND TERM OF PLAN

- 2.1. **Purpose.** The purpose of the Plan is to motivate certain Employees, Group Employees, Nonemployee Directors and Independent Contractors to put forth maximum efforts toward the growth, profitability, and success of the Company, Affiliates and Group Companies by providing incentives to such Employees,

Group Employees, Nonemployee Directors and Independent Contractors through cash payments and/or through the ownership and performance of the Common Stock. In addition, the Plan is intended to provide incentives that will attract and retain highly qualified individuals as Employees, Group Employees and Nonemployee Directors and to assist in aligning the interests of such Employees, Group Employees and Nonemployee Directors with those of the Company's shareholders.

- 2.2. **Term.** The Plan was originally effective as of February 28, 2006, has been amended from time to time and has been amended and restated as of the Effective Date. The Plan shall terminate on the 10th anniversary of the Effective Date, unless sooner terminated by the Board under Section 17.1 below, and no Awards may be granted under the Plan after its termination.

3. ELIGIBILITY AND PARTICIPATION

- 3.1. **Eligibility.** All Employees, Group Employees, Nonemployee Directors and Independent Contractors shall be eligible to participate in the Plan and to receive Awards.
- 3.2. **Participation.** Participants shall consist of such Employees, Group Employees, Nonemployee Directors and Independent Contractors as the Committee in its sole discretion designates to receive Awards under the Plan. Awards under the Plan shall be made on a one-time basis for Participants and designation of a Participant in any year shall not require the Committee to designate such person or entity to receive an Award in any other year or, once designated, to receive the same type or amount of Award as granted to the Participant in any other year. The Committee shall consider such factors as it deems pertinent in selecting Participants and in determining the type and amount of their respective Awards.

4. ADMINISTRATION

- 4.1. **Responsibility.** The Committee will administer the Plan. The Committee shall have the responsibility, in its sole discretion, to control, operate, manage and administer the Plan in accordance with its terms.
- 4.2. **Award Agreement.** Each Award granted under the Plan shall be evidenced by an Award Agreement; *provided, however*, that in the event of any conflict between a provision of the Plan and any provision of an Award Agreement, the provision of the Plan shall prevail.
- 4.3. **Authority of the Committee.** The Committee shall have all the discretionary authority that may be necessary or desirable to enable it to discharge its responsibilities with respect to the Plan, including but not limited to the following:
- (a) to determine eligibility for participation in the Plan;
 - (b) to determine eligibility for and the type and size of an Award granted under the Plan;
 - (c) to supply any omission, correct any defect, interpret any provision or reconcile any inconsistency in the Plan, any Award Agreement in connection with an Award, and any other agreement or document executed pursuant to the Plan, in

such manner and to such extent as it shall deem appropriate in its sole discretion to carry the same into effect;

- (d) to issue administrative guidelines as an aid to administer the Plan and make changes in such guidelines as it, from time to time, deems proper;
- (e) to make rules for carrying out and administering the Plan and make changes in such rules as it, from time to time, deems proper;
- (f) to the extent permitted under the Plan, grant waivers of Plan terms, conditions, restrictions, and limitations;
- (g) to accelerate or, with the consent of the Participant, defer the Vesting of any Award when such action or actions would be in the best interest of the Company, subject to the limitations of Code Section 409A; and
- (h) to take any and all other actions it deems necessary or desirable for the proper operation or administration of the Plan.

Notwithstanding the foregoing, in no event will the Committee be permitted to, without the approval of the shareholders of the Company, (i) reduce the Exercise Price of any outstanding Stock Option or SAR, (ii) exchange or replace an outstanding Stock Option or SAR with a new Stock Option or SAR with a lower Exercise Price, except pursuant to Section 5.2, or (iii) cancel a Stock Option or SAR in exchange for cash or other Awards.

4.4. **Action by the Committee.** The Committee may act only by a majority of its members. A determination of the Committee may be made, without a meeting, by a writing signed by all members of the Committee. In addition, the Committee may authorize any one or more of its members to execute and deliver documents on behalf of the Committee. Meetings of the Committee may be held telephonically or via videoconference, and participation via telephone or videoconference shall have the same force and effect as physical presence at any Committee meeting.

4.5. **Delegation of Authority.** The Committee may delegate to one or more of its members, or to one or more agents, such administrative duties as it may deem advisable; *provided, however*, that any such delegation shall be in writing. In addition, the Committee, or any person to whom it has delegated duties under this Section 4.5, may employ one or more persons to render advice with respect to any responsibility the Committee or such person may have under the Plan. The Committee may employ such legal or other counsel, consultants and agents as it may deem desirable for the administration of the Plan and may rely upon any opinion or computation received from any such counsel, consultant or agent. Expenses incurred by the Committee in the engagement of such counsel, consultant or agent shall be paid by the Company, or the Affiliate or Group Company whose employees have benefited from the Plan, as determined by the Committee.

The Board may delegate authority to the Company's Chief Executive Officer to grant specified numbers of Awards (as determined by the Board from time to time and during such time periods determined by the Board) to existing or prospective Employees (other than those individuals who are subject to Section 16(a) of the Exchange Act at the time of the grant) as the Chief Executive Officer determines appropriate without further action of the Board, but subject to rules and guidelines established by the Board or the Committee.

- 4.6. **Determinations and Interpretations by the Committee.** All determinations and interpretations made by the Committee shall be binding and conclusive on all Participants and their heirs, successors, and legal representatives.
- 4.7. **Liability.** No member of the Board, no member of the Committee and no Employee or Group Employee shall be liable for any act or failure to act hereunder, except in circumstances involving his or her bad faith, gross negligence or willful misconduct, or for any act or failure to act hereunder by any other member or Employee or by any agent to whom duties in connection with the administration of the Plan have been delegated.
- 4.8. **Indemnification.** Each person who is or has been a member of the Committee or the Board, and any individual or individuals to whom the Committee has delegated authority under this Section 4, will be indemnified and held harmless by the Company, Group Company and Affiliates from and against any loss, cost, liability, or expense that may be imposed upon or reasonably incurred by him or her in connection with or as a result of any claim, action, suit or proceeding to which he or she may be a party or in which he or she may be involved by reason of any action taken, or failure to act, under the Plan, except in circumstances involving such person's bad faith, gross negligence or willful misconduct. Each such person will also be indemnified and held harmless by the Company Group Company and Affiliates from and against any and all amounts paid by him or her in a settlement approved by the Company, or paid by him or her in satisfaction of any judgment, of or in a claim, action, suit or proceeding against him or her and described in the previous sentence, so long as he or she gives the Company an opportunity, at its own expense, to handle and defend the claim, action, suit or proceeding before he or she undertakes to handle and defend it. The foregoing right of indemnification will not be exclusive of any other rights of indemnification to which a person who is or has been a member of the Committee or the Board may be entitled under the Articles of Incorporation or By-Laws of the Company, Group Company or Affiliate, as a matter of law, agreement or otherwise, or any power that the Company may have to indemnify him or her or hold him or her harmless.

5. SHARES SUBJECT TO PLAN

- 5.1. **Available Shares.** Subject to any adjustments made in accordance with Section 5.2 below, the aggregate number of shares of Common Stock that shall be available under the Plan during its term shall be the sum of (a) the 10,000,000 shares of Common Stock previously authorized and approved for issuance under the Plan as of the Company's 2011 annual meeting of shareholders, less the number of shares underlying Awards made under the Plan prior to the Effective Date (calculated as described below), (b) 84,273 shares of Common Stock originally authorized and approved for issuance, but not awarded, under the IPG Photonics Corporation 2000 Incentive Compensation Plan, as amended, and subsequently rolled into the Plan, (c) 194,919 shares of Common Stock originally authorized and approved for issuance, but not awarded, under the IPG Photonics Corporation Non-Employee Directors Stock Plan, as amended, and subsequently rolled into the Plan, and (d) 1,200,000 shares of Common Stock authorized and approved for issuance under the Plan as of the Company's 2023 annual meeting of shareholders. Such shares of Common Stock may be either authorized but unissued shares of Common Stock, shares of issued Common Stock held in the Company's treasury, or a combination of both, at the discretion of the Company. Except as otherwise provided in this Section 5.1, any shares of Common Stock

underlying an Award under the Plan or the Prior Plans that expires without being exercised, or is forfeited, cancelled or otherwise terminated without a distribution to a Participant of Common Stock, cash, or other benefit in lieu of Common Stock, shall again be available under the Plan; provided that any shares that again become available for Awards under this Section 5.1 shall be added back as 1.0 share if such shares were subject to Stock Options, SARs, or other appreciation-only Awards granted under the Plan or Prior Plans, and as 1.60 shares if such shares were subject to a Restricted Stock, Stock Unit, Performance Share, Performance Unit or other full-value stock-based Award granted under the Plan or Prior Plans. In applying the immediately preceding sentence, (i) shares of Common Stock tendered by Participants as full or partial payment of the Exercise Price to the Company upon exercise of Stock Options granted under the Plan or Prior Plans shall not again be available for issuance under the Plan, (ii) shares of Common Stock repurchased on the open market with the proceeds of the Exercise Price of a Stock Option shall not again be available for issuance under the Plan, (iii) if any share-settled SARs are exercised, the aggregate number of shares subject to such SARs shall be deemed issued under the Plan or Prior Plans and shall not again be available for issuance under the Plan, (iv) if any Stock Options are exercised through a reduction of shares subject to the Award (*i.e.*, “net exercised”), the aggregate number of shares subject to such Stock Option shall be deemed issued under the Plan or Prior Plans and shall not again be available for issuance under the Plan, and (v) if any shares are withheld by, or otherwise remitted to, the Company to satisfy a Participant’s tax withholding obligations with respect to any Awards granted under the Plan or Prior Plans, such shares shall be deemed issued under the Plan and shall not again be available for issuance under the Plan. Awards that are payable only in cash are not subject to this Section 5.1.

- (a) In addition to the maximum shares of Common Stock available for Awards under the Plan described above, the remaining shares of Common Stock shall be reduced by 1.60 for each share of Common Stock awarded pursuant to Restricted Stock, Performance Shares, Performance Units, Stock Units, or other Awards with value denominated in full shares of Common Stock for purposes of determining any individual or aggregate award limitations under the Plan and for purposes of calculating the aggregate amount of Common Stock available for Awards under the Plan. Each share-settled SAR that is granted shall reduce the remaining shares of Common Stock available under this Section by one (1.0), notwithstanding the fact that the net number of shares of Common Stock delivered on exercise may be less than the number of SARs granted. Except as contemplated by the provisions of Section 5.2 hereof, the Committee shall not increase the number of shares of Common Stock available for issuance in connection with Awards under the Plan or to any one individual as set forth above. In no event shall Awards be outstanding at any one time that have resulted or could result in the issuance of a number of shares of Common Stock in excess of the number then remaining reserved and available for issuance under the Plan.
- (b) The maximum number of shares of Common Stock that may be issued to Participants in the aggregate under the Plan as ISOs is 833,333.
- (c) Notwithstanding the foregoing, Awards granted through the assumption of, or in substitution or exchange for, similar awards previously granted by an entity directly or indirectly acquired by the Company or any Subsidiary, or with which the Company or any Subsidiary combines (“Substitute Awards”) shall not be counted for purposes of applying the above limitations on numbers of shares

available for Awards generally or any particular kind of Award under the Plan; provided, that Substitute Awards issued in connection with the assumption of, or in substitution for, outstanding options intended to qualify as “incentive stock options” within the meaning of Section 422 of the Code shall be counted against the aggregate number of shares available for Awards of ISOs under the Plan, set forth in Section 5.1(b). Subject to applicable stock exchange requirements, available shares under a shareholder approved plan of an entity directly or indirectly acquired by the Company or with which the Company combines (as appropriately adjusted to reflect the acquisition or combination transaction) may be used for Awards under the Plan and shall not reduce the number of shares of Common Stock available for issuance under the Plan (and shares subject to such Awards shall not be added to the Shares available for Awards under the Plan as provided in this Section 5.1); provided that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not employed by or providing services to the Company or its Affiliates immediately prior to such acquisition or combination.

- 5.2. **Adjustment to Shares.** If there is any change in the Common Stock of the Company, through merger, consolidation, Reorganization, Recapitalization, stock dividend, stock split, reverse stock split, split-up, split-off, spin-off, combination of shares, exchange of shares, dividend in kind or other like change in capital structure or distribution (other than ordinary cash dividends or, as determined by the Committee, special cash dividends) to shareholders of the Company, an adjustment shall be made to each outstanding Award so that each such Award shall thereafter be with respect to or exercisable for such securities, cash and/or other property as would have been received in respect of the Common Stock subject to such Award had such Award been paid, distributed or exercised in full immediately prior to such change or distribution. Such adjustment shall be made successively each time any such change or distribution shall occur. In addition, in the event of any such change or distribution, in order to prevent dilution or enlargement of Participants’ rights under the Plan, the Committee shall have the authority to adjust, in an equitable manner, the number and kind of shares that may be issued under the Plan, the number and kind of shares subject to outstanding Awards, the Exercise Price applicable to outstanding Stock Options, and the Fair Market Value of the Common Stock and other value determinations applicable to outstanding Awards. Appropriate adjustments may also be made by the Committee in the terms of any Awards granted under the Plan to reflect such changes or distributions and to modify any other terms of outstanding Awards on an equitable basis, including modifications of performance goals and changes in the length of performance periods. In addition, the Committee is authorized to make adjustments to the terms and conditions of, and the criteria included in, Awards in recognition of unusual or nonrecurring events affecting the Company or the financial statements of the Company, or in response to changes in applicable laws, regulations, or accounting principles. Notwithstanding anything contained in the Plan to the contrary, any adjustment with respect to an ISO due to a change or distribution described in this Section 5.2 shall comply with the rules of Code Section 424(a), and in no event shall any adjustment be made which would render any ISO granted hereunder to be disqualified as an incentive stock option for purposes of Code Section 422.

6. MAXIMUM INDIVIDUAL AWARDS

- 6.1. **Maximum Aggregate Number of Shares Underlying Stock-Based Awards Granted Under the Plan to Any Single Participant in Any Calendar Year.** The maximum aggregate number of shares of Common Stock underlying all Stock Options, SARs and any other Awards that are measured in shares of Common Stock (whether payable in Common Stock, cash or a combination of both) that may be granted to any single Participant (other than a Nonemployee Director) in any calendar year shall be 1,000,000 shares, subject to adjustment as provided in Section 5.2 above. For purposes of the preceding sentence, such Awards that are forfeited due to Vesting or other restrictions shall continue to be counted in determining such maximum aggregate number of shares of Common Stock that may be granted to any single Participant in any calendar year. The maximum aggregate number of shares of Common Stock underlying Awards that may be granted to any single Participant in any calendar year as ISOs shall be 133,333.
- 6.2. **Nonemployee Director Award Limit.** Notwithstanding any provision to the contrary in the Plan or in any policy of the Company regarding non-employee director compensation, the sum of the grant date fair value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of all equity-based Awards and the maximum amount that may become payable pursuant to all cash-based Awards that may be granted to a Participant as compensation for services as a Non-Employee Director during any calendar year shall not exceed \$1,200,000. For the avoidance of doubt, compensation shall be counted towards this limit for the Board compensation year in which it is earned (and not when it is paid or settled in the event that it is deferred).

7. STOCK OPTIONS

- 7.1. **In General.** The Committee may, in its sole discretion, grant Stock Options to Employees, Group Employees, Nonemployee Directors and/or Independent Contractors on or after the Effective Date. The Committee shall, in its sole discretion, determine the Employees, Group Employees, Nonemployee Directors and Independent Contractors who will receive Stock Options and the number of shares of Common Stock underlying each Stock Option. With respect to Employees who become Participants, the Committee may grant such Participants ISOs or Nonqualified Stock Options or a combination of both. With respect to Group Employees, Nonemployee Directors and Independent Contractors who become Participants, the Committee may grant such Participants only Nonqualified Stock Options. Each Stock Option shall be subject to such terms and conditions consistent with the Plan as the Committee may impose from time to time and set forth in the Award Agreement. In addition, each Stock Option shall be subject to the terms and conditions set forth in Sections 7.2 through 7.9 below.
- 7.2. **Exercise Price.** The Committee shall specify the Exercise Price of each Stock Option in the Award Agreement; *provided, however*, that (i) the Exercise Price of an ISO shall not be less than one hundred percent (100%) of the Fair Market Value of the Common Stock on the Award Date, and (ii) the Exercise Price of a Nonqualified Stock Option shall not be less than one hundred percent (100%) of the Fair Market Value of the Common Stock on the Award Date.

- 7.3. **Term of Stock Option.** The Committee shall specify the term of each Stock Option in the Award Agreement; *provided, however,* that no ISO or Nonqualified Stock Option shall be exercisable after the 10th anniversary of the applicable Award Date. Each Stock Option shall terminate at such earlier times and upon such conditions or circumstances as the Committee shall, in its sole discretion, set forth in the Award Agreement on the Award Date.
- 7.4. **Vesting Date.** The Committee shall specify in the Award Agreement the Vesting Date(s) or other requirements to Vest for each Stock Option. The Vesting of a Stock Option may be subject to such other terms and conditions as shall be determined by the Committee and set forth in the Award Agreement, including, without limitation, accelerating the Vesting if certain performance goals are achieved, or a Change in Control of the Company occurs and a Participant's Service is terminated.
- 7.5. **Exercise of Stock Options.** The Stock Option Exercise Price may be paid in cash or, in the sole discretion of the Committee, by delivery to the Company of shares of Common Stock then owned by the Participant, or by the Company's withholding a portion of the shares of Common Stock for which the Stock Option is exercisable, or by a combination of these methods. If the Common Stock is readily tradable on a national securities exchange or other market system, payment may also be made by delivering a properly executed exercise notice to the Company and delivering a copy of irrevocable instructions to a broker directing the broker to promptly deliver to the Company the amount of sale or loan proceeds to pay the Exercise Price. To facilitate the foregoing, the Company may enter into agreements for coordinated procedures with one or more brokerage firms. The Committee may prescribe any other method of paying the Exercise Price that it determines to be consistent with applicable law and the purpose of the Plan, including, without limitation, in lieu of the delivery to the Company of shares of Common Stock then owned by the Participant, providing the Company with a notarized statement attesting to the number of shares owned by the Participant, where, upon verification by the Company, the Company would issue to the Participant only the number of incremental shares to which the Participant is entitled upon exercise of the Stock Option. In determining which methods a Participant may utilize to pay the Exercise Price, the Committee may consider such factors as it determines are appropriate; *provided, however,* that with respect to ISOs, all such discretionary determinations shall be made by the Committee at the time of grant and specified in the Award Agreement.
- 7.6. **Restrictions Relating to ISOs.** In addition to being subject to the terms and conditions of this Section 7, ISOs shall comply with all other requirements under Code Section 422. Accordingly, ISOs may be granted only to Participants who are employees (as described in Treasury Regulation Section 1.421-1(h)) of the Company or of any "Parent Corporation" (as defined in Code Section 424(e)) or of any "Subsidiary Corporation" (as defined in Code Section 424(f)) on the Award Date. The aggregate market value (determined as of the time the ISO is granted) of the Common Stock with respect to which ISOs (under all option plans of the Company and of any Parent Corporation and of any Subsidiary Corporation) are exercisable for the first time by a Participant during any calendar year shall not exceed \$100,000. For purposes of the preceding sentence, (i) ISOs shall be taken into account in the order in which they are granted and (ii) ISOs granted before 1987 shall not be taken into account. ISOs shall not be transferable by the Participant other than by will or the laws of descent and distribution and shall be exercisable, during the Participant's lifetime, only by

such Participant. The Committee shall not grant ISOs to any Employee who, at the time the ISO is granted, owns stock possessing (after the application of the attribution rules of Code Section 424(d)) more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent Corporation or of any Subsidiary Corporation unless (i) the Exercise Price of the ISO is fixed at not less than one hundred and ten percent (110%) of the Fair Market Value of the Common Stock on the Award Date and (ii) the exercise of such ISO is prohibited by its terms after the 5th anniversary of the ISO's Award Date.

7.7. **Conversion Stock Options.** The Committee may, in its sole discretion, grant a Stock Option to any holder of an option (hereinafter referred to as an "Original Option") to purchase shares of stock of any corporation:

- (a) the stock or assets of which were acquired, directly or indirectly, by the Company, an Affiliate or Group Company, or
- (b) which was merged with and into the Company, an Affiliate or Group Company,

so that the Original Option is converted into a Stock Option (hereinafter referred to as a "Conversion Stock Option"); provided, however, that such Conversion Stock Option as of the Award Date (the "Conversion Stock Option Grant Date") shall have the same economic value as the Original Option as of the Conversion Stock Option Grant Date. In addition, unless the Committee in its sole discretion determines otherwise, a Conversion Stock Option that is converting an Original Option intended to qualify as an ISO shall have the same terms and conditions as applicable to the Original Option in accordance with Code Section 424 and the Treasury Regulations thereunder so that the conversion (x) is treated as the issuance or assumption of a stock option under Code Section 424(a) and (y) is not treated as a modification, extension or renewal of a stock option under Code Section 424(h).

7.8. **Right to Call Stock Options or Common Stock.** Notwithstanding any other provision of this Plan, any Stock Option granted under this Plan shall be subject to a right of call by the Committee in the event of termination of the Plan due to merger or acquisition of the Company. If the Committee exercises the right to call the Common Stock, the Participant must return the shares of Common Stock to the Company within seven (7) calendar days following the call notice.

- (a) Upon the call of Common Stock, the owner of the Common Stock shall, unless otherwise determined by the Committee pursuant to subsection (b) below, be entitled to receive from the Company an amount equal to the Fair Market Value of the returned Common Stock.
- (b) Upon the call of a Stock Option, the Committee shall pay the optionee an amount equal to the excess of (i) the Fair Market Value the number of shares of Common Stock subject to the Option, over (y) the Exercise Price of such shares of Common Stock.
- (c) The Company shall have the right to defer payment of the proceeds under this Section 7.8, and make such payment in the form of single lump sum or in installments over such periods as the Committee may determine in its discretion, subject to Code Section 409A.

8. SARS

- 8.1. **In General.** The Committee may, in its sole discretion, grant SARs to Employees, Group Employees, Nonemployee Directors, and/or Independent Contractors. A SAR is a right to receive a payment in cash, Common Stock or a combination of both, in an amount equal to the excess of (x) the Fair Market Value of a specified number of shares of Common Stock on the date the SAR is exercised over (y) the Fair Market Value of such shares of Common Stock on the Award Date, all as determined and set forth in the Award Agreement by the Committee; *provided, however*, that if a SAR is granted retroactively in tandem with or in substitution for a Stock Option, the designated Fair Market Value of the Common Stock in the Award Agreement may be the Fair Market Value of the Common Stock on the Award Date of the Stock Option. Each SAR shall be subject to the terms of the Plan and the applicable Award Agreement, which may include the Vesting Date, an expiration date, and a provision that automatically converts a SAR into a Stock Option on a conversion date specified at the time of grant. In no event shall a SAR be exercisable after the 10th anniversary of the Award Date of such SAR.

9. RESTRICTED STOCK AWARDS AND STOCK UNITS

- 9.1. **Restricted Stock Awards.** The Committee may, in its sole discretion, grant Restricted Stock Awards to Employees, Group Employees, Nonemployee Directors, and/or Independent Contractors as additional compensation or in lieu of other compensation for Services to the Company, an Affiliate or a Group Company. A Restricted Stock Award shall consist of shares of Common Stock that are subject to such terms and conditions as the Committee in its sole discretion determines appropriate and sets forth in the Award Agreement including, without limitation, restrictions on the sale or other disposition of such shares, the Vesting Date with respect to such shares and the right of the Company to reacquire such shares for no consideration upon termination of the Participant's Service within specified periods.
- 9.2. **Stock Certificates.** Except as otherwise provided in this Section 9.2, the Company will issue each Participant entitled to receive shares of Common Stock under the Plan a certificate for such shares. Such certificate will be registered in the name of the Participant and will bear an appropriate legend reciting the terms, conditions and restrictions, if any, applicable to the Common Stock. Each certificate will be subject to appropriate stop-transfer orders. To the extent that the Plan provides for issuance of stock certificates to reflect the issuance of shares of Common Stock, the issuance may be effected on a non-certificated basis, to the extent not prohibited by applicable law or the applicable rules of any stock exchange or market system. If the issuance of shares under the Plan is effected on a non-certificated basis, the issuance of shares to a Participant will be reflected by crediting (by means of a book entry) the applicable number of shares of Common Stock to an account maintained by the Company in the name of such Participant, which account may be an account maintained by the Company for such Participant under any dividend reinvestment program offered by the Company. The Committee may require, under such terms and conditions as it deems appropriate or desirable, that the certificates for Restricted Stock delivered under the Plan be held in custody by a bank or other institution, or that the Company may itself hold such shares in custody until the Vesting conditions expire or until restrictions thereon otherwise lapse, and may require, as a condition of any receipt of Restricted Stock, that the recipient will have delivered a stock power endorsed

in blank relating to the Restricted Stock. Certificates for shares of unrestricted Common Stock may be delivered to the Participant after, and only after, the Vesting conditions will have expired without forfeiture in respect of such shares of Restricted Stock.

- 9.3. **Stock Units.** The Committee may, in its sole discretion, grant Stock Units to Employees, Group Employees, Nonemployee Directors, and Independent Contractors as additional compensation or in lieu of other compensation for Services to the Company, an Affiliate or a Group Company. A Stock Unit is a hypothetical share of Common Stock represented by a notional account established and maintained (or caused to be established or maintained) by the Company for such Participant who receives a grant of Stock Units. Stock Units shall be subject to such terms and conditions as the Committee, in its sole discretion, determines appropriate and sets forth in the Award Agreement including, without limitation, determinations of the Vesting Date with respect to such Stock Units and the criteria for the Vesting of such Stock Units. Subject to Section 9.4, a Stock Unit granted by the Committee shall provide for payment in shares of Common Stock at such time or times as the Award Agreement shall specify.
- 9.4. **Payout of Stock Units.** Subject to a Participant's election to defer in accordance with Section 18.4 below, upon the Vesting Date of a Stock Unit, the shares of Common Stock representing the Stock Unit shall be distributed to the Participant, unless the Committee, in its sole discretion, provides for the payment of the Stock Unit in cash (or partly in cash and partly in shares of Common Stock) equal to the value of the shares of Common Stock which would otherwise be distributed to the Participant.
- 9.5. A Participant shall have the right to vote unvested shares of Common Stock subject to a Restricted Award Agreement issued to the Participant under the Plan. The Participant shall not have the right to vote the shares of Common Stock subject to a Stock Unit until that award vests and shares of Common Stock are actually issued thereunder. Dividend Equivalent Rights may be credited, either in cash or in actual shares of Common Stock, on outstanding unvested shares of Common Stock issued under the Plan or Stock Units, subject to such terms and conditions as the Plan Administrator may deem appropriate, provided that any applicable dividend and dividend equivalent amounts with respect to unvested shares of Common Stock or any shares of Common Stock underlying any Award may be accrued but not paid to a Participant until all conditions or restrictions relating to such shares of Common Stock have been satisfied or lapsed and shall be forfeited if all of such conditions or restrictions are never satisfied or lapse.

10. PERFORMANCE SHARES AND PERFORMANCE UNITS

- 10.1. **Performance Shares.** The Committee may, in its sole discretion, grant Performance Shares to Employees, Group Employees, Nonemployee Directors, and/or Independent Contractors as additional compensation or in lieu of other compensation for Services to the Company, an Affiliate or a Group Company. A Performance Share shall consist of a share or shares of Common Stock that are subject to such terms and conditions as the Committee, in its sole discretion, determines appropriate and sets forth in the Award Agreement including, without limitation, determining the performance goal or goals that, depending on the extent to which such goals are met, will determine the number and/or value of the Performance Shares that will be paid out or distributed to the Participant and any

other Vesting criteria. Performance goals may be based on, without limitation, Company-wide, divisional and/or individual performance, as the Committee, in its sole discretion, may determine.

- 10.2. **Performance Units.** The Committee may, in its sole discretion, grant Performance Units to Employees, Group Employees, Nonemployee Directors, and/or Independent Contractors as additional compensation or in lieu of other compensation for Services to the Company, an Affiliate or Group Company. A Performance Unit is a hypothetical share of the value of the Company, represented by a notional account that the Company shall establish and maintain (or caused to be established or maintained) for such Participant who receives a grant of Performance Units. Performance Units shall be subject to such terms and conditions as the Committee, in its sole discretion, determines appropriate and sets forth in the Award Agreement including, without limitation, determining the performance goal or goals that, depending on the extent to which such goals are met, will determine the number and/or value of the Performance Units that will accrue to the Participant and any other Vesting criteria. Performance goals may be based on, without limitation, Company-wide, divisional and/or individual performance, as the Committee, in its sole discretion, may determine.
- 10.3. **Adjustment of Performance Goals.** The Committee shall have the authority at any time to adjust, as it deems necessary or desirable, the performance goals for any outstanding Performance Shares or Performance Units unless, at the time of establishment of such performance goals, the Committee precludes its authority to make such adjustments.
- 10.4. **Payout of Performance Shares or Performance Units.** Subject to a Participant's election to defer distribution in accordance with Section 18.4 below, upon the Vesting of a Performance Share or a Performance Unit, the shares of Common Stock representing the Performance Share or the cash value of the Performance Unit shall be distributed to the Participant, unless the Committee, in its sole discretion, determines to make the payment for the Performance Share in cash, or the Performance Unit in shares of Common Stock (or partly in cash and partly in shares of Common Stock) equal to the value of the shares of Common Stock or cash that would otherwise be distributed to the Participant.
- 10.5. A Participant shall have the right to vote unvested shares of Common Stock subject to a Performance Share Award issued to the Participant under the Plan. The Participant shall not have the right to vote the shares of Common Stock subject to a Performance Unit until that award vests and shares of Common Stock are actually issued thereunder. Dividend Equivalent Rights may be credited, either in cash or in actual shares of Common Stock, on outstanding unvested shares of Common Stock issued under the Plan or Performance Units, subject to such terms and conditions as the Plan Administrator may deem appropriate, provided that any applicable dividend and dividend equivalent amounts with respect to unvested shares of Common Stock or any shares of Common Stock underlying any Award may be accrued but not paid to a Participant until all conditions or restrictions relating to such shares of Common Stock have been satisfied or lapsed and shall be forfeited if all of such conditions or restrictions are never satisfied or lapse.

11. CASH AWARDS

The Committee may, in its sole discretion, grant Cash Awards to Employees, Group Employees, Nonemployee Directors, and/or Independent Contractors as additional compensation or in lieu of other compensation for Services to the Company, an Affiliate or Group Company. A Cash Award shall be subject to such terms and conditions as the Committee, in its sole discretion, determines appropriate and sets forth in the Award Agreement including, without limitation, determining the Vesting Date with respect to such Cash Award, the criteria for the Vesting of such Cash Award, and the right of the Company to require the Participant to repay the Cash Award (with or without interest) upon termination of the Participant's Service within specified periods.

12. [RESERVED]

13. CHANGE IN CONTROL

13.1. **Accelerated Vesting Upon Termination of Service.** Unless the terms of an Award Agreement expressly provide otherwise, if there is a Change in Control of the Company, and, within two years following the Change in Control, the Company terminates a Participant's Service other than for Cause or the Participant terminates Service for Good Reason, any outstanding Awards held by the Participant shall Vest. For this purpose, Good Reason will have the same meaning as such term or similar term is used in any employment, consulting, severance, or other written agreement between the Participant and the Company or an Affiliate. If there is no employment, consulting, or other written agreement between the Company or an Affiliate and the Participant or if such agreement does not define "Good Reason" or such similar term, then "Good Reason" will have the meaning specified in the Award Agreement; provided, that if the Award Agreement does not so specify, "Good Reason" will mean, as determined by the Committee in its sole discretion and solely with respect to this Plan and any Award made hereunder, the occurrence of any of the following events without the Participant's express written consent:

- (a) The material reduction of the Participant's authorities, duties, and position with the Company;
- (b) A reduction by the Company of the Participant's base compensation by more than fifteen percent (15%), other than a reduction approved by the Board that similarly applies to all executive officers of the Company; or
- (c) A change in the offices of the Participant to a place that is more than thirty-five (35) miles in distance farther from the Participant's home than the current executive offices of the Company in Marlborough, MA.

The Participant must provide notice to the Company of the existence of one or more of the foregoing conditions within ninety (90) calendar days of the initial existence of the condition, upon the notice of which the Company will have thirty (30) calendar days during which it may remedy the condition and not be required to Vest the Awards. For a Participant's termination of Service to be on account of "Good Reason," it must occur within one hundred eighty (180) calendar days following the initial existence of the applicable condition.

13.2. **Cashout.** The Committee, in its sole discretion, may determine that, upon the occurrence of a Change in Control of the Company, all or a portion of certain

outstanding Awards shall terminate within a specified number of days after notice to the holders, and each such holder shall receive an amount equal to the value of such Award on the date of the Change in Control, and with respect to each share of Common Stock subject to a Stock Option or SAR, an amount equal to the excess, if any, of the Fair Market Value of such shares of Common Stock immediately prior to the occurrence of such Change in Control of the Company over the Exercise Price per share of such Stock Option or SAR. Such amount shall be payable in cash, in one or more kinds of property (including the property, if any, payable in the transaction) or in a combination thereof, as the Committee, in its sole discretion, shall determine.

- 13.3. **Assumption or Substitution of Awards.** Notwithstanding anything contained in the Plan to the contrary, the Committee may, in its sole discretion, provide that an Award may be assumed by any entity that acquires control of the Company or may be substituted by a similar award under such entity's compensation plans. If any entity that acquires control of the Company does not agree to assume outstanding Awards upon a Change in Control or replace such Awards with awards that preserve the existing value of the Award at the time of the Change in Control and provide for subsequent payout in accordance with the same Vesting schedule applicable to the original Awards, then, at the time of the Change in Control, (i) all outstanding Stock Options and SARs shall become immediately Vested and exercisable; (ii) all restrictions on Restricted Stock Awards and Stock Units shall immediately lapse; (iii) all performance goals other than with respect to performance-based Cash Awards shall be deemed achieved at target levels and all other terms and conditions met; (iv) all performance-based Cash Awards shall be paid out at target levels (or earned levels, if greater) and all other terms and conditions deemed met; and (v) all Performance Shares shall be delivered, and all Cash Awards, Performance Units and Stock Units shall be paid out as promptly as practicable.

14. TERMINATION OF SERVICE

- 14.1. **Termination of Service Due to Death or Disability.** Unless the terms of an Award Agreement expressly provide otherwise, if a Participant's Service is terminated due to death all non-Vested portions of Awards held by the Participant on the date of the Participant's death shall immediately Vest.

Unless the terms of an Award Agreement expressly provide otherwise, if a Participant's Service is terminated due to death or Disability, all Vested portions of Stock Options and SARs held by the Participant on the date of the Participant's death or Disability shall remain exercisable until the earlier of:

- (i) the end of the 12-month period following the date of the Participant's death or Disability, or
- (ii) the date the Stock Option or SAR would otherwise expire.

- 14.2. **Termination of Service for Cause.** Unless the terms of an Award Agreement expressly provide otherwise, if a Participant's Service is terminated by the Company, the Affiliate or the Group Company, as the case may be, for Cause, all Awards held by the Participant on the date of the termination of Service, whether Vested or non-Vested, shall immediately be forfeited by the Participant as of such date. A Participant's Service shall be deemed to have terminated for Cause if, after the Participant's Service has terminated, facts and circumstances are discovered that would have justified a termination for Cause.

- 14.3. **Other Terminations of Service.** Unless the terms of an Award Agreement expressly provide otherwise, if a Participant's Service is terminated for any reason other than for Cause or other than due to death or Disability:
- (a) all non-Vested portions of Awards held by the Participant on the date of the termination of his or her Service shall immediately be forfeited by such Participant as of such date; and
 - (b) all Vested portions of Stock Options and/or SARs held by the Participant on the date of the termination of his or her Service shall remain exercisable until the earlier of (i) the end of the ninety (90) calendar day period following the date of the termination of the Participant's Service or (ii) the date the Stock Option or SAR would otherwise expire.

Notwithstanding the foregoing, the Vesting, expiration and forfeiture of any Stock Options and/or SARs awarded to an Independent Contractor shall be governed by the terms of the written Award Agreement.

- 14.4. **ISOs.** Notwithstanding anything contained in the Plan to the contrary, (i) the provisions contained in this Section 14 shall be applied to an ISO only if the application of such provision maintains the treatment of such ISO as an ISO.
- 14.5. **Leave of Absence.** A Participant shall not cease to be an Employee for purposes of this Plan solely on account of a Leave of Absence. For purposes of ISOs, no such leave may exceed ninety (90) calendar days, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, on the one hundred eighty-first (181st) calendar day of such leave any ISO held by the Participant shall cease to be treated as an ISO and shall be treated for tax purposes as a Nonqualified Stock Option. Notwithstanding anything in the Plan to the contrary, the Committee, in its sole discretion, reserves the right to designate a Participant's leave of absence as "Personal Leave;" provided that military leaves and approved family or medical leaves shall not be considered Personal Leave. No Awards shall be made to a Participant during Personal Leave. Except where prohibited by law, a Participant's un-Vested Awards shall remain un-Vested during such Personal Leave and the time spent on such Personal Leave shall not count towards the Vesting of such Awards. A Participant's Vested Stock Options that may be exercised shall remain exercisable upon commencement of Personal Leave until the earlier of (i) a period of one year from the date of commencement of such Personal Leave; or (ii) the remaining exercise period of such Stock Options. Notwithstanding the foregoing, if a Participant returns to the Company from a Personal Leave of less than one year and the Participant's Stock Options have not lapsed, the Stock Options shall remain exercisable for the remaining exercise period as provided at the time of grant and subject to the conditions contained herein.

15. NONEMPLOYEE DIRECTOR COMPENSATION

- 15.1. **Annual Cash Retainer.** Each Nonemployee Director will be paid a retainer fee for Service as a member of the Board (the "Annual Retainer"), in an amount that the Board will establish from time to time by resolution, in accordance with the IPG Photonics Corporation Non-Employee Director Compensation Plan. In no event will the sum of the cash portion of the Annual Retainer and any Cash Award to any Participant who is a Nonemployee Director exceed \$250,000 in a

given period of time beginning on an annual shareholder meeting date and ending on the day immediately preceding the following annual shareholder meeting date.

- 15.2. **Equity Awards.** Each Nonemployee Director will be eligible to receive an Award upon appointment or election to the Board, and annually thereafter, in accordance with the Director Plan and subject to the limit in Section 6.1 and the terms of the applicable Award Agreement.

16. TAXES

- 16.1. **Withholding Taxes.** With respect to Employees and Group Employees, the Company, or the applicable Affiliate or Group Company, may require a Participant who has Vested in his or her Restricted Stock Award, Stock Unit, Performance Share or Performance Unit granted hereunder, or who exercises a Stock Option or SAR granted hereunder, to reimburse the corporation that employs such Employee or Group Employee for any taxes required by any governmental regulatory authority to be withheld or otherwise deducted and paid by such corporation or entity in respect of the issuance or disposition of such shares or the payment of any amounts. In lieu thereof, the corporation that employs such Employee or Group Employee shall have the right to withhold the amount of such taxes from any other sums due or to become due from such corporation to the Employee or Group Employee upon such terms and conditions as the Committee shall prescribe. The corporation that employs the Employee or Group Employee may, in its discretion, hold the stock certificate to which such Employee or Group Employee is entitled upon the Vesting of a Restricted Stock Award, Stock Unit, Performance Share or Performance Unit or the exercise of a Stock Option or SAR as security for the payment of such withholding tax liability, until cash sufficient to pay that liability has been accumulated.
- 16.2. **Use of Common Stock to Satisfy Withholding Obligation.** With respect to Employees and Group Employees, at any time that the Company or an Affiliate or Group Company that employs such Employee or Group Employee becomes subject to a withholding obligation under applicable law with respect to the Vesting of a Restricted Stock Award, Stock Unit, Performance Share or Performance Unit or the exercise of a Nonqualified Stock Option (the "Tax Date"), except as set forth below, a holder of such Award may elect to satisfy, in whole or in part, the holder's related personal tax liabilities (an "Election") by (i) directing the Company, the Affiliate or the Group Company that employs such Employee or Group Employee to withhold from shares issuable in the related Vesting or exercise either a specified number of shares, or shares of Common Stock having a specified value in each case equal to the statutory personal withholding tax liabilities with respect to the applicable taxing jurisdiction, (ii) tendering shares of Common Stock previously issued pursuant to the exercise of a Stock Option or other shares of the Common Stock owned by the holder, or (iii) combining any or all of the foregoing Elections in any fashion. An Election shall be irrevocable. The withheld shares and other shares of Common Stock tendered in payment shall be valued at their Fair Market Value of the Common Stock on the Tax Date. The Committee may disapprove any Election, suspend or terminate the right to make Elections or provide that the right to make Elections shall not apply to particular shares or exercises. The Committee may impose any additional conditions or restrictions on the right to make an Election as it shall deem appropriate, including conditions or restrictions with respect to Section 16 of the Exchange Act.

- 16.3. **No Guarantee of Tax Consequences.** No person connected with the Plan in any capacity, including, but not limited to, the Company, an Affiliate or a Group Company and their directors, officers, agents and employees makes any representation, commitment, or guarantee that any tax treatment, including, but not limited to, federal, state and local income, estate and gift tax treatment, will be applicable with respect to amounts deferred under the Plan, or paid to or for the benefit of a Participant under the Plan, or that such tax treatment will apply to or be available to a Participant on account of participation in the Plan.

17. AMENDMENT AND TERMINATION

- 17.1. **Termination of Plan.** The Board may suspend or terminate the Plan at any time with or without prior notice; *provided, however*, that no action authorized by this Section 17.1 shall reduce the amount of any outstanding Award or change the terms and conditions thereof without the Participants' consent, except as expressly provided herein.
- 17.2. **Amendment of Plan.** The Board may amend the Plan at any time with or without prior notice; *provided, however*, that no action authorized by this Section 17.2 shall reduce the amount of any outstanding Award or change the terms and conditions thereof without the Participants' consent, except as expressly provided herein. No amendment of the Plan shall, without the approval of the shareholders of the Company:
- (a) increase the total number of shares of Common Stock that may be issued under the Plan;
 - (b) increase the maximum number of shares with respect to all Awards measured in Common Stock that may be granted to any individual under the Plan;
 - (c) increase the maximum dollar amount that may be paid with respect to all Awards measured in cash; or
 - (d) modify the requirements as to eligibility for Awards under the Plan.

In addition, the Plan shall not be amended without the approval of such amendment by the Company's shareholders if such amendment (i) is required under the rules and regulations of the stock exchange or national market system on which the Common Stock is listed or (ii) will disqualify any ISO granted hereunder.

- 17.3. **Amendment or Cancellation of Award Agreements.** The Committee may amend or modify any Award Agreement at any time by mutual agreement between the Committee and the Participant or such other persons as may then have an interest therein; *provided, however*, that (i) no such amendment, modification, extension, cancellation, renewal, exchange, substitution or replacement will be to the detriment of a Participant with respect to any Award previously granted without the affected Participant's written consent, (ii) any such amendment, modification, extension, cancellation, renewal exchange, substitution, or replacement must satisfy the requirements for exemption under Code Section 409A, and (iii) in no event will the Committee be permitted to, without the approval of the shareholders of the Company, (A) reduce the Exercise Price of any outstanding Stock Option or SAR, (B) exchange or replace an outstanding Stock Option or SAR with a new Stock Option or SAR with a lower Exercise Price, except pursuant to Section 5.2, or (C) cancel a Stock Option or SAR in exchange for cash or other Awards. In addition, by mutual agreement

between the Committee and a Participant or such other persons as may then have an interest therein, Awards may be granted to an Employee, Group Employee, Nonemployee Director or Independent Contractor in substitution and exchange for, and in cancellation of, any Awards previously granted to such Employee, Group Employee, Nonemployee Director or Independent Contractor under the Plan, or any award previously granted to such Employee, Group Employee, Nonemployee Director or Independent Contractor under any other present or future plan of the Company or any present or future plan of an entity which (i) is purchased by the Company, (ii) purchases the Company, or (iii) merges into or with the Company.

- 17.4. **Certain Amendments.** Notwithstanding any provision in the Plan or in any Award Agreement to the contrary, the Board may amend the Plan without the consent of any Participant and the Committee may amend any Award Agreement without the consent of the Participant in order to comply with applicable law, including Code Sections 409A, stock exchange listing standards, or accounting rules.

18. MISCELLANEOUS

- 18.1. **Other Provisions.** Awards granted under the Plan may also be subject to such other provisions (whether or not applicable to an Award granted to any other Participant) as the Committee determines on the Award Date to be appropriate, including, without limitation, for the installment purchase of Common Stock under Stock Options, to assist the Participant in financing the acquisition of Common Stock, for the forfeiture of, or restrictions on resale or other disposition of, Common Stock acquired under any Stock Option, for the acceleration of Vesting of Awards in the event of a Change in Control of the Company, for the payment of the value of Awards to Participants in the event of a Change in Control of the Company, or to comply with federal and state securities laws, or understandings or conditions as to the Participant's Service in addition to those specifically provided for under the Plan.
- 18.2. **Restrictive Covenants and Other Terms and Conditions.** The Committee may provide, by way of the Award Agreement or otherwise, that, notwithstanding any other provision of this Plan to the contrary, if the Participant breaches the non-compete, non-solicitation, non-disclosure or other terms, conditions, restrictions and/or limitations of the Award Agreement, whether during or after termination of Service, in addition to any other penalties or restrictions that may apply under any employment agreement, consulting agreement, state law, or otherwise, the Participant will forfeit:
- (a) any and all Awards granted to him or her under the Plan, including Awards that have become Vested, shares of Common Stock that have been distributed to him or her, and the full value of shares of Common Stock that the Participant has sold (the Participant may be required to return such shares or repay the full value of such share of Common Stock to the Company); and/or
 - (b) the profit the Participant has realized on the vesting or disposition of an Award granted to him or her under the Plan, including from exercise of any Stock Options, which is the difference between the Stock Options' Exercise Price and the Fair Market Value of any Stock Option the Participant exercised (the Participant may be required to repay the profit and such difference to the Company).

- 18.3. **Transferability.** Each Award granted under the Plan to a Participant shall not be transferable other than by will or the laws of descent and distribution, and Stock Options and SARs shall be exercisable, during the Participant's lifetime, only by the Participant. In the event of the death of a Participant, each Stock Option or SAR theretofore granted to him or her shall be exercisable during such period after his or her death as the Committee shall, in its sole discretion, set forth in the Award Agreement on the Award Date and then only by the executor or administrator of the estate of the deceased Participant or the person or persons to whom the deceased Participant's rights under the Stock Option or SAR shall pass by will or the laws of descent and distribution. Notwithstanding the foregoing, the Committee, in its sole discretion, may permit the transferability of a Stock Option (other than an ISO) by a Participant solely to members of the Participant's immediate family or trusts or family partnerships or other similar entities for the benefit of such persons, and subject to such terms, conditions, restrictions and/or limitations, if any, as the Committee may establish and include in the Award Agreement.
- 18.4. **Election to Defer Compensation Attributable to Award.** The Committee may, in its sole discretion and subject to Code Section 409A, allow a Participant to elect to defer the receipt of any compensation attributable to an Award under guidelines and procedures to be established by the Committee after taking into account the advice of the Company's tax counsel.
- 18.5. **Listing of Shares and Related Matters.** If at any time the Committee shall determine that the listing, registration or qualification of the shares of Common Stock subject to an Award on any securities exchange or under any applicable law, or the consent or approval of any governmental regulatory authority, is necessary or desirable as a condition of, or in connection with, the granting of an Award or the issuance of shares of Common Stock thereunder, such Award may not be exercised, distributed or paid out, as the case may be, in whole or in part, unless such listing, registration, qualification, consent or approval shall have been effected or obtained free of any conditions not acceptable to the Committee.
- 18.6. **No Right, Title, or Interest in Company Assets.** Participants shall have no right, title, or interest whatsoever in or to any investments that the Company may make to aid it in meeting its obligations under the Plan. Nothing contained in the Plan, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind, or a fiduciary relationship between the Company and any Participant, beneficiary, legal representative or any other person. To the extent that any person acquires a right to receive payments from the Company under the Plan, such right shall be no greater than the right of an unsecured general creditor of the Company. All payments to be made hereunder shall be paid from the general funds of the Company, no special or separate fund shall be established, and no segregation of assets shall be made to assure payment of such amounts except as expressly set forth in the Plan. The Plan is not intended to be subject to the Employee Retirement Income Security Act of 1974, as amended.
- 18.7. **No Right to Continued Employment or Service or to Grants.** A Participant's rights, if any, to continue to serve the Company, an Affiliate or a Group Company as a director, officer, Employee, independent contractor or otherwise, shall not be enlarged or otherwise affected by his or her designation as a Participant under the Plan, and the Company, the Affiliate and the Group Company reserve the right to terminate the employment or Service of any Employee or Group Employee or the Services of any Independent Contractor or director at any time. The adoption of

the Plan shall not be deemed to give any Employee, Group Employee, Nonemployee Director, Independent Contractor or any other individual any right to be selected as a Participant or to be granted an Award.

- 18.8. **Awards Subject to Foreign Laws.** The Committee may grant Awards to individual Participants who are subject to the tax laws of nations other than the United States, and such Awards may have terms and conditions as determined by the Committee as necessary to comply with applicable foreign laws. The Committee may take any action that it deems advisable to obtain approval of such Awards by the appropriate foreign governmental entity; *provided, however,* that no such Awards may be granted pursuant to this Section and no action may be taken which would result in a violation of the Exchange Act or any other applicable law. The Committee may make such modifications, amendments, procedures, or sub-plans as may be necessary or advisable to comply with such legal or regulatory provisions. The Committee also may impose conditions on the exercise or Vesting of Awards in order to minimize the Company's obligation with respect to tax equalization for Participants on assignments outside their home country.
- 18.9. **Governing Law.** The Plan, all Awards granted hereunder, and all actions taken in connection herewith shall be governed by and construed in accordance with the laws of the State of Delaware without reference to principles of conflict of laws, except as superseded by applicable federal law. Participants, the Company, a Group Company and Affiliate each submit and consent to the jurisdiction of the courts in the Commonwealth of Massachusetts, County of Worcester, including the Federal Courts located therein, should Federal jurisdiction requirements exist in any action brought to enforce (or otherwise relating to) this Plan or an Award Agreement.
- 18.10. **Statute of Limitations for Claims Involving the Plan or Awards.** If a Participant believes that the Committee has not followed his or her election, or the Participant believes that he or she has a claim against the Plan, the Company or Committee under the terms of the Plan or an Award Agreement, the Participant must file a written claim with the Committee within twelve (12) months after the Participant learned of the claim or allegedly made the election.
- 18.11. **Other Agreements.** Notwithstanding any provision of the Plan or an Award Agreement to the contrary, to the extent any employment, consulting, or other written agreement between the Participant and the Company, a Group Company or Affiliate provides Vesting terms or post-termination exercise periods with respect to an Award that are more favorable to the Participant than those set forth in the Plan or an Award Agreement, the Vesting terms or post-termination exercise periods in such employment, consulting, or other written agreement between the Participant and the Company, a Group Company or Affiliate shall control.
- 18.12. **Other Benefits.** No Award granted under the Plan shall be considered compensation for purposes of computing benefits under any retirement plan of the Company, an Affiliate or a Group Company nor affect any benefits or compensation under any other benefit or compensation plan of the Company, and Affiliate or a Group Company, now or subsequently in effect.
- 18.13. **No Fractional Shares.** No fractional shares of Common Stock shall be issued or delivered pursuant to the Plan or any Award. The Committee shall determine whether cash, Common Stock, Stock Options, or other property shall be issued or

paid in lieu of fractional shares or whether such fractional shares or any rights thereto shall be forfeited or otherwise eliminated.

- 18.14. **Electronic Delivery of Plan Information and Electronic Signatures.** To the extent permitted by applicable law, the Company may deliver by email or other electronic means (including posting on a web site maintained by the Company or by a third party under contract with the Company) all documents relating to the Plan or any Award thereunder (including without limitation, prospectuses required by applicable securities law) and all other documents that the Company is required to deliver to its security holders (including without limitation, annual reports and proxy statements). To the extent permitted by applicable law, the Participant's execution of an Award Agreement may be made by electronic facsimile or other method of recording of the Participant's signature in a manner that is acceptable to the Committee.
- 18.15. **Compliance With Code Section 409A.** Any provision of the Plan that becomes subject to Code Section 409A will be interpreted and applied consistent with that Section and the applicable Treasury Regulations. Each payment in a series of payments hereunder shall be deemed to be a separate payment for purposes of Code Section 409A. If a Participant is a "specified employee" (as such term is defined for purposes of Code Section 409A) at the time of his or her termination of Service, no amount that is subject to Code Section 409A and that becomes payable by reason of such termination of Service shall be paid to the Participant before the earlier of (i) the expiration of the six (6) month period measured from the date of the Participant's termination of Service, and (ii) the date of the Participant's death. A termination of Service shall be deemed to occur only if it is a "separation from service" within the meaning of Code Section 409A, and references in the Plan and any Award Agreement to "termination," "termination of employment," or like terms shall mean a "separation from service." A separation from Service shall be deemed to occur if it is anticipated that the level of Services the Participant will perform after a certain date (whether as an Employee or as an Independent Contractor) will permanently decrease to no more than twenty percent (20%) of the average level of Services provided by the Participant in the immediately preceding thirty-six (36) months. With respect to any Award that is or becomes subject to Code Section 409A, a Change in Control would only be deemed to have occurred only upon a change in control event described in Code Section 409A and Treasury Regulations §1.409A-3(i)(5).
- 18.16. **Compensation Recovery Policy.** Notwithstanding any provision in the Plan or in any Award Agreement to the contrary, Awards granted or paid under the Plan will be subject to any Compensation Recovery Policy established by the Company and amended from time to time.

Certification of Chief Executive Officer

Pursuant to Rule 13a – 14(a) or Rule 15d – 14(a) of the Securities Exchange Act of 1934

I, Eugene A. Scherbakov, certify that:

1. I have reviewed this quarterly report on Form 10-Q of IPG Photonics Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be signed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 1, 2023

By:

/s/ Eugene A. Scherbakov

Eugene A. Scherbakov
Chief Executive Officer (Principal Executive Officer)

Certification of Chief Financial Officer

Pursuant to Rule 13a – 14(a) or Rule 15d – 14(a) of the Securities Exchange Act of 1934

I, Timothy P.V. Mammen, certify that:

1. I have reviewed this quarterly report on Form 10-Q of IPG Photonics Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 1, 2023

By:

/s/ Timothy P.V. Mammen

Timothy P.V. Mammen

Senior Vice President and Chief Financial Officer (Principal Financial Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the filing of the Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2023 (the "Report") by IPG Photonics Corporation (the "Company"), Eugene A. Scherbakov, as the Chief Executive Officer of the Company, and Timothy P.V. Mammen, as the Chief Financial Officer of the Company, each hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

- 1 the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and
- 2 the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 1, 2023

/s/ Eugene A. Scherbakov

**Eugene A. Scherbakov
Chief Executive Officer**

/s/ Timothy P.V. Mammen

**Timothy P.V. Mammen
Senior Vice President and Chief Financial Officer**

A signed original of this written statement required by 18 U.S.C. Section 1350 has been provided to IPG Photonics Corporation and will be retained by IPG Photonics Corporation and furnished to the Securities and Exchange Commission or its staff upon request.