

**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 September 30, 2022

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)*

50 Old Webster Road, Oxford, Massachusetts

(Address of principal executive offices)

01540

(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 October 31, 2022, there were 48,714,359 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

	September 30, 2022	December 31, 2021
(In thousands, except share and per share data)		
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 869,274	\$ 709,105
Short-term investments	365,409	805,400
Accounts receivable, net	195,194	262,121
Inventories	555,537	460,747
Prepaid income taxes	49,496	36,990
Prepaid expenses and other current assets	84,177	73,320
Total current assets	2,119,087	2,347,683
Deferred income taxes, net	69,323	47,761
Goodwill	37,963	38,609
Intangible assets, net	36,171	52,678
Property, plant and equipment, net	661,510	635,302
Other assets	38,466	48,507
Total assets	\$ 2,962,520	\$ 3,170,540
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ 16,328	\$ 18,126
Accounts payable	55,072	55,839
Accrued expenses and other current liabilities	199,636	230,826
Income taxes payable	24,752	8,642
Total current liabilities	295,788	313,433
Other long-term liabilities and deferred income taxes	86,223	93,855
Long-term debt, net of current portion	—	16,031
Total liabilities	382,011	423,319
Commitments and contingencies (Note 12)		
IPG Photonics Corporation equity:		
Common stock, \$0.0001 par value, 175,000,000 shares authorized; 55,974,063 and 49,393,642 shares issued and outstanding, respectively, at September 30, 2022; 55,788,246 and 53,010,265 shares issued and outstanding, respectively, at December 31, 2021.	6	6
Treasury stock, at cost, 6,580,421 and 2,777,981 shares held at September 30, 2022 and December 31, 2021, respectively.	(821,388)	(438,503)
Additional paid-in capital	939,040	908,423
Retained earnings	2,669,411	2,466,607
Accumulated other comprehensive loss	(206,560)	(189,951)
Total IPG Photonics Corporation equity	2,580,509	2,746,582
Non-controlling interests	—	639
Total equity	2,580,509	2,747,221
Total liabilities and equity	\$ 2,962,520	\$ 3,170,540

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF INCOME

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
(In thousands, except per share data)				
Net sales	\$ 349,006	\$ 379,150	\$ 1,096,008	\$ 1,096,393
Cost of sales	198,582	193,276	601,419	566,000
Gross profit	150,424	185,874	494,589	530,393
Operating expenses:				
Sales and marketing	19,383	20,688	58,767	58,764
Research and development	25,436	34,277	89,494	102,807
General and administrative	33,813	32,557	97,888	93,715
Gain on divestiture	(21,748)	—	(21,748)	—
Impairment of long-lived assets and other restructuring charges	919	—	919	—
(Gain) loss on foreign exchange	(541)	(3,634)	11,289	(7,973)
Total operating expenses	57,262	83,888	236,609	247,313
Operating income	93,162	101,986	257,980	283,080
Other income (expense), net:				
Interest income (expense), net	3,625	(288)	4,732	(1,190)
Other income (expense), net	301	(211)	683	70
Total other income (expense)	3,926	(499)	5,415	(1,120)
Income before provision for income taxes	97,088	101,487	263,395	281,960
Provision for income taxes	20,390	26,788	59,738	69,362
Net income	76,698	74,699	203,657	212,598
Less: net income (loss) attributable to non-controlling interests	434	(703)	853	(731)
Net income attributable to IPG Photonics Corporation common stockholders	\$ 76,264	\$ 75,402	\$ 202,804	\$ 213,329
Net income attributable to IPG Photonics Corporation per common share:				
Basic	\$ 1.48	\$ 1.41	\$ 3.94	\$ 3.99
Diluted	\$ 1.47	\$ 1.40	\$ 3.93	\$ 3.95
Weighted average common shares outstanding:				
Basic	51,629	53,387	51,449	53,501
Diluted	51,737	53,834	51,626	54,053

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(In thousands)			
Net income	\$ 76,698	\$ 74,699	\$ 203,657	\$ 212,598
Other comprehensive (loss) income, net of tax:				
Foreign currency translation adjustments and other	(71,839)	(15,558)	(16,921)	(28,921)
Unrealized gain on derivatives	51	46	383	165
Total other comprehensive loss	(71,788)	(15,512)	(16,538)	(28,756)
Comprehensive income	4,910	59,187	187,119	183,842
Less: comprehensive income (loss) attributable to non-controlling interests	428	(869)	924	(799)
Comprehensive income attributable to IPG Photonics Corporation	\$ 4,482	\$ 60,056	\$ 186,195	\$ 184,641

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	Nine Months Ended September 30,	
	2022	2021
	(In thousands)	
Cash flows from operating activities:		
Net income	\$ 203,657	\$ 212,598
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	69,852	72,127
Deferred income taxes	(21,550)	(4,757)
Stock-based compensation	29,201	28,536
Impairment of long-lived assets and other restructuring charges	919	—
Unrealized loss (gain) on foreign currency transactions	8,355	(4,313)
Gain on divestiture	(21,748)	—
Other	4,195	5,828
Provisions for inventory, warranty and bad debt	58,990	50,364
Changes in assets and liabilities that provided (used) cash, net of acquisitions:		
Accounts receivable	42,517	(12,281)
Inventories	(148,959)	(105,384)
Prepaid expenses and other assets	6,584	(8,823)
Accounts payable	(2,837)	26,296
Accrued expenses and other liabilities	(40,327)	7,963
Income and other taxes payable	(17,823)	37,002
Net cash provided by operating activities	171,026	305,156
Cash flows from investing activities:		
Purchases of and deposits on property, plant and equipment	(84,552)	(93,857)
Proceeds from sales of property, plant and equipment	837	859
Purchases of short-term investments	(914,598)	(1,437,193)
Proceeds from short-term investments	1,355,883	1,226,445
Acquisitions of businesses, net of cash acquired	(2,000)	—
Proceeds from divestiture, net of cash sold	52,141	—
Other	(246)	(1,078)
Net cash provided by (used in) investing activities	407,465	(304,824)
Cash flows from financing activities:		
Principal payments on long-term borrowings	(17,829)	(2,851)
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	2,353	11,427
Purchase of treasury stock, at cost	(382,885)	(78,071)
Payment of purchase price holdback from business combination	—	(2,624)
Purchase of non-controlling interests	(2,500)	—
Net cash used in financing activities	(400,861)	(72,119)
Effect of changes in exchange rates on cash, cash equivalents and restricted cash	(17,461)	(11,862)
Net increase (decrease) in cash, cash equivalents and restricted cash	160,169	(83,649)
Cash, cash equivalents and restricted cash — Beginning of period	709,105	878,553
Cash and cash equivalents — End of period	\$ 869,274	\$ 794,904
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 2,766	\$ 1,932
Cash paid for income taxes	\$ 83,771	\$ 35,982
Non-cash transactions:		
Demonstration units transferred from inventory to other assets	\$ 3,520	\$ 4,245
Inventory transferred to machinery and equipment	\$ 2,439	\$ 1,965
Changes in accounts payable related to property, plant and equipment	\$ 1,989	\$ 1,461
Leased assets obtained in exchange for new operating lease liabilities	\$ 6,237	\$ 2,500

See Note 4 for reconciliation of cash, cash equivalents and restricted cash between the condensed consolidated balance sheets and condensed consolidated statements of cash flows.

See notes to condensed consolidated financial statements.

IPG PHOTONICS CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY

Three Months Ended September 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, July 1, 2022	50,206,255	\$ 6	(5,760,999)	\$ (750,109)	\$ 930,950	\$ 2,593,147	\$ (134,778)	\$ 1,135	\$ 2,640,351
Exercise of stock options and vesting of RSUs and PSUs	6,809	—	—	—	265	—	—	—	265
Purchased common stock	(819,422)	—	(819,422)	(71,279)	—	—	—	—	(71,279)
Stock-based compensation	—	—	—	—	8,762	—	—	—	8,762
Net income	—	—	—	—	—	76,264	—	434	76,698
Foreign currency translation adjustments and other	—	—	—	—	—	—	(71,833)	(6)	(71,839)
Purchase of non-controlling interests	—	—	—	—	(937)	—	—	(1,563)	(2,500)
Unrealized gain on derivatives, net of tax	—	—	—	—	—	—	51	—	51
Balance, September 30, 2022	49,393,642	\$ 6	(6,580,421)	\$ (821,388)	\$ 939,040	\$ 2,669,411	\$ (206,560)	\$ —	\$ 2,580,509
Balance, July 1, 2021	53,491,889	\$ 6	(2,233,789)	\$ (345,345)	\$ 883,546	\$ 2,326,118	\$ (159,407)	\$ 1,362	\$ 2,706,280
Exercise of stock options and vesting of RSUs and PSUs	13,101	—	—	—	860	—	—	—	860
Purchased common stock	(199,505)	—	(199,505)	(36,340)	—	—	—	—	(36,340)
Stock-based compensation	—	—	—	—	9,858	—	—	—	9,858
Net income	—	—	—	—	—	75,402	—	(703)	74,699
Foreign currency translation adjustments and other	—	—	—	—	—	—	(15,392)	(166)	(15,558)
Unrealized gain on derivatives, net of tax	—	—	—	—	—	—	46	—	46
Balance, September 30, 2021	53,305,485	\$ 6	(2,433,294)	\$ (381,685)	\$ 894,264	\$ 2,401,520	\$ (174,753)	\$ 493	\$ 2,739,845

Nine Months Ended September 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, 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	156,640	—	—	—	19	—	—	—	19
Common stock issued under employee stock purchase plan	29,177	—	—	—	2,334	—	—	—	2,334
Purchased common stock	(3,802,440)	—	(3,802,440)	(382,885)	—	—	—	—	(382,885)
Stock-based compensation	—	—	—	—	29,201	—	—	—	29,201
Net income	—	—	—	—	—	202,804	—	853	203,657
Foreign currency translation adjustments and other	—	—	—	—	—	—	(16,992)	71	(16,921)
Purchase of non-controlling interests	—	—	—	—	(937)	—	—	(1,563)	(2,500)
Unrealized gain on derivatives, net of tax	—	—	—	—	—	—	383	—	383
Balance, September 30, 2022	49,393,642	\$ 6	(6,580,421)	\$ (821,388)	\$ 939,040	\$ 2,669,411	\$ (206,560)	\$ —	\$ 2,580,509
Balance, January 1, 2021	53,427,234	\$ 6	(2,034,012)	\$ (303,614)	\$ 854,301	\$ 2,188,191	\$ (146,065)	\$ 1,292	\$ 2,594,111
Exercise of stock options and vesting of RSUs and PSUs	262,462	—	—	—	8,727	—	—	—	8,727
Common stock issued under employee stock purchase plan	15,071	—	—	—	2,700	—	—	—	2,700
Purchased common stock	(399,282)	—	(399,282)	(78,071)	—	—	—	—	(78,071)
Stock-based compensation	—	—	—	—	28,536	—	—	—	28,536
Net income	—	—	—	—	—	213,329	—	(731)	212,598
Foreign currency translation adjustments and other	—	—	—	—	—	—	(28,853)	(68)	(28,921)
Unrealized gain on derivatives, net of tax	—	—	—	—	—	—	165	—	165
Balance, September 30, 2021	53,305,485	\$ 6	(2,433,294)	\$ (381,685)	\$ 894,264	\$ 2,401,520	\$ (174,753)	\$ 493	\$ 2,739,845

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, 2021.

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 September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Balance, beginning of period	\$ 1,872	\$ 2,251	\$ 2,108	\$ 2,156
Provision for bad debts, net of (recoveries)	372	(295)	211	(154)
Uncollectable accounts written off	—	—	(79)	(59)
Foreign currency translation	(125)	(15)	(121)	(2)
Balance, end of period	\$ 2,119	\$ 1,941	\$ 2,119	\$ 1,941

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 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, July 1, 2022	\$ (134,926)	\$ 148	\$ (134,778)
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments and other before reclassification, net of tax benefit of \$70	(72,041)	—	(72,041)
Reclassification for foreign currency translation adjustments and other included in net income	208	—	208
Unrealized gain on derivatives, net of tax expense of \$14	—	51	51
Total other comprehensive (loss) income	(71,833)	51	(71,782)
Balance, September 30, 2022	\$ (206,759)	\$ 199	\$ (206,560)
Balance, July 1, 2021	\$ (159,064)	\$ (343)	\$ (159,407)
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments and other	(15,392)	—	(15,392)
Unrealized gain on derivatives, net of tax expense of \$14	—	46	46
Total other comprehensive (loss) income	(15,392)	46	(15,346)
Balance, September 30, 2021	\$ (174,456)	\$ (297)	\$ (174,753)
Balance, January 1, 2022	\$ (189,767)	\$ (184)	\$ (189,951)
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments and other before reclassification, net of tax expense of \$72	(17,200)	—	(17,200)
Reclassification for foreign currency translation adjustments and other included in net income	208	—	208
Unrealized gain on derivatives, net of tax expense of \$117	—	383	383
Total other comprehensive (loss) income	(16,992)	383	(16,609)
Balance, September 30, 2022	\$ (206,759)	\$ 199	\$ (206,560)
Balance, January 1, 2021	\$ (145,603)	\$ (462)	\$ (146,065)
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments and other	(28,853)	—	(28,853)
Unrealized gain on derivatives, net of tax expense of \$50	—	165	165
Total other comprehensive (loss) income	(28,853)	165	(28,688)
Balance, September 30, 2021	\$ (174,456)	\$ (297)	\$ (174,753)

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

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

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; fiber amplifiers and transceivers for communications applications and fiber lasers, systems and fibers for medical applications.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
<u>Sales by Application</u>				
Materials processing	\$ 312,546	\$ 346,045	\$ 994,866	\$ 1,008,939
Other applications	36,460	33,105	101,142	87,454
Total	<u>\$ 349,006</u>	<u>\$ 379,150</u>	<u>\$ 1,096,008</u>	<u>\$ 1,096,393</u>

<u>Sales by Product</u>				
High Power Continuous Wave ("CW") Lasers	\$ 152,767	\$ 177,787	\$ 483,455	\$ 538,013
Medium Power CW Lasers	20,639	24,520	63,230	58,579
Pulsed Lasers	55,216	59,051	192,000	176,219
Quasi-Continuous Wave ("QCW") Lasers	11,353	16,312	38,212	45,503
Laser and Non-Laser Systems	35,930	32,523	108,970	89,236
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue	73,101	68,957	210,141	188,843
Total	<u>\$ 349,006</u>	<u>\$ 379,150</u>	<u>\$ 1,096,008</u>	<u>\$ 1,096,393</u>

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
<u>Sales by Geography</u>				
North America	\$ 82,119	\$ 81,605	\$ 247,495	\$ 221,123
Europe:				
Germany	20,622	26,832	70,831	74,840
Other including Eastern Europe/CIS	72,332	79,777	227,739	212,709
Asia and Australia:				
China	117,952	137,211	385,080	436,119
Japan	11,220	14,286	38,847	35,485
Other	39,130	35,844	111,500	106,608
Rest of World	5,631	3,595	14,516	9,509
Total	<u>\$ 349,006</u>	<u>\$ 379,150</u>	<u>\$ 1,096,008</u>	<u>\$ 1,096,393</u>

<u>Timing of Revenue Recognition</u>				
Goods and services transferred at a point in time	\$ 337,648	\$ 364,677	\$ 1,056,318	\$ 1,054,554
Goods and services transferred over time	11,358	14,473	39,690	41,839
Total	<u>\$ 349,006</u>	<u>\$ 379,150</u>	<u>\$ 1,096,008</u>	<u>\$ 1,096,393</u>

One of the Company's customers accounted for 13% and 22% of the Company's net accounts receivable as of September 30, 2022 and December 31, 2021, 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

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

Company also records deferred revenue related to installation services when consideration is received before the services have been performed. The standalone selling price for installation services is determined based on the estimated number of days of service technician time required for installation at standard service rates. The Company recognizes customer deposits and deferred revenue as net sales after control of the goods or services has been transferred to the customer and all revenue recognition criteria are met. The Company bills customers for extended warranties upon entering into the agreement with the customer, resulting in deferred revenue that is recognized over the period of the extended warranty contract. The Company recognizes revenue over time on contracts for the sale of large scale materials processing systems. The timing of customer payments on these contracts generally differs from the timing of revenue recognized. If revenue recognized exceeds customer payments, a contract asset is recorded and if customer payments exceed revenue recognized, a contract liability is recorded. Contract assets are included within prepaid expense and other current assets on the condensed consolidated balance sheets. Contract liabilities are included within accrued expenses and other current liabilities on the condensed consolidated balance sheets. Certain deferred revenues related to extended warranties in excess 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 nine months ended September 30, 2022 and 2021:

	September 30, 2022	January 1, 2022	Change	September 30, 2021	January 1, 2021	Change
Contract assets						
Contract assets	\$ 8,995	\$ 9,345	\$ (350)	\$ 7,510	\$ 8,999	\$ (1,489)
Contract liabilities						
Contract liabilities - current	81,868	89,659	(7,791)	80,694	71,246	9,448
Contract liabilities - long-term	2,711	2,691	20	2,737	2,189	548

During the three months ended September 30, 2022 and 2021 the Company recognized revenue of \$31,213 and \$10,172, respectively, that was included in contract liabilities at the beginning of each period. During the nine months ended September 30, 2022 and 2021 the Company recognized revenue of \$65,743 and \$58,069 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 September 30, 2022:

	Remaining Performance Obligations						
	2022 ^(a)	2023	2024	2025	2026	Thereafter	Total
Revenue expected to be recognized for extended warranty agreements	\$ 1,571	\$ 3,181	\$ 976	\$ 729	\$ 364	\$ 92	\$ 6,913
Revenue to be earned over time from contracts to sell large scale materials processing systems	9,282	13,095	5,151	—	—	—	27,528
Total	\$ 10,853	\$ 16,276	\$ 6,127	\$ 729	\$ 364	\$ 92	\$ 34,441

^(a) For the three-month period beginning October 1, 2022.

3. DIVESTITURES

During the third quarter of 2022, the Company completed the sale of its telecommunications transmission product lines for \$56,222. The Company recorded a gain on divestiture of \$21,748 for the quarter ended September 30, 2022, which was included in the Company's condensed consolidated statements of income. As part of and just prior to closing, the Company also acquired the remaining non-controlling interests related to the business that was sold for \$2,500.

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

4. RESTRICTED CASH

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheets to the total of the same amounts shown in the condensed consolidated statements of cash flows.

	September 30,		December 31,	
	2022	2021	2021	2020
Cash and cash equivalents	\$ 869,274	\$ 794,904	\$ 709,105	\$ 876,231
Restricted cash included in prepaid expenses and other current assets	—	—	—	2,322
Cash, cash equivalents and restricted cash in the condensed consolidated statements of cash flows	\$ 869,274	\$ 794,904	\$ 709,105	\$ 878,553

During the first quarter of 2021, the Company released \$2,127 of restricted cash held back related to the Company's acquisition of the submarine networks division (SND) of Padtec SA, for indemnities provided by the seller.

5. 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, interest rate swaps and contingent purchase consideration.

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 carrying amounts of money market fund deposits, term deposits, accounts receivable, accounts payable and drawings on revolving lines of credit are considered reasonable estimates of their fair market value 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 bond securities is based upon quoted prices for instruments with identical terms in active markets. The Company's commercial paper securities reported at fair value are based upon model-driven valuations in which all significant inputs are observable or can be derived from or corroborated by observable market data for substantially the full term of the asset or liability, and are therefore classified as Level 2.

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 and contingent purchase consideration, which are measured at fair value:

		Fair Value Measurements at September 30, 2022			
		Total	Level 1	Level 2	Level 3
Assets					
Cash equivalents:					
Money market fund deposits and term deposits	\$	457,754	\$ 457,754	\$ —	\$ —
Commercial paper		112,506	—	112,506	—
Certificate of deposit		17	—	17	—
Short-term investments:					
Commercial paper		317,457	—	317,457	—
Corporate bonds		20,786	—	20,786	—
U.S. Treasury and agency obligations		14,756	—	14,756	—
Certificates of deposit		11,713	—	11,713	—
Other assets:					
Interest rate swap		258	—	258	—
Total	\$	935,247	\$ 457,754	\$ 477,493	\$ —
Liabilities					
Term note	\$	16,328	\$ —	\$ 16,328	\$ —
Total	\$	16,328	\$ —	\$ 16,328	\$ —
		Fair Value Measurements at December 31, 2021			
		Total	Level 1	Level 2	Level 3
Assets					
Cash equivalents:					
Money market fund deposits and term deposits	\$	279,066	\$ 279,066	\$ —	\$ —
Commercial paper		117,663	—	117,663	—
Corporate bonds		11,459	—	11,459	—
Municipal bonds		3,220	—	3,220	—
Short-term investments:					
Commercial paper		557,955	—	557,955	—
Corporate bonds		215,754	—	215,754	—
U.S. Treasury and agency obligations		21,980	—	21,980	—
Municipal bonds		4,546	—	4,546	—
Certificate of deposit		3,000	—	3,000	—
Foreign government bonds		2,015	—	2,015	—
Total	\$	1,216,658	\$ 279,066	\$ 937,592	\$ —
Liabilities					
Term notes	\$	34,226	\$ —	\$ 34,226	\$ —
Contingent purchase consideration		1,371	—	—	1,371
Interest rate swap		242	—	242	—
Total	\$	35,839	\$ —	\$ 34,468	\$ 1,371

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 September 30, 2022 and 2021. There were no current expected credit loss allowances for the investments

IPG PHOTONICS CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - (Continued)
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considered held-to-maturity at September 30, 2022 and 2021. The Company holds highly-rated held-to-maturity instruments that are within one year of maturity.

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

	September 30, 2022		December 31, 2021	
	Book Value	Fair Value	Book Value	Fair Value
Investment maturity				
Less than 1 year	\$ 365,409	\$ 364,712	\$ 805,400	\$ 805,250

The Company entered into an interest rate swap that is designated as a cash flow hedge associated with a long-term note issued during the second quarter of 2016 that will terminate with the long-term note in May 2023. The fair value at September 30, 2022 for the interest rate swap considered pricing models whose inputs are observable for the securities held by the Company.

At September 30, 2022, the Company's long-term note consisted of a variable rate note. The carrying value of the note approximates the estimated fair value of \$16,328. At December 31, 2021, the Company's long-term notes consisted of a variable rate note and a fixed rate note. The fair value of the notes were estimated using a discounted cash flow model using observable market interest rates. The fair value of the long-term notes, including the current portion, at December 31, 2021, was \$34,226 as compared to the carrying value of \$34,157. The long-term notes were reported at amortized cost on the condensed consolidated balance sheets and were classified within Level 2 of the fair value hierarchy.

The fair values of contingent purchase consideration at December 31, 2021 were determined using an income approach at the respective business combination date and at the reporting date. The approach is based on significant inputs that are not observable in the market and include key assumptions such as assessing the probability of meeting certain milestones required to earn the contingent purchase consideration. The contingency period ended during the nine months ended September 30, 2022.

The following table presents information about the Company's movement in Level 3 assets and liabilities measured at fair value:

	Nine Months Ended September 30,	
	2022	2021
Contingent purchase consideration		
Balance, beginning of period	\$ 1,371	\$ 1,963
Cash payments	—	(466)
Change in fair value	(1,477)	—
Foreign exchange adjustment	106	(91)
Balance, end of period	\$ —	\$ 1,406

6. INVENTORIES

Inventories consist of the following:

	September 30, 2022	December 31, 2021
Components and raw materials	\$ 384,471	\$ 270,146
Work-in-process	49,630	32,506
Finished goods	121,436	158,095
Total	\$ 555,537	\$ 460,747

The Company recorded inventory provisions totaling \$12,883 and \$7,882 for the three months ended September 30, 2022 and 2021, respectively, and \$38,363 and \$23,529 for the nine months ended September 30, 2022 and 2021. 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.

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

7. GOODWILL AND INTANGIBLES

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

	Nine Months Ended September 30,	
	2022	2021
Balance, beginning of period	\$ 38,609	\$ 41,366
Goodwill arising from business combinations	1,000	—
Adjustment to goodwill during measurement period	—	(2,205)
Goodwill written off related to divestiture	(796)	—
Foreign exchange adjustment	(850)	(456)
Balance, end of period	<u>\$ 37,963</u>	<u>\$ 38,705</u>

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

	September 30, 2022				December 31, 2021			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Lives	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted-Average Lives
Customer relationships	\$ 48,119	\$ (20,654)	\$ 27,465	11 years	\$ 59,729	\$ (23,556)	\$ 36,173	10 years
Technology, trademark and trade name	30,683	(22,672)	8,011	7 years	40,536	(26,269)	14,267	7 years
Production know-how	8,984	(8,590)	394	7 years	10,384	(8,723)	1,661	7 years
Patents	8,036	(7,735)	301	8 years	8,036	(7,459)	577	8 years
Total	<u>\$ 95,822</u>	<u>\$ (59,651)</u>	<u>\$ 36,171</u>		<u>\$ 118,685</u>	<u>\$ (66,007)</u>	<u>\$ 52,678</u>	

The intangible assets are net of intangible assets disposed of as a result of the telecommunications transmission product lines divestiture during the third quarter of 2022. See Note 3, "Divestitures" for further information.

Amortization expense for the three months ended September 30, 2022 and 2021 was \$2,447 and \$3,051, respectively. Amortization expense for the nine months ended September 30, 2022 and 2021 was \$8,377 and \$9,387, respectively. The estimated future amortization expense for intangibles for the remainder of 2022 and subsequent years is as follows:

2022 ^(a)	2023	2024	2025	2026	Thereafter	Total
\$ 2,077	\$ 7,892	\$ 5,545	\$ 4,973	\$ 4,212	\$ 11,472	\$ 36,171

^(a) For the three-month period beginning October 1, 2022.

8. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consist of the following:

	September 30, 2022	December 31, 2021
Contract liabilities	\$ 81,868	\$ 89,659
Accrued compensation	73,324	94,857
Current portion of accrued warranty	26,800	26,204
Short-term lease liabilities	5,291	5,454
Other	12,353	14,652
Total	<u>\$ 199,636</u>	<u>\$ 230,826</u>

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

9. 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:

	Nine Months Ended September 30,	
	2022	2021
Balance, beginning of period	\$ 49,864	\$ 45,669
Provision for warranty accrual	18,280	26,535
Warranty claims	(13,968)	(21,576)
Foreign currency translation	(4,198)	(1,774)
Balance, end of period	\$ 49,978	\$ 48,854

Accrued warranty reported in the accompanying condensed consolidated financial statements as of September 30, 2022 and December 31, 2021 consisted of \$26,800 and \$26,204 in accrued expenses and other current liabilities, respectively, and \$23,178 and \$23,660 in other long-term liabilities and deferred income taxes, respectively.

10. FINANCING ARRANGEMENTS

The Company's borrowings under existing financing arrangements consist of the following:

	September 30, 2022	December 31, 2021
Total debt	\$ 16,328	\$ 34,157
Less: current portion	(16,328)	(18,126)
Long-term debt, net of current portion	\$ —	\$ 16,031

Term Debt:

At September 30, 2022, the Company has an unsecured long-term note with an outstanding principal balance of \$16,328, all of which is current. The interest on this unsecured long-term note is variable at 1.20% above LIBOR and is fixed using an interest rate swap at 2.85% per annum. The unsecured long-term note matures in May 2023, at which time the outstanding principal balance will be \$15,438. The Company had another long-term note that was secured by its corporate aircraft, which matured and was paid in July 2022, at which time the outstanding principal balance was \$15,375.

The future principal payments for the Company's Note as of September 30, 2022 are as follows:

2022 ^(a)	\$ 297
2023	16,031
Total	\$ 16,328

^(a) For the three-month period beginning October 1, 2022.

Revolving Line of Credit Facilities:

The Company maintains a \$75,000 U.S. revolving line of credit and a €50,000 (\$48,987) 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 Company also maintains a €1,500 (\$1,470) Italian overdraft facility. At September 30, 2022 and December 31, 2021, there were no amounts drawn on the U.S. line-of-credit, and there were \$3,244 and \$2,478, respectively, of guarantees issued against the facility, which reduce the amount of the facility available to draw. At September 30, 2022 and December 31, 2021, there were no amounts drawn on the euro line-of-credit, and there were \$1,939 and \$2,161, respectively, of guarantees issued against those facilities, which reduce the amount available to draw. At September 30, 2022 and December 31, 2021, there were no amounts

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drawn on the euro overdraft facility. After providing for the guarantees used, the total unused lines-of-credit and overdraft facilities are \$120,274 at September 30, 2022.

11. DERIVATIVE FINANCIAL INSTRUMENTS

The Company's only outstanding derivative financial instrument is an interest rate swap that is classified as a cash flow hedge of its variable rate debt. The fair value amounts in the condensed consolidated balance sheets were:

	September 30, 2022	December 31, 2021
Notional amounts ⁽¹⁾	\$ 16,328	\$ 17,219
Fair values:		
Other assets	\$ 258	\$ —
Other long-term liabilities and deferred income taxes	—	242

⁽¹⁾ Notional amounts represent the gross contract/notional amount of the derivatives outstanding.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Effective portion recognized in other comprehensive income, pretax:				
Interest rate swap	\$ 65	\$ 60	\$ 500	\$ 215

12. 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 September 30, 2022 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 number of voluntary self-disclosures regarding compliance with export control laws and regulations and the U.S. Department of Justice is conducting an investigation into certain shipments of equipment. At this time, the Company is not able to estimate the amount or probability of any monetary penalties or other expenses that the Company may incur as a result of this investigation.

13. INCOME TAXES

The effective tax rates were 21.0% and 26.4% for the three months ended September 30, 2022 and 2021, respectively, and 22.7% and 24.6% for the nine months ended September 30, 2022 and 2021, respectively. There were net discrete tax benefits of \$3,644 and \$1,424 for the three months ended September 30, 2022 and 2021, respectively, and \$6,806 and \$5,849 for the nine months ended September 30, 2022 and 2021, respectively. 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. The 2022 benefit is partly offset by the impact from tax deductions for equity-based compensation that were less than the compensation expense recognized for books. The 2021 discrete items relate primarily to tax deductions for equity based compensation that exceeded book deductions and to provision to return adjustments.

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.

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(In thousands, except share and per share data)

The following is a summary of the activity of the Company's unrecognized tax benefits for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,	
	2022	2021
Balance, beginning of period	\$ 19,209	\$ 14,706
Change in prior period positions	(603)	—
Additions for tax positions in current period	—	4,000
Foreign currency translation	865	92
Balance, end of period	<u>\$ 19,471</u>	<u>\$ 18,798</u>

The liability for uncertain tax benefits is included in other long-term liabilities and deferred income taxes at September 30, 2022 and December 31, 2021. 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.

14. 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 September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income attributable to IPG Photonics Corporation common stockholders	\$ 76,264	\$ 75,402	\$ 202,804	\$ 213,329
Basic weighted average common shares	51,628,701	53,387,175	51,449,367	53,500,507
Dilutive effect of common stock equivalents	108,289	446,577	176,565	552,836
Diluted weighted average common shares	51,736,990	53,833,752	51,625,932	54,053,343
Basic net income attributable to IPG Photonics Corporation per common share	<u>\$ 1.48</u>	<u>\$ 1.41</u>	<u>\$ 3.94</u>	<u>\$ 3.99</u>
Diluted net income attributable to IPG Photonics Corporation per common share	<u>\$ 1.47</u>	<u>\$ 1.40</u>	<u>\$ 3.93</u>	<u>\$ 3.95</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 nine months ended September 30, 2022 and 2021 were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Non-qualified stock options	672,539	225,684	604,394	202,077
Restricted stock units	373,646	128,402	340,924	100,066
Performance stock units	91,920	30,142	78,999	24,732
Total weighed average anti-dilutive shares outstanding	<u>1,138,105</u>	<u>384,228</u>	<u>1,024,317</u>	<u>326,875</u>

On August 2, 2022, the Company announced that its Board of Directors has authorized the purchase of up to \$300,000 of IPG common stock. This authorization is in addition to the Company's stock repurchase programs authorized in May 2020 and February 2022.

For the three months ended September 30, 2022, the Company repurchased 819,422 shares of common stock under the August 2022 authorization with an average price of \$86.96 per share in the open market. For the nine months ended September 30, 2022, the Company repurchased 3,802,440 shares of common stock under the August 2022 authorization and May 2020 and February 2022 authorization with an average price of \$100.66 per share in the open market. The impact on the reduction of weighted average shares for the three and nine months ended September 30, 2022 was 62,179 shares and 1,689,862 shares,

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respectively. The Company completed all of the repurchases under the May 2020 authorization and February 2022 authorization in the second quarter of 2022.

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, Germany, Russia and Belarus. We have sales 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.

Recent Events. The Russia-Ukraine conflict and the sanctions imposed in response to this crisis have increased the levels of uncertainty and risks facing the Company. While sales to third-parties in Russia were approximately 2% of our revenue in the first three quarters of 2022, we rely on our facility in Russia to manufacture certain components that are used in our other manufacturing facilities. In addition, we supply finished products to China from Russia. The total value of product shipped to the Chinese market from Russia was approximately \$50 million for the nine months ended September 30, 2022 of which \$8 million was shipped in the third quarter. At September 30, 2022, we had working capital excluding cash and short-term investments of \$150.5 million in Russia of which \$116.4 million is inventory. In addition, we had \$44.0 million cash and short term investments in Russia. The net asset value of our long lived assets was \$94.7 million. We also have a factory in Belarus that supplies certain components to our other manufacturing facilities. The value of the long lived assets in Belarus was \$44.0 million at September 30, 2022, and we had working capital excluding cash and short-term investments of \$6.5 million in Belarus of which \$5.5 million is inventory. In addition, we had \$4.0 million cash and short term investments in Belarus.

Since the start of the conflict, we have been navigating complex and evolving regulations, including sanctions, without material disruption to our ability to meet customer demand. Certain sanctions increase the cost of operating in Russia and Belarus as a result of shipping limitations, logistics challenges and changes in tariffs. Trade restrictions further limited our ability to ship components to Russia from Germany during the third quarter. The U.S. increased tariffs on Russian and Belarus goods late in the first quarter of 2022, impacting the results of operations for the remainder of the 2022.

In response to the risks from the Russia-Ukraine conflict, we are 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 the first three quarters of 2022, we began hiring and training additional employees, expanding capacity for increased production, and running additional shifts in the U.S. and Europe. These plans also include additional investments in facilities 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 other financial results will be adversely impacted by increased operating costs associated with these transitions. Over time, we intend to mitigate some of these increases with cost reductions, higher productivity from automation, improved yields and product specifications.

In October 2022, the European Union introduced new sanctions that will 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 will mitigate the effect of the new sanctions. If we have not fully mitigated the effect of

these and other trade restrictions, our ability to supply finished products to customers could be impacted after they take effect. Our Board of Directors has been monitoring and continues to assess and monitor risks to our business associated with the Russia-Ukraine conflict. Our Directors receive management reports and have discussions with management at quarterly and special meetings. As a result of the recent sanctions, we are evaluating strategic options for our operations in Russia. Depending on the result of the assessment and strategic options pursued, we may need to assess the net realizable value of our Russian working capital and whether our long-lived assets in Russia need to be impaired. 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-Q for the quarter ended March 31, 2022.

COVID-19. Global demand trends have been impacted by the ongoing COVID-19 pandemic and therefore remain uncertain at this time. 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. This uncertainty continues to make forecasting our business challenging in the near to medium-term.

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. Supply chain and logistics constraints are expected to continue for the foreseeable future and could impact our ability to supply products and our customers' demand for our product or readiness to accept deliveries. 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, increased the cost of certain electronic components, pushed out customer deliveries and caused delays in recognizing revenue for certain custom processing systems in our Genesis business due to delays in receiving robots. Notwithstanding these effects, we believe we have the ability to meet the near-term demand for our products, but the situation is fluid and subject to change.

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% of our revenues for both the first three quarters of 2022 and the full 2021 fiscal year 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; and finally,
- 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.

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 \$12.9 million and \$7.9 million for the three months ended September 30, 2022 and 2021, respectively, and \$38.4 million and \$23.5 million for the nine months ended September 30, 2022 and 2021, 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. As part of the telecommunications transmission product line divestiture mentioned below, we will no longer be incurring research and development expenses attributed to the development of telecommunications transmission products.

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, buildings and the corporate aircraft. If the estimated sales value of any of these assets is below carrying value, then we may need to record an asset impairment charge.

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., Germany, Russia and Belarus) also affects our costs and earnings. Certain currencies experiencing significant exchange rate fluctuations like the euro, the Russian ruble, the Chinese yuan and the Japanese yen have had and could have an additional significant impact on our sales, costs and earnings. For the quarter ended September 30, 2022, the foreign exchange gain created by the depreciation of the euro and depreciation of the Russian ruble were partially offset by a foreign exchange loss created by the depreciation of the Chinese yuan as compared to the U.S. dollar. This is because 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 16% for the nine months ended September 30, 2022 and 19%, and 24% for the full years 2021 and 2020, respectively. One of our customers accounted for 13% and 22% of our net accounts receivable at September 30, 2022 and December 31, 2021, 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 September 30, 2022 Compared to the Three Months Ended September 30, 2021

Net sales. Net sales decreased by \$30.1 million, or 8.0%, to \$349.0 million for the three months ended September 30, 2022 from \$379.1 million for the three months ended September 30, 2021.

The table below sets forth sales by application:

	Three Months Ended September 30,						Change
	2022			2021			
	(In thousands, except for percentages)						
<u>Sales by Application</u>	% of Total			% of Total			
Materials processing	\$	312,546	89.6 %	\$	346,045	91.3 %	\$ (33,499) (9.7)%
Other applications		36,460	10.4 %		33,105	8.7 %	3,355 10.1 %
Total	\$	349,006	100.0 %	\$	379,150	100.0 %	\$ (30,144) (8.0)%

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

	Three Months Ended September 30,							
	2022			2021			Change	
	(In thousands, except for percentages)							
Sales by Product	% of Total			% of Total				
High Power Continuous Wave ("CW") Lasers	\$	152,767	43.8 %	\$	177,787	46.9 %	\$	(25,020) (14.1)%
Medium Power CW Lasers		20,639	5.9 %		24,520	6.4 %		(3,881) (15.8)%
Pulsed Lasers		55,216	15.8 %		59,051	15.6 %		(3,835) (6.5)%
Quasi-Continuous Wave ("QCW") Lasers		11,353	3.3 %		16,312	4.3 %		(4,959) (30.4)%
Laser and Non-Laser Systems		35,930	10.3 %		32,523	8.6 %		3,407 10.5 %
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue		73,101	20.9 %		68,957	18.2 %		4,144 6.0 %
Total	\$	349,006	100.0 %	\$	379,150	100.0 %	\$	(30,144) (8.0)%

Materials processing

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

- 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 Europe. 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.
- Medium power CW laser sales decreased due to lower demand for welding and cutting applications.
- Pulsed laser sales, including high power pulsed lasers, decreased due to lower sales for cutting, marking and engraving application, partially offset by an increase in sales for green pulsed lasers used for solar cell manufacturing applications, and cleaning and stripping applications.
- QCW laser sales decreased due to lower demand in fine processing for consumer electronics applications.
- Laser and non-laser systems sales increased due to higher demand for laser systems and LightWELD.

Other Applications

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

Cost of sales and gross margin. Cost of sales increased by \$5.3 million, or 2.7%, to \$198.6 million for the three months ended September 30, 2022 from \$193.3 million for the three months ended September 30, 2021. Our gross margin decreased to 43.1% for the three months ended September 30, 2022 from 49.0% for the three months ended September 30, 2021. The decrease in gross margin was driven by an increase in costs of products sold from inventory, inventory provisions and shipping costs and tariffs as a percentage of sales, partially offset by higher absorption of manufacturing expenses 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 decreased by \$1.3 million, or 6.3%, to \$19.4 million for the three months ended September 30, 2022 compared with \$20.7 million for the three months ended September 30, 2021. The decrease is due to personnel and related costs. As a percentage of sales, sales and marketing expense increased to 5.6% and 5.5% for the three months ended September 30, 2022 and 2021, respectively.

Research and development expense. Research and development expense decreased by \$8.9 million, or 25.9%, to \$25.4 million for the three months ended September 30, 2022, compared to \$34.3 million for the three months ended September 30, 2021. This change was primarily a result of decreases in personnel and related costs and expense for materials used for research and development projects, which both decreased in part due to the telecommunications transmission product line divestiture. As a percentage of sales, research and development expense decreased to 7.3% for the three months ended September 30, 2022 from 9.0% for the three months ended September 30, 2021.

General and administrative expense. General and administrative expense increased by \$1.2 million, or 3.7%, to \$33.8 million for the three months ended September 30, 2022 from \$32.6 million for the three months ended September 30, 2021. This change was primarily a result of increases in consultant costs and provisions for bad debt. As a percentage of sales, general and administrative expense increased to 9.7% from 8.6% for the three months ended September 30, 2022 and 2021, 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 0.85, Russian ruble 73, Japanese yen 110 and Chinese yuan 6.47, respectively, we would have expected net sales for the three months ended September 30, 2022 to be \$26.0 million higher, gross profit to be \$13.7 million higher and total operating expenses would have been \$0.5 million higher.

Gain on divestiture. During the quarter ended September 30, 2022, we divested our telecommunications transmission product lines for \$56.2 million. The divestiture resulted in a gain of \$21.7 million for the quarter-ended September 30, 2022.

Gain on foreign exchange. We incurred a foreign exchange transaction gain of \$0.5 million for the three months ended September 30, 2022 as compared to a \$3.6 million gain for the three months ended September 30, 2021. 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 gain for the three months ended September 30, 2022 was primarily attributable to gains from the depreciation of the euro and the Russian ruble, and partially offset by the loss resulted from the depreciation of the Chinese yuan, as compared to the U.S. dollar.

Interest income (expense), net. Interest income, net was \$3.6 million for the three months ended September 30, 2022 as compared to interest expense, net of \$0.3 million for three months ended September 30, 2021. The change in interest income (expense), net is due to an increase in yields on cash equivalents and short term investments.

Provision for income taxes. Provision for income taxes was \$20.4 million for the three months ended September 30, 2022 compared to \$26.8 million for the three months ended September 30, 2021, representing an effective tax rate of 21.0% and 26.4% for the three months ended September 30, 2022 and 2021, respectively. The decrease in tax expense in 2022 is primarily due to an increase in the benefit from discrete items. 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. The 2021 discrete benefit relate primarily to provision to return adjustments.

Net income attributable to IPG Photonics Corporation. Net income attributable to IPG Photonics Corporation increased by \$0.9 million to \$76.3 million for the three months ended September 30, 2022 compared to \$75.4 million for the three months ended September 30, 2021. Net income attributable to IPG Photonics Corporation as a percentage of our net sales increased by 2.0 percentage points to 21.9% for the three months ended September 30, 2022 from 19.9% for the three months ended September 30, 2021 due to the factors described above.

Results of Operations for the Nine Months Ended September 30, 2022 Compared to the Nine Months Ended September 30, 2021

Net sales. Net sales decreased by \$0.4 million to \$1,096.0 million for the nine months ended September 30, 2022 from \$1,096.4 million for the nine months ended September 30, 2021.

The table below sets forth sales by application:

	Nine Months Ended September 30,						Change
	2022		2021				
	(In thousands, except for percentages)						
<u>Sales by Application</u>		% of Total		% of Total			
Materials processing	\$ 994,866	90.8 %	\$ 1,008,939	92.0 %	\$ (14,073)	(1.4)%	
Other applications	101,142	9.2 %	87,454	8.0 %	13,688	15.7 %	
Total	\$ 1,096,008	100.0 %	\$ 1,096,393	100.0 %	\$ (385)	— %	

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

	Nine Months Ended September 30,						
	2022		2021		Change		
	(In thousands, except for percentages)						
<u>Sales by Product</u>		% of Total		% of Total			
High Power CW Lasers	\$	483,455	44.1 %	\$	538,013	49.1 %	\$ (54,558) (10.1)%
Medium Power CW Lasers		63,230	5.8 %		58,579	5.3 %	4,651 7.9 %
Pulsed Lasers		192,000	17.5 %		176,219	16.1 %	15,781 9.0 %
QCW Lasers		38,212	3.5 %		45,503	4.2 %	(7,291) (16.0)%
Laser and Non-Laser Systems		108,970	9.9 %		89,236	8.1 %	19,734 22.1 %
Other Revenue including Amplifiers, Service, Parts, Accessories and Change in Deferred Revenue		210,141	19.2 %		188,843	17.2 %	21,298 11.3 %
Total	\$	1,096,008	100.0 %	\$	1,096,393	100.0 %	\$ (385) — %

Materials processing

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

- 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 and increased competition in China. 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 increase in medium power CW sales related to an increase in demand for welding and additive manufacturing applications, partially offset by a decrease in cutting applications.
- Pulsed laser sales, including high power pulsed lasers, increased due to growth in sales for foil cutting, welding and brazing for EV battery processing applications, and cleaning and stripping applications, partially offset by a decrease in demand for 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 due to higher demand for laser systems and LightWELD.
- Other revenue for materials processing increased due to higher sales of options and accessories.

Other Applications

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

Cost of sales and gross margin. Cost of sales increased by \$35.4 million, or 6.3%, to \$601.4 million for the nine months ended September 30, 2022 from \$566.0 million for the nine months ended September 30, 2021. Our gross margin decreased to 45.1% for the nine months ended September 30, 2022 from 48.4% for the nine months ended September 30, 2021. Gross margin decreased mainly due to an increase in inventory provisions, shipping costs and tariffs and cost of products sold from inventory 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.

Research and development expense. Research and development expense decreased by \$13.3 million, or 12.9%, to \$89.5 million for the nine months ended September 30, 2022, compared to \$102.8 million for the nine months ended September 30, 2021, primarily as a result of a decrease in personnel and related costs, expenses related to materials used for research and development projects, and consultants costs. The decrease in personnel and related costs and expenses related to materials used for research and development was partially driven by the telecommunications transmission product line divestiture in the third quarter. As a percentage of sales, research and development expense decreased to 8.2% for the nine months ended September 30, 2022 from 9.4% for the nine months ended September 30, 2021.

General and administrative expense. General and administrative expense increased by \$4.2 million, or 4.5%, to \$97.9 million for the nine months ended September 30, 2022 from \$93.7 million for the nine months ended September 30, 2021, primarily as a result of increases in consultant costs, bad debt provisions and information systems costs, partially offset by an increase in bad debt recoveries. As a percentage of sales, general and administrative expense increased to 8.9% for the nine months ended September 30, 2022 from 8.5% for the nine months ended September 30, 2021.

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 0.84, Russian ruble 74, Japanese yen 109 and Chinese yuan 6.47, respectively, we would have expected net sales for the nine months ended September 30, 2022 to be \$54.0 million higher, gross profit to be \$28.2 million higher and total operating expenses would have been \$3.3 million higher.

Gain on divestiture. During the quarter ended September 30, 2022, we divested our telecommunications transmission product lines for \$56.2 million. The divestiture resulted in a gain of \$21.7 million for the nine months ended September 30, 2022.

Loss on foreign exchange. We incurred a foreign exchange transaction loss of \$11.3 million for the nine months ended September 30, 2022 as compared to a gain of \$8.0 million for the nine months ended September 30, 2021. 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 loss for the nine months ended September 30, 2022 was primarily attributable to loss resulted from the appreciation of the Russian ruble and depreciation of the Chinese yuan, partially offset by the gain from depreciation of the euro, as compared to the U.S. dollar.

Interest income (expense), net. Interest income, net, was \$4.7 million for the nine months ended September 30, 2022 as compared to \$1.2 million of expense for the nine months ended September 30, 2021. The change in interest income (expense), net is due to an increase in yields on cash equivalents and short-term investments that resulted in higher market interest rates as compared to prior year rates.

Provision for income taxes. Provision for income taxes was \$59.7 million for the nine months ended September 30, 2022 compared to \$69.4 million for the nine months ended September 30, 2021, representing an effective tax rate of 22.7% and 24.6% for the nine months ended September 30, 2022 and 2021, respectively. The decrease in expense is primarily related to a decrease in income. For the nine months ended September 30, 2022 and 2021, the net discrete tax benefits were \$6.8 million and \$5.8 million, respectively. 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. The 2022 benefit is partly offset by the impact from tax deductions for equity-based compensation that were less than the compensation expense recognized for books. The 2021 discrete items relate primarily to tax deductions for equity based compensation that exceeded book deductions and to provision to return adjustments.

Net income attributable to IPG Photonics Corporation. Net income attributable to IPG Photonics Corporation decreased by \$10.5 million to \$202.8 million for the nine months ended September 30, 2022 compared to \$213.3 million for the nine

months ended September 30, 2021. Net income attributable to IPG Photonics Corporation as a percentage of our net sales decreased by 1.0 percentage point to 18.5% for the nine months ended September 30, 2022 from 19.5% for the nine months ended September 30, 2021 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 investments in European and North American manufacturing capacity in order to execute plans to reduce reliance on Russia for manufacturing capacity, our level of sales, the impact of the economic environment on our growth including any ongoing impact of the COVID-19 pandemic on certain global or regional economies, global or regional recessions, 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.

With respect to the current geopolitical situation involving Ukraine and Russia, the imposition of capital controls by the Russian government restricts our ability to access company cash in Russia, but would not materially disrupt our liquidity as a whole. The current balance of cash and cash equivalents and short term investments in Russia is approximately 3% of total current cash and cash equivalents and short term investments. The Russian operations are self-funding. We attempt to keep only amounts that are needed for working capital in Russia and approximately 12% 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:

	September 30, 2022	December 31, 2021
	(In thousands)	
Cash and cash equivalents	\$ 869,274	\$ 709,105
Short-term investments	365,409	805,400
Unused credit lines and overdraft facilities	120,274	128,772
Working capital (excluding cash, cash equivalents and short-term investments)	588,616	519,745

Short-term investments at September 30, 2022 consist of liquid investments including commercial paper, corporate bonds, certificates of deposit, and U.S. Treasury and agency obligations with original maturities of greater than three months but less than one year. See Note 5, "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 and long-term note as of September 30, 2022:

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 (\$49.0 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 (\$1.5 million)	2.03%	March 2023	Common pool of assets of Italian subsidiary
Long-term Unsecured Note ⁽⁴⁾	\$16.3 million	1.20% above LIBOR, fixed using an interest rate swap at 2.85% per annum	May 2023	Unsecured

⁽¹⁾ This facility is available to certain foreign subsidiaries in their respective local currencies. At September 30, 2022, there were no amounts drawn on this line; however, there were \$3.2 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 September 30, 2022, there were no drawings on this facility; however, there were \$1.9 million of guarantees issued against the line which reduces total availability.

⁽³⁾ At September 30, 2022, there were no drawings.

⁽⁴⁾ At maturity, the outstanding note balance will be \$15.4 million.

Our largest committed credit lines are with Bank of America N.A. and Deutsche Bank AG in the amounts of \$75.0 million and \$49.0 million (or 50.0 million euro as described above), respectively, and neither of them is syndicated. The banks have made amendments of our credit agreements to modify LIBOR and EONIA reference rates as these rates are phased out as borrowing rates. We do not plan to amend our long-term unsecured note as it matures prior to the final phase-out of LIBOR.

We are required to meet certain financial covenants associated with our U.S. revolving line of credit and long-term debt 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 September 30, 2022.

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 10, "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:

	Nine Months Ended September 30,	
	2022	2021
	(In thousands)	
Cash provided by operating activities	\$ 171,026	\$ 305,156
Cash provided by (used in) investing activities	407,465	(304,824)
Cash used in financing activities	(400,861)	(72,119)

Operating activities. Net cash provided by operating activities decreased by \$134.2 million to \$171.0 million for the nine months ended September 30, 2022 from \$305.2 million for the nine months ended September 30, 2021, primarily due to an increase in cash used by working capital. Our largest working capital items typically are inventory and accounts receivable. Items such as accounts payable to third parties, prepaid expenses and other current assets and accrued expenses and other liabilities are not as significant as our working capital investment in accounts receivable and inventory because of the amount of value added within IPG due to our vertically integrated structure. Accruals and payables for personnel costs including bonuses and income and other taxes payable are largely dependent on the timing of payments for those items. The decrease in cash flow from operating activities in 2022 primarily resulted from:

- an increase in cash used by income and other taxes payable driven by the requirement to capitalize research and development expenses in the U.S. and the timing of estimated tax payments made and refunds received from filing tax returns,
- an increase in cash used by accrued expenses due to higher bonus payments and lower bonus accruals,
- an increase in cash used by inventory, including an increase in days inventory on hand as the company builds safety stocks for supply chain disruptions related to third party electronic parts and components internally manufactured by our factory in Russia,
- an increase in cash used by accounts payable due to timing of payments,
- a decrease in cash provided by net income after adjusting for non-cash operating activities, partly driven by the non-cash gain on divestiture of the telecommunications transmission product lines; partially offset by,
- an increase in cash provided by accounts receivable, including a decrease in days sales outstanding due to increased collection efforts, and
- an increase in cash provided by prepaid expenses and other assets.

Investing activities. Net cash provided by investing activities was \$407.5 million for the nine months ended September 30, 2022 as compared to cash used in investing activities of \$304.8 million in 2021. The cash provided by investing activities in 2022 related to \$441.3 million of net proceeds from short-term investments, and \$52.1 million of proceeds received from the divestiture of the telecommunications transmission product lines, net of cash sold; partially offset by \$84.6 million of cash used for capital expenditures. The cash used in investing activities in 2021 related to \$210.7 million of net purchases of short-term investments and \$93.9 million of capital expenditures.

In 2022, we expect to invest approximately \$110 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 \$400.9 million for the nine months ended September 30, 2022 as compared to net cash used of \$72.1 million in 2021. The cash used in financing activities in 2022 primarily related to the purchase of treasury stock of \$382.9 million, \$17.8 million of principal payments on our long-term borrowings; the purchase of non-controlling interests of \$2.5 million related to the divestiture of the telecommunications transmission product lines; partially offset by, the proceeds of \$2.4 million from the issuance of common stock under the employee stock purchase plan and the exercise of stock options net of amounts disbursed in relation to shares withheld to cover employee income taxes due upon the vesting and release of restricted stock units. The cash used in financing activities in 2021 related to the purchase of treasury stock of \$78.1 million, \$2.9 million of principal payments on our long-term borrowings and \$2.6 million of payments of purchase price holdbacks from business combinations; partially offset by, proceeds of \$11.4 million from the exercise of stock options net of amounts disbursed in relation to shares withheld to cover employee income taxes due upon the vesting and release of restricted stock units.

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, 2021 (the "Annual Report"), and in Part II Item 1A of Form 10-Q filed with the SEC for the quarter ended March 31, 2022. 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 our debt 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 bank debt and borrowings on our bank credit facilities. Our interest obligations on our long-term debt are fixed by means of an interest rate swap agreement. 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 gain on foreign exchange transactions totaled \$0.5 million for the three months ended September 30, 2022 compared to a gain of \$3.6 million for the three months ended September 30, 2021. 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 September 30, 2022, 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 September 30, 2022 applied to the net U.S. dollar asset balances, would result in a foreign exchange gain of \$2.0 million if the U.S. dollar appreciated and a \$2.1 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 September 30, 2022 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 Chinese yuan as of September 30, 2022 applied to the net U.S. dollar liabilities balances, would result in a foreign exchange loss of \$2.4 million if the U.S. dollar appreciated and a \$2.5 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 September 30, 2022. 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 September 30, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. We are continually monitoring and assessing the changes to business processes resulting from COVID-19 to ensure the design and operating effectiveness of our controls are adequate.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Information with respect to this item may be found in Note 12, "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, 2021, and in Item 1A of Part II of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, 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 this Quarterly Report 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 September 30, 2022.

Issuer Purchases of Equity Securities

The following table reflects issuer purchases of equity securities for the three months ended September 30, 2022:

	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
July 1, 2022 — July 31, 2022	—		\$ —	—	\$ —
August 1, 2022 — August 31, 2022	874	(1)	102.80	—	—
September 1, 2022 — September 30, 2022	819,422	(2)	86.96	819,422	228,745
Total	820,296		\$ 86.98	819,422	\$ 228,745

(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 September 30, 2022 a total of 874 shares were withheld at an average price of \$102.80.

(2) On August 2, 2022, we announced that our Board of Directors authorized the purchase of up to \$300 million of IPG common stock (the "August 2022 authorization"), exclusive of any fees, commissions or other expenses. Share repurchases under this purchase authorization were made periodically in open-market transactions using our working capital, and were subject to market conditions, legal requirements and other factors. The share purchase program authorizations did not obligate us to repurchase any dollar amount or number of our shares, and repurchases could be commenced or suspended from time to time without prior notice.

We repurchased 819,422 shares in the third quarter of 2022 under the August 2022 authorization.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

(a) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
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: November 1, 2022

By: /s/ Eugene A. Scherbakov

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

Date: November 1, 2022

By: /s/ Timothy P.V. Mammen

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

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: November 1, 2022

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: November 1, 2022

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 September 30, 2022 (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: November 1, 2022

/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.