

SECURITIES & EXCHANGE COMMISSION EDGAR FILING

LIGHTPATH TECHNOLOGIES INC

Form: 10-Q

Date Filed: 2019-02-07

Corporate Issuer CIK: 889971

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-Q

(Mark One)

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

For the quarterly period ended December 31, 2018

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 000-27548

LIGHTPATH TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

DELAWARE

(State or other jurisdiction of incorporation or organization)

86-0708398

(I.R.S. Employer Identification No.)

<http://www.lightpath.com>

**2603 Challenger Tech Ct. Suite 100
Orlando, Florida 32826**

(Address of principal executive offices)
(ZIP Code)

(407) 382-4003

(Registrant's telephone number, including area code)

N/A

(Former name, former address, and former fiscal year, if changed since last report)

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 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 ☒

APPLICABLE ONLY TO CORPORATE ISSUERS:

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

25,811,634 shares of common stock, Class A, \$.01 par value, outstanding as of February 4, 2019.

LIGHTPATH TECHNOLOGIES, INC.

Form 10-Q

Index

Item	Page
Cautionary Note Concerning Forward-Looking Statements	3
Part I Financial Information	
Item 1 Financial Statements	
Unaudited Condensed Consolidated Balance Sheets	4
Unaudited Condensed Consolidated Statements of Comprehensive Income (Loss)	5
Unaudited Condensed Consolidated Statements of Stockholders' Equity	6
Unaudited Condensed Consolidated Statements of Cash Flows	7
Notes to Unaudited Condensed Consolidated Financial Statements	8
Item 2 Management's Discussion and Analysis of Financial Condition and Results of Operations	
Overview	19
Results of Operations	20
Liquidity and Capital Resources	23
Contractual Obligations and Commitments	24
Off-Balance Sheet Arrangements	24
Critical Accounting Policies and Estimates	24
Non-GAAP Financial Measures	28
Item 4 Controls and Procedures	29
Part II Other Information	
Item 1 Legal Proceedings	30
Item 2 Unregistered Sales of Equity Securities and Use of Proceeds	30
Item 3 Defaults Upon Senior Securities	30
Item 4 Mine Safety Disclosures	30
Item 5 Other Information	30
Item 6 Exhibits	30
Signatures	33

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

Certain statements and information in this Quarterly Report on Form 10-Q for the quarter ended December 31, 2018 (the "Quarterly Report") may constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, which address activities, events, or developments that we expect or anticipate will or may occur in the future, including such things as future capital expenditures, growth, product development, sales, business strategy, and other similar matters are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," or "continue," or other comparable terminology. These forward-looking statements are based largely on our current expectations and assumptions and are subject to a number of risks and uncertainties, many of which are beyond our control. These statements are subject to many risks, uncertainties, and other important factors that could cause actual future results to differ materially from those expressed in the forward-looking statements. For a discussion of risks and uncertainties that could cause actual results to differ materially from those contained in our forward-looking statements, please refer to Item 1A, Risk Factors, in our Annual Report on Form 10-K for the year-ended June 30, 2018. In light of these risks and uncertainties, all of the forward-looking statements made herein are qualified by these cautionary statements and there can be no assurance that the actual results or developments anticipated by us will be realized. We undertake no obligation to update or revise any of the forward-looking statements contained herein.

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Balance Sheets
(unaudited)

Assets	December 31, 2018	June 30, 2018
Current assets:		
Cash and cash equivalents	\$ 3,641,389	\$ 5,508,620
Restricted cash	1,000,000	1,000,000
Trade accounts receivable, net of allowance of \$21,956 and \$13,364	6,218,288	5,370,508
Inventories, net	6,737,050	6,404,741
Other receivables	69,224	46,574
Prepaid expenses and other assets	861,373	1,058,610
Total current assets	18,527,324	19,389,053
Property and equipment, net	12,227,361	11,809,241
Intangible assets, net	8,404,347	9,057,970
Goodwill	5,854,905	5,854,905
Deferred tax assets, net	1,030,000	624,000
Other assets	357,753	381,945
Total assets	\$ 46,401,690	\$ 47,117,114
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 2,042,290	\$ 2,032,834
Accrued liabilities	501,171	685,430
Accrued payroll and benefits	1,306,831	1,228,120
Loans payable, current portion	1,458,800	1,458,800
Capital lease obligation, current portion	390,881	307,199
Total current liabilities	5,699,973	5,712,383
Capital lease obligation, less current portion	710,569	550,127
Deferred rent	349,703	377,364
Loans payable, less current portion	4,401,859	5,119,796
Total liabilities	11,162,104	11,759,670
Commitments and Contingencies		
Stockholders' equity:		
Preferred stock: Series D, \$.01 par value, voting; 500,000 shares authorized; none issued and outstanding	—	—
Common stock: Class A, \$.01 par value, voting; 44,500,000 shares authorized; 25,789,272 and 25,764,544 shares issued and outstanding	257,893	257,645
Additional paid-in capital	230,097,492	229,874,823
Accumulated other comprehensive income	699,348	473,508
Accumulated deficit	(195,815,147)	(195,248,532)
Total stockholders' equity	35,239,586	35,357,444
Total liabilities and stockholders' equity	\$ 46,401,690	\$ 47,117,114

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

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(unaudited)

	Three Months Ended December 31,		Six Months Ended December 31,	
	2018	2017	2018	2017
Revenue, net	\$ 8,548,507	\$ 8,361,373	\$ 17,098,228	\$ 15,933,466
Cost of sales	5,007,364	4,849,657	10,513,912	9,132,413
Gross margin	3,541,143	3,511,716	6,584,316	6,801,053
Operating expenses:				
Selling, general and administrative	2,518,853	2,294,177	4,982,731	4,692,417
New product development	518,793	413,081	988,776	794,469
Amortization of intangibles	324,351	329,271	653,622	658,542
(Gain) loss on disposal of property and equipment	(15,500)	3,315	43,257	3,315
Total operating costs and expenses	3,346,497	3,039,844	6,668,386	6,148,743
Operating income (loss)	194,646	471,872	(84,070)	652,310
Other income (expense):				
Interest expense, net	(153,289)	(193,747)	(298,302)	(395,008)
Change in fair value of warrant liability	—	(243,012)	—	(194,632)
Other income (expense), net	(48,484)	194,729	(386,606)	442,852
Total other income (expense), net	(201,773)	(242,030)	(684,908)	(146,788)
Income (loss) before income taxes	(7,127)	229,842	(768,978)	505,522
Income tax benefit	(23,403)	(193,508)	(202,363)	(135,524)
Net income (loss)	\$ 16,276	\$ 423,350	\$ (566,615)	\$ 641,046
Foreign currency translation adjustment	52,793	69,262	225,840	123,409
Comprehensive income (loss)	\$ 69,069	\$ 492,612	\$ (340,775)	\$ 764,455
Earnings (loss) per common share (basic)	\$ 0.00	\$ 0.02	\$ (0.02)	\$ 0.03
Number of shares used in per share calculation (basic)	25,781,941	24,525,839	25,777,330	24,380,448
Earnings (loss) per common share (diluted)	\$ 0.00	\$ 0.02	\$ (0.02)	\$ 0.02
Number of shares used in per share calculation (diluted)	27,397,239	26,437,359	25,777,330	26,326,759

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

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Statements of Stockholders' Equity
(unaudited)

	Class A Common Stock Shares	Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity
Balances at June 30, 2018	25,764,544	\$ 257,645	\$ 229,874,823	\$ 473,508	\$ (195,248,532)	\$ 35,357,444
Issuance of common stock for:						
Employee Stock Purchase Plan	9,061	91	20,750	—	—	20,841
Stock-based compensation on stock options & RSUs	—	—	93,910	—	—	93,910
Foreign currency translation adjustment	—	—	—	173,047	—	173,047
Net loss	—	—	—	—	(582,891)	(582,891)
Balances at September 30, 2018	25,773,605	\$ 257,736	\$ 229,989,483	\$ 646,555	\$ (195,831,423)	\$ 35,062,351
Issuance of common stock for:						
Exercise of stock options & RSUs	15,667	157	4,104	—	—	4,261
Stock-based compensation on stock options & RSUs	—	—	103,905	—	—	103,905
Foreign currency translation adjustment	—	—	—	52,793	—	52,793
Net income	—	—	—	—	16,276	16,276
Balances at December 31, 2018	25,789,272	\$ 257,893	\$ 230,097,492	\$ 699,348	\$ (195,815,147)	\$ 35,239,586
Balances at June 30, 2017	24,215,733	\$ 242,157	\$ 225,492,252	\$ 295,396	\$ (196,308,636)	\$ 29,721,169
Issuance of common stock for:						
Exercise of warrants	25,000	250	30,000	—	—	30,250
Employee Stock Purchase Plan	7,093	71	19,009	—	—	19,080
Reclassification of warrant liability upon exercise	—	—	34,500	—	—	34,500
Stock-based compensation on stock options & RSUs	—	—	92,241	—	—	92,241
Foreign currency translation adjustment	—	—	—	54,147	—	54,147
Net income	—	—	—	—	217,695	217,695
Balances at September 30, 2017	24,247,826	\$ 242,478	\$ 225,668,002	\$ 349,543	\$ (196,090,941)	\$ 30,169,082
Exercise of warrants	408,810	4,088	504,980	—	—	509,068
Exercise of stock options	46,250	463	103,238	—	—	103,701
Reclassification of warrant liability upon exercise	—	—	650,632	—	—	650,632
Stock-based compensation on stock options & RSUs	—	—	377,367	—	—	377,367
Foreign currency translation adjustment	—	—	—	69,262	—	69,262
Net income	—	—	—	—	423,351	423,351
Balances at December 31, 2017	24,702,886	\$ 247,029	\$ 227,304,219	\$ 418,805	\$ (195,667,590)	\$ 32,302,463

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

LIGHTPATH TECHNOLOGIES, INC.
Condensed Consolidated Statements of Cash Flows
(unaudited)

	Six Months Ended December 31,	
	2018	2017
Cash flows from operating activities:		
Net (loss) income	\$ (566,615)	\$ 641,046
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:		
Depreciation and amortization	1,683,676	1,625,674
Interest from amortization of debt costs	11,962	7,721
Loss on disposal of property and equipment	43,257	3,315
Stock-based compensation on stock options & RSU, net	197,815	186,209
Provision for doubtful accounts receivable	1,469	(24,264)
Change in fair value of warrant liability	—	194,632
Change in fair value of Sellers note	—	71,505
Deferred rent amortization	(27,096)	(37,885)
Inventory write-offs to reserve	2,114	—
Deferred tax benefit	(406,000)	—
Changes in operating assets and liabilities:		
Trade accounts receivable	(849,007)	247,702
Other receivables	(22,858)	(28,206)
Inventories	(594,141)	(821,838)
Prepaid expenses and other assets	214,960	(3,094)
Accounts payable and accrued liabilities	(87,707)	(444,276)
Net cash (used in) provided by operating activities	<u>(398,171)</u>	<u>1,618,241</u>
Cash flows from investing activities:		
Purchase of property and equipment	(1,180,184)	(1,900,582)
Proceeds from sale of equipment	110,500	—
Net cash used in investing activities	<u>(1,069,684)</u>	<u>(1,900,582)</u>
Cash flows from financing activities:		
Proceeds from exercise of stock options	4,261	103,701
Proceeds from sale of common stock from Employee Stock Purchase Plan	20,841	19,080
Proceeds from exercise of warrants, net of costs	—	539,318
Payments on loan payable	(729,399)	(556,499)
Payments on capital lease obligations	(167,626)	(119,424)
Net cash used in financing activities	<u>(871,923)</u>	<u>(13,824)</u>
Effect of exchange rate on cash and cash equivalents	472,547	(54,413)
Change in cash and cash equivalents and restricted cash	(1,867,231)	(350,578)
Cash and cash equivalents and restricted cash, beginning of period	6,508,620	8,085,015
Cash and cash equivalents and restricted cash, end of period	<u>\$ 4,641,389</u>	<u>\$ 7,734,437</u>
Supplemental disclosure of cash flow information:		
Interest paid in cash	\$ 267,065	\$ 316,174
Income taxes paid	\$ 247,664	\$ 446,434
Supplemental disclosure of non-cash investing & financing activities:		
Purchase of equipment through capital lease arrangements	\$ 411,750	\$ 306,220
Reclassification of warrant liability upon exercise	—	\$ 685,132
Derecognition of liability associated with stock option grants	—	\$ 283,399

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

LIGHTPATH TECHNOLOGIES, INC.
Notes to Unaudited Condensed Consolidated Financial Statements

1. Basis of Presentation

References in this document to “the Company,” “LightPath,” “we,” “us,” or “our” are intended to mean LightPath Technologies, Inc., individually, or as the context requires, collectively with its subsidiaries on a consolidated basis.

The accompanying unaudited Condensed Consolidated Financial Statements have been prepared in accordance with the requirements of Article 8 of Regulation S-X promulgated under the Exchange Act and, therefore, do not include all information and footnotes necessary for a fair presentation of financial position, results of operations, and cash flows in conformity with accounting principles generally accepted in the United States of America. These unaudited Condensed Consolidated Financial Statements should be read in conjunction with our Consolidated Financial Statements and related notes, included in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018, filed with the Securities and Exchange Commission (the “SEC”). Unless otherwise stated, references to particular years or quarters refer to our fiscal years ended June 30 and the associated quarters of those fiscal years.

These Condensed Consolidated Financial Statements are unaudited, but include all adjustments, including normal recurring adjustments, which, in the opinion of management, are necessary to present fairly our financial position, results of operations and cash flows for the interim periods presented. The Consolidated Balance Sheet as of June 30, 2018 has been derived from the audited financial statements at that date but does not include all of the information and notes required by generally accepted accounting principles for complete financial statements. Results of operations for interim periods are not necessarily indicative of the results that may be expected for the year as a whole. The unaudited Condensed Consolidated Financial Statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

2. Significant Accounting Policies

Our significant accounting policies are provided in Note 2, *Summary of Significant Accounting Policies*, in the Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018.

Use of Estimates

Management makes estimates and assumptions during the preparation of our unaudited Condensed Consolidated Financial Statements that affect amounts reported in the unaudited Condensed Consolidated Financial Statements and accompanying notes. Such estimates and assumptions could change in the future as more information becomes available, which, in turn, could impact the amounts reported and disclosed herein.

Recently Adopted Accounting Standards

Revenue from Contracts with Customers – In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-9, *Revenue from Contracts with Customers* (“ASU 2014-9”). The standard, along with the amendments issued in 2016 and 2015, provides companies with a single model for use in accounting for revenue arising from contracts with customers and supersedes current revenue recognition guidance, including industry-specific revenue guidance. The core principle of the model is to recognize revenue when control of the goods or services transfers to the customer, as opposed to recognizing revenue when the risks and rewards transfer to the customer under the existing revenue guidance. ASU 2014-9 is required to be adopted, using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within ASU 2014-9; or (ii) retrospective with the cumulative effect of initially applying ASU 2014-9 recognized at the date of initial application and providing certain additional disclosures. This standard, as amended, is effective for annual and interim periods beginning after December 15, 2017 and permits entities to early adopt for annual and interim reporting periods beginning after December 15, 2016. We adopted this standard as of July 1, 2018, using the modified retrospective transition method. The impact on the Consolidated Financial Statements upon adoption of this standard was immaterial. For additional information, see Note 3, *Revenue*, to these unaudited Condensed Consolidated Financial Statements.

Income Taxes – In October 2016, the FASB issued ASU 2016-16, *Income Taxes* (Topic 740) (“ASU 2016-16”). ASU 2016-16 will require an entity to recognize the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. ASU 2016-16 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. ASU 2016-16 is effective for us in the first quarter of fiscal 2019. We adopted this standard effective July 1, 2018, and there was no significant impact on the unaudited Condensed Consolidated Financial Statements upon the adoption of this standard.

Compensation – Stock Compensation – In May 2017, the FASB issued ASU 2017-09, *Compensation - Stock Compensation* (Topic 718): Scope of Modification Accounting (“ASU 2017-09”). The new guidance clarifies when a change to the terms or conditions of a share-based payment award must be accounted for as a modification. ASU 2017-09 is effective for fiscal years, and interim periods within those annual periods, beginning after December 15, 2017. ASU 2017-09 is effective for us in the first quarter of fiscal 2019. We adopted this standard effective July 1, 2018, and there was no impact on the unaudited Condensed Consolidated Financial Statements upon the adoption of this standard.

There have been no other material changes to our significant accounting policies during the six months ended December 31, 2018, from those disclosed in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018.

Recent Accounting Standards Yet to be Adopted

Leases – In February 2016, the FASB issued ASU No. 2016-02, *Leases* (“ASU 2016-02”). This guidance requires an entity to recognize lease liabilities and a right-of-use asset for all leases on the balance sheet and to disclose key information about the entity’s leasing arrangements. ASU 2016-02 must be adopted using a modified retrospective approach for all leases existing at, or entered into after the date of initial adoption, with an option to elect to use certain transition relief. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, with earlier adoption permitted. Our current operating lease portfolio is primarily comprised of real estate leases. Upon adoption of this standard, we expect our Consolidated Balance Sheet to include a right-of-use asset and liability related to substantially all operating lease arrangements. ASU 2016-02 is effective for us in the first quarter of our fiscal year ending June 30, 2020.

3. Revenue

On July 1, 2018, the Company adopted ASU 2014-9 using the modified retrospective method, which required us to record a cumulative effect adjustment, if any, at the date of adoption. The adoption did not have a material impact on our unaudited Condensed Consolidated Financial Statements and, as a result, no changes were made to prior reporting periods presented.

Product Revenue

We are a manufacturer of optical components and higher-level assemblies, including precision molded glass aspheric optics, molded and diamond-turned infrared aspheric lenses, and other optical materials used to produce products that manipulate light. We design, develop, manufacture, and distribute optical components and assemblies utilizing advanced optical manufacturing processes. We also perform research and development for optical solutions for a wide range of optics markets. Revenue is derived primarily from the sale of optical components and assemblies.

Revenue Recognition

Revenue is generally recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We generally bear all costs, risk of loss, or damage and retain title to the goods up to the point of transfer of control of promised products to customers. Shipping and handling costs are included in the cost of goods sold. We present revenue net of sales taxes and any similar assessments.

Customary payment terms are granted to customers, based on credit evaluations. We currently do not have any contracts where revenue is recognized, but the customer payment is contingent on a future event. We record deferred revenue when cash payments are received or due in advance of our performance. Deferred revenue was immaterial as of June 30, 2018 and December 31, 2018.

Nature of Products

Revenue from the sale of optical components and assemblies is recognized upon transfer of control to the customer. The performance obligations for the sale of optical components and assemblies are satisfied at a point in time. Product development agreements are generally short term in nature, with revenue recognized upon transfer of control of the agreed-upon deliverable. We have organized our products in three groups: precision molded optics ("PMO"), infrared, and specialty products. Revenues from product development agreements are included in specialty products. Our revenue by product group for the three and six months ended December 31, 2018 and 2017 was as follows:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2018	2017	2018	2017
PMO	\$ 4,126,091	\$ 3,318,482	\$ 7,238,195	\$ 6,540,846
Infrared Products	3,729,845	4,237,564	8,690,772	7,838,351
Specialty Products	692,571	805,327	1,169,261	1,554,269
Total revenue	<u>\$ 8,548,507</u>	<u>\$ 8,361,373</u>	<u>\$ 17,098,228</u>	<u>\$ 15,933,466</u>

4. Inventories

The components of inventories include the following:

	December 31, 2018	June 30, 2018
Raw materials	\$ 2,733,205	\$ 2,309,454
Work in process	2,275,862	2,506,891
Finished goods	2,483,133	2,263,121
Allowance for obsolescence	(755,150)	(674,725)
	<u>\$ 6,737,050</u>	<u>\$ 6,404,741</u>

The value of tooling in raw materials was approximately \$1.8 million and \$1.6 million at December 31, 2018 and June 30, 2018, respectively.

5. Property and Equipment

Property and equipment are summarized as follows:

	Estimated Lives (Years)	December 31, 2018	June 30, 2018
Manufacturing equipment	5 - 10	\$ 17,411,344	\$ 16,534,124
Computer equipment and software	3 - 5	562,003	513,681
Furniture and fixtures	5	257,135	199,872
Leasehold improvements	5 - 7	1,484,084	1,350,482
Construction in progress		992,729	954,317
Total property and equipment		20,707,295	19,552,476
Less accumulated depreciation and amortization		(8,479,934)	(7,743,235)
Total property and equipment, net		<u>\$ 12,227,361</u>	<u>\$ 11,809,241</u>

6. Goodwill and Intangible Assets

There were no changes in the net carrying value of goodwill during the six months ended December 31, 2018.

Identifiable intangible assets were comprised of:

	Useful Lives (Years)	December 31, 2018	June 30, 2018
Customer relationships	15	\$ 3,590,000	\$ 3,590,000
Backlog	2	366,000	366,000
Trade secrets	8	3,272,000	3,272,000
Trademarks	8	3,814,000	3,814,000
Non-compete agreement	3	27,000	27,000
Total intangible assets		11,069,000	11,069,000
Less accumulated amortization		(2,664,653)	(2,011,030)
Total intangible assets, net		<u>\$ 8,404,347</u>	<u>\$ 9,057,970</u>

Future amortization of identifiable intangibles is as follows:

Fiscal year ending:

June 30, 2019 (remaining six months)	\$ 567,041
June 30, 2020	1,129,342
June 30, 2021	1,125,083
June 30, 2022	1,125,083
June 30, 2023 and later	4,457,798
	<u>\$ 8,404,347</u>

7. Accounts Payable

The accounts payable balance as of December 31, 2018 and June 30, 2018 both include approximately \$82,000 of earned but unpaid Board of Directors' fees.

8. Income Taxes

A summary of our total income tax expense and effective income tax rate for the three and six months ended December 31, 2018 and 2017 is as follows:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2018	2017	2018	2017
Income (loss) before income taxes	\$ (7,127)	\$ 229,842	\$ (768,978)	\$ 505,522
Income tax benefit	\$ (23,403)	\$ (193,508)	\$ (202,363)	\$ (135,524)
Effective income tax rate	328%	-84%	26%	-27%

The difference between our effective tax rates in the periods presented above and the federal statutory rate is due to the mix of taxable income and losses generated in our various tax jurisdictions, which include the United States ("U.S."), the People's Republic of China, and the Republic of Latvia. For the three and six months ended December 31, 2018, we recorded a net income tax benefit, representing a tax benefit on losses in the U.S. jurisdiction, offset by tax expense on income generated in China. Income tax benefit for the six months ended December 31, 2017 was primarily related to income taxes from our non-U.S. operations. During the three months ended December 31, 2017, the statutory tax rate applicable to one of our Chinese subsidiaries, LightPath Optical Instrumentation (Zhenjiang) Co., Ltd. ("LPOIZ"), was lowered from 25% to 15% in accordance with an incentive program for technology companies. The lower rate applied to LPOIZ's 2017 tax year, beginning on January 1, 2017. Accordingly, we recorded a tax benefit during the three months ended December 31, 2017 related to this retroactive rate change.

We record net deferred tax assets to the extent we believe it is more likely than not that some portion or all of these assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. As of December 31, 2018 and June 30, 2018, we have provided for a valuation allowance against our net deferred tax assets to reduce the net deferred tax assets to the amount we estimate is more-likely-than-not to be realized. Our net deferred tax asset consists primarily of U.S. net operating loss ("NOL") carryforward benefits, and federal and state tax credits with indefinite carryover periods.

Tax Cuts and Jobs Act

In December 2017, Congress passed, and the President signed into law, the Tax Cuts and Jobs Act (the "2017 Act"), which changed existing U.S. tax law and included various provisions that affect companies in the United States. Among other things, the 2017 Act: (i) changed U.S. corporate tax rates, (ii) generally reduced a company's ability to utilize accumulated net operating losses, and (iii) required the calculation of a one-time transition tax on certain foreign earnings and profits ("foreign E&P") that had not been previously repatriated.

During the quarter ended December 31, 2018, we completed our accounting of the income tax impact from the enactment of the 2017 Act and there were no material changes from the estimates reported in our Annual Report on Form 10-K for the year ended June 30, 2018. The 2017 Act provides for a one-time transition tax on our post-1986 foreign E&P that have not been previously repatriated. We determined that our foreign E&P was approximately \$6.9 million and anticipate that we will not owe any one-time transition tax due to the utilization of U.S. NOL carryforward benefits against these earnings. We have also completed our evaluation of the income tax impacts of the Global Intangible Low-Taxed Income and Foreign-Derived Intangible Income provisions of the 2017 Act, and our tax expense includes the impact of these provisions as a period cost in our effective tax rate.

Income Tax Law of the People's Republic of China

Our Chinese subsidiaries, LightPath Optical Instrumentation (Shanghai) Co., Ltd. ("LPOI") and LPOIZ, are governed by the Income Tax Law of the People's Republic of China. As of December 31, 2018, LPOI and LPOIZ were subject to statutory income tax rates of 25% and 15%, respectively.

We currently intend to permanently invest earnings generated from our foreign Chinese operations and, therefore, have not previously provided for future Chinese withholding taxes on such related earnings. However, if in the future we change such intention, the Company would provide for and pay additional foreign taxes, if any, at that time.

Law of Corporate Income Tax of Latvia

Our Latvian subsidiary, ISP Optics Latvia, SIA ("ISP Latvia"), is governed by the Law of Corporate Income Tax of Latvia. As of December 31, 2017, ISP Latvia was subject to a statutory income tax rate of 15%. Effective January 1, 2018, the Republic of Latvia enacted tax reform with the following key provisions: (i) corporations are no longer subject to income tax, but are instead subject to a distribution tax on distributed profits (or deemed distributions, as defined) and (ii) the tax rate was changed to 20%; however, distribution amounts are first divided by 0.8 to arrive at the taxable amount of profit, resulting in an effective tax rate of 25%. As a transitional measure, distributions made from earnings prior to January 1, 2018, distributed prior to December 31, 2019, are not subject to tax. As such, any distributions of profits from ISP Latvia to ISP Optics Corporation ("ISP"), its U.S. parent company, will be from earnings prior to January 1, 2018 and, therefore, will not be subject to tax. We currently do not intend to distribute any current earnings generated after January 1, 2018. If, in the future, we change such intention, we will accrue distribution taxes, if any, as profits are generated.

9. Stock-Based Compensation

Our directors, officers, and key employees were granted stock-based compensation through our Amended and Restated Omnibus Incentive Plan, as amended (the "Omnibus Plan"), through October 2018 and after that date, the 2018 Stock and Incentive Compensation Plan (the "SICP"). The awards include incentive stock options, non-qualified stock options, and restricted stock unit ("RSU") awards. The stock-based compensation expense is based primarily on the fair value of the award as of the grant date, and is recognized as an expense over the requisite service period.

The following table shows total stock-based compensation expense for the six months ended December 31, 2018 and 2017 included in the accompanying unaudited Condensed Consolidated Statements of Comprehensive Income:

	Six Months Ended December 31,	
	2018	2017
Stock options	\$ 29,468	\$ 21,280
RSUs	168,347	164,929
Total	<u>\$ 197,815</u>	<u>\$ 186,209</u>
The amounts above were included in:		
Selling, general & administrative	\$ 196,378	\$ 182,277
Cost of sales	1,620	3,206
New product development	(183)	726
	<u>\$ 197,815</u>	<u>\$ 186,209</u>

We also adopted the LightPath Technologies, Inc. Employee Stock Purchase Plan (the "2014 ESPP"). The 2014 ESPP permits employees to purchase Class A common stock through payroll deductions, subject to certain limitations. A discount of \$2,084 and \$1,915 for the six months ended December 31, 2018 and 2017, respectively, is included in the selling, general and administrative expense in the accompanying unaudited Condensed Consolidated Statements of Comprehensive Income, which represents the value of the 10% discount given to the employees purchasing stock under the 2014 ESPP.

Grant Date Fair Values and Underlying Assumptions; Contractual Terms

We estimate the fair value of each stock option as of the date of grant, using the Black-Scholes-Merton pricing model. The fair value of 2014 ESPP shares is the amount of the discount the employee obtains at the date of the purchase transaction.

Most stock options granted vest ratably over two to four years and are generally exercisable for ten years. The assumed forfeiture rates used in calculating the fair value of RSU grants was 0%, and the assumed forfeiture rates used in calculating the fair value of options for performance and service conditions were 20% for each of the six months ended December 31, 2018 and 2017. The volatility rate and expected term are based on seven-year historical trends in Class A common stock closing prices and actual forfeitures. The interest rate used is the U.S. Treasury interest rate for constant maturities.

For stock options granted under the Omnibus Plan or SICP, as applicable, in the six-month periods ended December 31, 2018 and 2017, we estimated the fair value of each stock option as of the date of grant using the following assumptions:

	Six Months Ended December 31,	
	2018	2017
Weighted-average expected volatility	56% - 69%	63% - 75%
Dividend yields	0%	0%
Weighted-average risk-free interest rate	2.65% - 3.00%	1.28% - 1.80%
Weighted-average expected term, in years	2.53	7.25

Information Regarding Current Share-Based Compensation Awards

A summary of the activity for share-based compensation awards in the six months ended December 31, 2018 is presented below:

	Stock Options			Restricted Stock Units (RSUs)	
	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contract	Shares	Weighted-Average Remaining Contract
June 30, 2018	1,005,129	\$ 1.77	6.3	1,649,353	0.9
Granted	13,058	\$ 2.10	9.9	229,509	2.9
Exercised	(4,797)	\$ 1.05	—	(14,336)	—
Cancelled/Forfeited	(3,938)	\$ 0.92	—	—	—
December 31, 2018	<u>1,009,452</u>	\$ 1.78	5.9	<u>1,864,526</u>	0.9
Awards exercisable/ vested as of					
December 31, 2018	886,882	\$ 1.68	5.5	1,464,382	—
Awards unexercisable/ unvested as of					
December 31, 2018	<u>122,570</u>	\$ 2.50	8.1	<u>400,144</u>	0.9
	<u>1,009,452</u>			<u>1,864,526</u>	

RSU awards vest immediately or from two to four years from the grant date.

As of December 31, 2018, there was approximately \$720,000 of total unrecognized compensation cost related to non-vested share-based compensation arrangements (including share options and RSUs) granted. We expect to recognize the compensation cost as follows:

	Stock Options	RSUs	Total
Six months ending June 30, 2019	6,993	189,982	196,975
Year ending June 30, 2020	8,926	289,944	298,870
Year ending June 30, 2021	5,939	169,978	175,917
Year ending June 30, 2022	2,021	46,654	48,675
	<u>\$ 23,879</u>	<u>\$ 696,558</u>	<u>\$ 720,437</u>

10. Earnings (Loss) Per Share

Basic earnings per share is computed by dividing net income or loss by the weighted-average number of shares of Class A common stock outstanding, during each period presented. Diluted earnings per share is computed similarly to basic earnings per share, except that it reflects the potential dilution that could occur if dilutive securities or other obligations to issue shares of Class A common stock were exercised or converted into shares of Class A common stock. The computations for basic and diluted earnings per share of Class A common stock are presented in the following table:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2018	2017	2018	2017
Net income (loss)	\$ 16,276	\$ 423,350	\$ (566,615)	\$ 641,046
Weighted-average common shares outstanding:				
Basic number of shares	25,781,941	24,525,839	25,777,330	24,380,448
Effect of dilutive securities:				
Options to purchase common stock	133,471	408,494	—	385,424
RSUs	1,481,827	1,397,866	—	1,376,887
Common stock warrants	—	105,160	—	184,000
Diluted number of shares	<u>27,397,239</u>	<u>26,437,359</u>	<u>25,777,330</u>	<u>26,326,759</u>
Earnings (loss) per common share:				
Basic	\$ 0.00	\$ 0.02	\$ (0.02)	\$ 0.03
Diluted	\$ 0.00	\$ 0.02	\$ (0.02)	\$ 0.02

The following potential weighted-average dilutive shares were not included in the computation of diluted earnings per share of Class A common stock, as their effects would be anti-dilutive:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2018	2017	2018	2017
Options to purchase common stock	875,085	696,811	1,006,348	714,710
RSUs	274,334	213,288	1,702,757	183,081
Common stock warrants	—	83,589	—	154,590
	<u>1,149,419</u>	<u>993,688</u>	<u>2,709,105</u>	<u>1,052,381</u>

11. Lease Commitments

We lease various facilities under non-cancelable operating leases, expiring through 2022. Our leased facilities are located in Orlando, Florida; Irvington, New York; Riga, Latvia; Shanghai, China; and Zhenjiang, China. Rent expense totaled approximately \$505,000 and \$522,000 during the six months ended December 31, 2018 and 2017, respectively.

We currently have obligations under five capital lease agreements, entered into during fiscal years 2016, 2017, 2018, and 2019, with terms ranging from three to five years. The leases are for computer and manufacturing equipment, which are included as part of property and equipment. Assets under capital lease include approximately \$1.9 million in manufacturing equipment, with accumulated amortization of approximately \$771,000 as of December 31, 2018. Amortization related to capital lease assets is included in depreciation and amortization expense.

The approximate future minimum lease payments under capital and operating leases at December 31, 2018 were as follows:

	Capital Leases	Operating Leases
Fiscal year ending:		
June 30, 2019 (six months remaining)	\$ 232,590	\$ 514,000
June 30, 2020	442,299	923,000
June 30, 2021	367,654	679,000
June 30, 2022	191,484	558,000
June 30, 2023	—	60,869
Total minimum payments	<u>1,234,027</u>	<u>\$ 2,734,869</u>
Less imputed interest	<u>(132,577)</u>	
Present value of minimum lease payments included in capital lease obligations	1,101,450	
Less current portion	<u>(390,881)</u>	
Non-current portion	<u>\$ 710,569</u>	

12. Loans Payable

Loans payable consists of the Term II Loan (as defined below) payable to Avidbank Corporate Finance, a division of Avidbank ("Avidbank"), pursuant to the Second Amended and Restated Loan and Security Agreement (the "LSA") entered into on December 21, 2016, as amended by the First Amendment to the LSA dated December 20, 2017 (the "First Amendment"), the Second Amendment to the LSA dated January 16, 2018 (the "Second Amendment"), the Third Amendment to the LSA dated May 11, 2018 (the "Third Amendment"), the Fourth Amendment to the LSA dated September 7, 2018 (the "Fourth Amendment"), and the Fifth Amendment to the LSA dated October 30, 2018 (the "Fifth Amendment," and together with the LSA, First Amendment, the Second Amendment, the Third Amendment, and the Fourth Amendment, the "Amended LSA"). The First Amendment and Third Amendment are discussed in detail in Item 8 under the heading "Notes to the Consolidated Financial Statements – Note 18, *Loans Payable*, in our latest Annual Report on Form 10-K for the year ended June 30, 2018. The Second Amendment, Fourth Amendment, and Fifth Amendment are discussed below. The Amended LSA also provides for a working capital revolving line of credit (the "Revolving Line").

Pursuant to the Amended LSA, Avidbank will, in its discretion, make loan advances under the Revolving Line to us up to a maximum aggregate principal amount outstanding not to exceed the lesser of (i) One Million Dollars (\$1,000,000), or (ii) eighty percent (80%) (the "Maximum Advance Rate") of the aggregate balance of our eligible accounts receivable, as determined by Avidbank in accordance with the Amended LSA. Upon the occurrence and during the continuance of an event of default, Avidbank may, in its discretion, cease making advances and terminate the Amended LSA; provided, that at the time of termination, no obligations remain outstanding and Avidbank has no obligation to make advances under the Amended LSA. Avidbank also has the discretion to determine that certain accounts are not eligible accounts.

Amounts borrowed under the Revolving Line may be repaid and re-borrowed at any time prior to the Revolving Maturity Date (as defined below), at which time all amounts shall be immediately due and payable. The advances under the Revolving Line bear interest, on the outstanding daily balance, at a per annum rate equal to one percent (1%) above the Prime Rate; provided, however, that at no time shall the applicable rate be less than four-and-one-half percent (4.5%) per annum. Interest payments are due and payable on the last business day of each month. Payments received with respect to accounts upon which advances are made will be applied to the amounts outstanding under the Amended LSA. There were no borrowings under the Revolving Line during the six months ended December 31, 2018. As of December 31, 2018, there was no outstanding balance under the Revolving Line.

Our obligations under the Amended LSA are collateralized by a first priority security interest (subject to permitted liens) in cash, U.S. inventory, accounts receivable and equipment. In addition, our wholly-owned subsidiary, Geltech, Inc., has guaranteed our obligations under the Amended LSA.

The Amended LSA contains customary covenants, including, but not limited to: (i) limitations on the disposition of property; (ii) limitations on changing our business or permitting a change in control; (iii) limitations on additional indebtedness or encumbrances; (iv) restrictions on distributions; (v) limitations on certain investments; and (vi) limitations on the amount of cash held in financial institutions in Latvia. Additionally, the Amended LSA requires us to maintain a fixed charge coverage ratio (as defined in the Amended LSA) of at least 1.15 to 1.00 and an asset coverage ratio (as defined in the Amended LSA) of at least 1.50 to 1.00.

On January 16, 2018, we entered into the Second Amendment, which established the current loan in the original principal amount of \$7,294,000 (the "Term II Loan"), the proceeds of which were used to pay in full the previously outstanding acquisition term loan, and a portion of a note payable to the sellers of ISP (the "Sellers Note"). Contemporaneous with this transaction, the Sellers Note was satisfied in full with the issuance of 967,208 shares of our Class A common stock, with the remaining balance paid in cash. The Term II Loan is for a five-year term, and bears interest at a per annum rate equal to two percent (2.0%) above the Prime Rate; provided, however, that at no time shall the applicable rate be less than five-and-one-half percent (5.50%) per annum. As of December 31, 2018, the interest rate was 7.50%.

On September 7, 2018, we entered into the Fourth Amendment. Pursuant to the Fourth Amendment, Avidbank granted us a waiver of default arising prior to the Fourth Amendment from our failure to comply with the fixed charge coverage ratio covenant measured on June 30, 2018. Based on the waiver, we are no longer in default on the Term II Loan or the Revolving Line. The Fourth Amendment also provides for the restriction of \$1 million of the Company's cash, which will be released upon two consecutive quarters of compliance with the fixed charge coverage ratio covenant, and so long as no event of default has occurred that is continuing on that date. The Fourth Amendment also provides that during the restrictive period, the calculation of the fixed charge coverage ratio will be determined as if the outstanding principal amount of the Term II Loan is \$1 million less than the actual outstanding principal amount of the Term II Loan.

On October 30, 2018, we entered into the Fifth Amendment, which amended the definition of "Adjusted EBITDA" to allow for the addback of certain one-time expenses for purposes of determining the fixed charge coverage ratio and compliance with the related covenant. The Fifth Amendment also extended the maturity date of the Revolving Line from December 21, 2018 to March 21, 2019 (the "Revolving Maturity Date"). As of December 31, 2018, we are in compliance with all required covenants. As a result, the Term II Loan is classified in the unaudited Condensed Consolidated Balance Sheets according to the original minimum maturity schedule.

Financing costs incurred were recorded as a discount on debt and will be amortized over the term. Amortization of approximately \$12,000 and \$7,700 is included in interest expense for the six months ended December 31, 2018 and 2017, respectively.

Future maturities of loans payable are as follows:

	Avidbank Note	Unamortized Debt Costs	Total
Fiscal year ending:			
June 30, 2019 (six months remaining)	\$ 729,400	\$ (11,461)	\$ 717,939
June 30, 2020	1,458,800	(22,924)	1,435,876
June 30, 2021	1,458,800	(22,924)	1,435,876
June 30, 2022	1,458,800	(22,924)	1,435,876
June 30, 2023	850,967	(15,875)	835,092
Total payments	\$ 5,956,767	\$ (96,108)	\$ 5,860,659
Less current portion			(1,458,800)
Non-current portion			<u>\$ 4,401,859</u>

13. Foreign Operations

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the balance sheet date, and revenues and expenses are translated at average rates of exchange for the period. During the six months ended December 31, 2018 and 2017, we recognized a loss of approximately \$388,000 and a gain of approximately \$409,000 on foreign currency transactions, respectively, included in the unaudited Condensed Consolidated Statements of Comprehensive Income (Loss) in the line item entitled "Other income (expense), net." Gains or losses on the translation of the financial statements of a non-U.S. operation, where the functional currency is other than the U.S. dollar, are reflected as a separate component of equity, which was a gain of approximately \$226,000 and \$123,000 for the six months ended December 31, 2018 and 2017, respectively.

Our cash, cash equivalents and restricted cash totaled \$4.6 million at December 31, 2018. Of this amount, approximately 54% was held by our foreign subsidiaries in China and Latvia. These foreign funds were generated in China and Latvia as a result of foreign earnings. With respect to the funds generated by our foreign subsidiaries in China, the retained earnings in China must equal at least 150% of the registered capital before any funds can be repatriated. As of December 31, 2018, we have retained earnings in China of approximately \$2.4 million and we need to have \$11.3 million before repatriation will be allowed.

Assets and net assets in foreign countries are as follows:

	China		Latvia	
	December 31, 2018	June 30, 2018	December 31, 2018	June 30, 2018
Assets	\$15.9 million	\$14.7 million	\$7.1 million	\$6.4 million
Net assets	\$13.7 million	\$12.6 million	\$6.5 million	\$5.9 million

14. Restructuring Costs

In July 2018, we announced the relocation and consolidation of ISP's New York facility (the "Irvington Facility") into our existing facilities in Orlando, Florida and Riga, Latvia. We record charges for restructuring and other exit activities related to the closure or relocation of business activities at fair value, when incurred. Such charges include termination benefits, contract termination costs and costs to consolidate facilities or relocate employees. For the six months ended December 31, 2018, we recorded approximately \$291,000 in expenses related to the relocation of the Irvington Facility. These charges were mostly incurred during the three months ended December 31, 2018, and are included as a component of the "Selling, general and administrative" expenses line item in our unaudited Condensed Consolidated Statement of Comprehensive Income. We estimate that we will incur an additional \$474,000 in expenses through June 30, 2019 related to this facility relocation. We expect the relocation to be substantially completed by that date. As of that date, we will have a remaining lease obligation of up to \$433,000, which will be accrued once we have fully vacated the facility.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Management's Discussion and Analysis of Financial Condition and Results of Operations is designed to provide a reader of the financial statements with a narrative report on our financial condition, results of operations, and liquidity. This discussion and analysis should be read in conjunction with the attached unaudited Condensed Consolidated Financial Statements and notes thereto and our Annual Report on Form 10-K for the year ended June 30, 2018, including the audited Consolidated Financial Statements and notes thereto. The following discussion contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations, and intentions. Our actual results could differ materially from those discussed in the forward-looking statements. Please also see the cautionary language at the beginning of this Quarterly Report regarding forward-looking statements.

The discussions of our results as presented in this Quarterly Report include use of the non-GAAP term "gross margin," as well as other non-GAAP measures discussed in more detail under the heading "Non-GAAP Financial Measures." Gross margin is determined by deducting the cost of sales from operating revenue. Cost of sales includes manufacturing direct and indirect labor, materials, services, fixed costs for rent, utilities and depreciation, and variable overhead. Gross margin should not be considered an alternative to operating income or net income, which are determined in accordance with GAAP. We believe that gross margin, although a non-GAAP financial measure, is useful and meaningful to investors as a basis for making investment decisions. It provides investors with information that demonstrates our cost structure and provides funds for our total costs and expenses. We use gross margin in measuring the performance of our business and have historically analyzed and reported gross margin information publicly. Other companies may calculate gross margin in a different manner.

Introduction

We were incorporated in Delaware in 1992 as the successor to LightPath Technologies Limited Partnership, a New Mexico limited partnership, formed in 1989, and its predecessor, Integrated Solar Technologies Corporation, a New Mexico corporation, formed in 1985.

We are in the business of manufacturing optical components and higher level assemblies, including precision molded glass aspheric optics, molded and diamond turned infrared aspheric lenses and other optical materials used to produce products that manipulate light. All the products we produce enable lasers and imaging devices to function more effectively.

In November 2005, we formed LPOI, a wholly-owned subsidiary, located in Jiading, People's Republic of China. LPOI provides sales and support functions. In December 2013, we formed LPOIZ, a wholly-owned subsidiary located in the New City district, of the Jiangsu province, of the People's Republic of China. LPOIZ's 39,000 square foot manufacturing facility (the "Zhenjiang Facility") serves as our primary manufacturing facility in China and provides a lower cost structure for production of larger volumes of optical components and assemblies.

In December 2016, we acquired ISP and its wholly-owned subsidiary, ISP Latvia. ISP is a vertically integrated manufacturer offering a full range of infrared products from custom infrared optical elements to catalog and high performance lens assemblies. Historically, ISP's Irvington Facility functioned as its global headquarters for operations, while also providing manufacturing capabilities, optical coatings, and optical and mechanical design, assembly, and testing. In July 2018, we announced plans to relocate this manufacturing facility to our existing facilities in Orlando, Florida and Riga, Latvia. We expect the relocation to occur in phases through the end of fiscal 2019. ISP Latvia's manufacturing facility is located in Riga, Latvia (the "Riga Facility"). It is a manufacturer of high precision optics and offers a full range of infrared products, including catalog and custom infrared optics. For additional information, please refer to our Annual Report on Form 10-K for the year ended June 30, 2018.

Product Groups and Markets:

Beginning in fiscal 2019, we reorganized our business into three product groups: PMO (as defined below), specialty products, and infrared products.

Our precision molded optics (the “PMO”) product group consists of precision molded optics with varying applications and includes our high volume PMOs and low volume PMOs. Our specialty product group is comprised of value-added products, such as optical subsystems, assemblies, and collimators, and non-recurring engineering (“NRE”) products, consisting of those products we develop pursuant to product development agreements that we enter into with customers. Typically, customers approach us and request that we develop new products or applications for our existing products to fit their particular needs or specifications. The timing and extent of any such product development is outside of our control.

Our infrared product group is comprised of both molded and turned infrared lenses and assemblies, and includes all of the products offered by ISP. Near the end of fiscal 2018, we announced comprehensive production capabilities and global availability for a new line of infrared lenses made of a chalcogenide compound. We developed this compound and grow it internally to produce Black Diamond glass, which has been trademarked, and marketed as BD6. Currently, the majority of our infrared products are germanium-based, which is subject to market pricing and availability. BD6 offers a lower-cost alternative to germanium, which we expect will benefit the cost structure of some of our current infrared products, and allow us to expand our product offerings in response to the markets’ increasing requirement for low-cost infrared optics applications.

We have also aligned our marketing efforts by industry. We currently serve the following major markets: industrial, commercial, defense, medical, telecommunications, and catalogs/distributors. Customers in each of these markets may select the best optical technologies that suit their needs from our entire suite of products, availing us to cross-selling opportunities, particularly where we can leverage our knowledge base of technical requirements against our expanding design library. Within our product groups, we have various applications that serve our major markets. For example, sales of our infrared products are primarily to customers in the industrial market that use thermal imaging technology. However, our infrared products can also be used for gas sensing devices, spectrometers, night vision systems, automotive driver systems, thermal weapon gun sights, and infrared counter measure systems, among others.

Within the larger overall markets, which are estimated to be in the multi-billions of dollars, we believe there is a market of approximately \$1.7 billion for our current products and capabilities. We continue to believe our products will provide significant growth opportunities over the next several years and, therefore, we will continue to target specific applications in each of these major markets. In addition to these major markets, a large percentage of our revenues are derived from sales to unaffiliated companies that purchase our products to fulfill their customers’ orders, as well as unaffiliated companies that offer our products for sale in their catalogs. Our strategy is to leverage our technology, know-how, established low-cost manufacturing capability and partnerships to grow our business.

Results of Operations

Fiscal Second Quarter: Three months ended December 31, 2018, compared to three months ended December 31, 2017

Revenues:

Revenue for the second quarter of fiscal 2019 was approximately \$8.5 million, an increase of approximately \$187,000, or 2%, as compared to the same period of the prior fiscal year. Revenue generated by PMO products was approximately \$4.1 million for the second quarter of fiscal 2019, as compared to \$3.3 million in the same period of fiscal 2018, an increase of approximately \$808,000 or 24%. The increase was primarily due to an increase in sales to customers in the telecommunications market, and to a lesser extent, an increase in sales to customers in the defense market. Revenue generated by infrared products was approximately \$3.7 million in the second quarter of fiscal 2019, a decrease of approximately \$508,000, or 12%, compared to approximately \$4.2 million in the same period of fiscal 2018. The decrease was primarily due to the timing of the renewal of a large annual contract, as the balance of the existing contract was fulfilled before the renewal was finalized, which reflects our expanding manufacturing capacity. Revenue generated by specialty products, which includes revenue for NRE projects, was approximately \$693,000 in the second quarter of fiscal 2019, a decrease of approximately \$113,000, or 14%, as compared to approximately \$805,000 in the same period of fiscal 2018. This decrease is primarily due to lower sales to customers in the commercial and industrial markets, partially offset by increased sales to medical customers.

Cost of Sales and Gross Margin:

Gross margin in both the second quarters of fiscal 2019 and 2018 was approximately \$3.5 million. Gross margin as a percentage of revenue was 41% for the second quarter of fiscal 2019, compared to 42% for the second quarter of fiscal 2018. Total cost of sales was approximately \$5.0 million for the second quarter of fiscal 2019, an increase of approximately \$158,000, compared to \$4.8 million for the same period of the prior fiscal year. The increase was partially due to higher sales, but more significantly, cost of sales for the second quarter of fiscal 2019 was elevated due to increased labor costs, manufacturing inefficiencies, and increased overhead expenses associated with the relocation of our Irvington Facility. Although we expect to have higher costs for the remainder of fiscal 2019, we expect costs and operating performance to improve as the relocation of the Irvington Facility progresses.

Selling, General and Administrative:

Selling, general and administrative ("SG&A") costs for the second quarter of fiscal 2019 were approximately \$2.5 million, an increase of approximately 10%, as compared to approximately \$2.3 million in the same quarter of the prior fiscal year. SG&A for the second quarter of fiscal 2019 included approximately \$200,000 of non-recurring expenses related to the relocation of the Irvington Facility to our existing facilities in Orlando, Florida, and Riga, Latvia. We expect SG&A costs will continue to be elevated for the remainder of fiscal 2019, as we continue to incur expenses related to this facility relocation. On a long-term basis, we expect the consolidation of our manufacturing facilities to reduce our operating and overhead costs.

New Product Development:

New product development costs were approximately \$519,000 in the second quarter of fiscal 2019, an increase of approximately \$106,000, or 26%, as compared to the same period of the prior fiscal year. This increase was primarily due to increased wages related to additional engineering employees to support the demand for development. We anticipate that these expenses will remain at current levels for the remainder of fiscal 2019.

Other Income (Expense):

In the second quarter of fiscal 2019, interest expense was approximately \$153,000, compared to approximately \$194,000 in the same period of the prior fiscal year. The decrease in interest expense is primarily due to the satisfaction, in full, of the Sellers Note, which occurred during the third quarter of fiscal 2018. We expect that interest expense will remain near current levels for the remainder of fiscal 2019.

In the second quarter of fiscal 2018, we recognized non-cash expense of approximately \$243,000 related to the change in the fair value of the warrants issued in connection with our June 2012 private placement. The June 2012 warrants expired on December 11, 2017; therefore, there was no remaining warrant liability as of that date. Accordingly, we did not recognize any income or expense in the second quarter of fiscal 2019 related to these warrants.

Other expense, net, was approximately \$48,000 in the second quarter of fiscal 2019, compared to other income, net, of approximately \$195,000 in the second quarter of fiscal 2018, primarily resulting from foreign exchange gains and losses. We execute all foreign sales from our Orlando and New York facilities and inter-company transactions in United States dollars, partially mitigating the impact of foreign currency fluctuations. Assets and liabilities denominated in non-United States currencies, primarily the Chinese Yuan and Euro, are translated at rates of exchange prevailing on the balance sheet date, and revenues and expenses are translated at average rates of exchange for the year. During the second quarter of fiscal 2019, we incurred a loss on foreign currency translation of approximately \$50,000, compared to a gain of \$163,000 for the same period of the prior fiscal year.

Income Taxes:

During the second quarter of fiscal 2019, we recorded an income tax benefit of approximately \$23,000, compared to an income tax benefit of approximately \$194,000 for the same period of the prior fiscal year. The decrease in our income tax benefit was primarily attributable to an adjustment for a retroactive statutory rate change that was recorded in the second quarter of fiscal 2018. During the second quarter of fiscal 2018, the statutory tax rate applicable to LPOIZ decreased from 25% to 15% in accordance with an incentive program for technology companies. The lower rate applies to LPOIZ's 2017 tax year, beginning on January 1, 2017. Accordingly, we recorded a tax benefit during the second quarter of fiscal 2018 related to this retroactive rate change. Please refer to Note 8, *Income Taxes*, in the unaudited Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for additional information.

Net Income:

Net income for the second quarter of fiscal 2019 was approximately \$16,000, or \$0.00 basic and diluted income per share, compared to the second quarter of fiscal 2018, in which we reported net income of approximately \$423,000, or \$0.02 basic and diluted earnings per share, respectively. The decrease in net income for the second quarter of fiscal 2019, as compared to the second quarter of fiscal 2018, is primarily attributable to the following: (i) an additional \$200,000 in SG&A expenses related to the relocation of the Irvington Facility, (ii) an increase in new product development costs of approximately \$106,000, (iii) an approximately \$213,000 unfavorable difference in foreign exchange gains and losses, and (iv) a \$170,000 decrease in the income tax benefit, offset by the absence of \$243,000 in expenses related to the change in fair value of the warrant liability.

Weighted-average shares of common stock outstanding were 25,781,941 and 27,397,239 basic and diluted, respectively, in the second quarter of fiscal 2019, compared to basic and diluted of 24,525,839 and 26,437,359, respectively, in the second quarter of fiscal 2018. The increase in the weighted-average shares of common stock outstanding was primarily due to the 967,208 shares of Class A common stock issued during the third quarter of fiscal 2018 in conjunction with the satisfaction of the Sellers Note, and, to a lesser extent, shares of Class A common stock issued under the 2014 ESPP, and upon the exercises of stock options and RSUs.

Fiscal First Half: Six months ended December 31, 2018, compared to six months ended December 31, 2017

Revenues:

Revenue for the first half of fiscal 2019 was approximately \$17.1 million, an increase of approximately \$1.2 million, or 7%, as compared to the same period of the prior fiscal year. Revenue generated by PMO products was approximately \$7.2 million for the first half of fiscal 2019, as compared to \$6.5 million in the same period of fiscal 2018, an increase of approximately \$697,000 or 11%. The increase is primarily due to an increase in sales to customers in the telecommunications market, as well as to customers in the defense market, partially offset by decreases in sales to customers in the medical and commercial markets. Revenue generated by infrared products was approximately \$8.7 million in the first half of fiscal 2019, an increase of approximately \$852,000, or 11%, compared to approximately \$7.8 million in the same period of fiscal 2018. Industrial applications, firefighting cameras, and other public safety applications continue to be the primary drivers of the increased demand for infrared products. Revenue generated by our specialty products was approximately \$1.2 million in the first half of fiscal 2019, a decrease of approximately \$385,000, or 25%, compared to approximately \$1.6 million in the same period of fiscal 2018. This decrease is primarily due to the timing of NRE projects, as well as a decrease in sales of specialty products to customers in the commercial and industrial markets, partially offset by increased sales to medical customers.

Cost of Sales and Gross Margin:

Gross margin in the first half of fiscal 2019 was approximately \$6.6 million, a decrease of 3%, as compared to approximately \$6.8 million in the same period of the prior fiscal year. Gross margin as a percentage of revenue was 39% for the first half of fiscal 2019, compared to 43% for the first half of fiscal 2018. The change in gross margin as a percentage of revenue is primarily due to a shift in the sales mix within the infrared product group during the first half of fiscal 2019, as compared to the same period of the prior fiscal year, with a higher percentage of sales derived from contract sales and a smaller percentage of sales derived from custom products. The standard materials for our infrared products, such as germanium, have inherent pricing volatility, which has negatively impacted our margins for infrared products over the past few quarters. As we convert many of these products to our BD6 material, we expect our margins to improve over time. Total cost of sales was approximately \$10.5 million for the first half of fiscal 2019, an increase of approximately \$1.4 million, compared to \$9.1 million for the same period of the prior fiscal year. The increase was partially due to higher sales, but more significantly, cost of sales for the first half of fiscal 2019 was elevated due to increased labor costs, manufacturing inefficiencies, and increased overhead expenses associated with the relocation of our Irvington Facility. Although we expect to have higher costs for the remainder of fiscal 2019, we expect costs to improve as the relocation of the Irvington Facility progresses.

Selling, General and Administrative:

SG&A costs for the first half of fiscal 2019 were approximately \$5.0 million, an increase of approximately 6%, as compared to approximately \$4.7 million in the same quarter of the prior fiscal year. SG&A for the first half of fiscal 2019 included approximately \$291,000 of non-recurring expenses related to the relocation of the Irvington Facility to our existing facilities in Orlando, Florida, and Riga, Latvia. We expect SG&A costs to continue to be elevated for the remainder of fiscal 2019, due to this facility relocation. On a long-term basis, we expect the consolidation of our manufacturing facilities to reduce our operating and overhead costs.

New Product Development:

New product development costs were approximately \$989,000 in the first half of fiscal 2019, an increase of approximately \$194,000, or 24%, as compared to the same period of the prior fiscal year. This increase was primarily due to increased wages related to additional engineering employees to support the demand for development. We anticipate that these expenses will remain at current levels for the remainder of fiscal 2019.

Other Income (Expense):

In the first half of fiscal 2019, interest expense was approximately \$298,000, compared to approximately \$395,000 in the same period of the prior fiscal year. The decrease in interest expense is primarily due to the satisfaction, in full, of the Sellers Note, which occurred during the third quarter of fiscal 2018. We expect that interest expense will remain near current levels for the remainder of fiscal 2019.

In the first half of fiscal 2018, we recognized non-cash expense of approximately \$194,000 related to the change in the fair value of the warrants issued in connection with our June 2012 private placement. The June 2012 warrants expired on December 11, 2017; therefore, there was no remaining warrant liability as of that date. Accordingly, we did not recognize any income or expense in the first half of fiscal 2019 related to these warrants.

Other expense, net, was approximately \$387,000 in the first half of fiscal 2019, compared to other income, net, of approximately \$442,000 in the same period of the prior fiscal year, primarily resulting from foreign exchange gains and losses. We execute all foreign sales from our Orlando and New York facilities and inter-company transactions in United States dollars, partially mitigating the impact of foreign currency fluctuations. Assets and liabilities denominated in non-United States currencies, primarily the Chinese Yuan and Euro, are translated at rates of exchange prevailing on the balance sheet date, and revenues and expenses are translated at average rates of exchange for the year. During the first half of fiscal 2019, we incurred a loss on foreign currency translation of approximately \$388,000, compared to a gain of \$409,000 for the same period of the prior fiscal year.

Income Taxes:

During the first half of fiscal 2019, we recorded an income tax benefit of approximately \$202,000, compared to an income tax benefit of approximately \$136,000 for the same period of the prior fiscal year. The increase in our income tax benefit was primarily attributable to the mix of taxable income and losses generated in our various tax jurisdictions. For the first half of fiscal 2019, the net income tax benefit represents a tax benefit on losses in the U.S. jurisdiction, offset by tax expense on income generated in China. For the first half of fiscal 2018, the net income tax benefit is primarily related to an adjustment for a retroactive statutory tax rate change for one of our Chinese entities, LPOIZ. Please refer to Note 8, *Income Taxes*, in the unaudited Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q for additional information.

Net Income (Loss):

Net loss for the first half of fiscal 2019 was approximately \$567,000, or \$0.02 basic and diluted loss per share, compared to the first half of fiscal 2018, in which we reported net income of approximately \$641,000, or \$0.03 basic and \$0.02 diluted earnings per share, respectively. The decrease in net income for the first half of fiscal 2019, as compared to the first quarter of fiscal 2018, is primarily attributable to the following: (i) a decrease in gross margin of approximately \$217,000, (ii) an additional \$291,000 in SG&A expenses related to the relocation of the Irvington Facility, (iii) an increase in new product development costs of approximately \$194,000, and (iv) an approximately \$797,000 unfavorable difference in foreign exchange gains and losses, offset by the absence of \$194,000 in expenses related to the change in fair value of the warrant liability.

Weighted-average shares of common stock outstanding were 25,777,330, for both basic and diluted, in the first half of fiscal 2019, compared to basic and diluted shares of 24,380,448 and 26,326,759, respectively, in the first half of fiscal 2018. The increase in the weighted-average basic common stock shares was primarily due to the 967,208 shares of Class A common stock issued during the third quarter of fiscal 2018 in conjunction with the satisfaction of the Sellers Note, and, to a lesser extent, shares of Class A common stock issued under the 2014 ESPP, and upon the exercises of stock options and RSUs.

Liquidity and Capital Resources

At December 31, 2018, we had working capital of approximately \$12.8 million and total cash and cash equivalents and restricted cash of approximately \$4.6 million, of which approximately \$2.5 million of cash and cash equivalents were held by our foreign subsidiaries, and \$1 million was restricted pursuant to the Fourth Amendment to the Amended LSA.

Cash and cash equivalents held by our foreign subsidiaries were generated in China and Latvia as a result of foreign earnings. Before any funds can be repatriated from China, the retained earnings in China must equal at least 150% of the registered capital. As of December 31, 2018, we had retained earnings of \$2.4 million and we must have \$11.3 million before repatriation will be allowed. Currently, we intend to permanently invest earnings from our foreign Chinese operations; therefore, we have not previously provided for future Chinese withholding taxes on the related earnings. However, if, in the future, we change such intention, we would provide for and pay additional foreign taxes, if any, at that time.

Loans payable consists of the Term II Loan pursuant to the Amended LSA. The Amended LSA also provides for a Revolving Line. As of December 31, 2018, the outstanding balance on the Term II Loan was approximately \$5.9 million, and we had no borrowings outstanding on the Revolving Line.

The Amended LSA includes certain customary covenants. The Fourth Amendment provided for the restriction of \$1 million of our domestic cash, which will be released upon two consecutive quarters of compliance with the fixed charge coverage ratio covenant, and so long as no event of default has occurred that is continuing on that date. The Fourth Amendment also provided that during the restrictive period, the calculation of the fixed charge coverage ratio will be determined as if the outstanding principal amount of the Term II Loan is \$1 million less than the actual outstanding principal amount of the Term II Loan, if we maintain a restricted cash balance of \$1 million. On October 30, 2018, we entered into the Fifth Amendment, which amended the definition of "Adjusted EBITDA" to allow for the addback of certain one-time expenses for purposes of determining the fixed charge coverage ratio and compliance with the related covenant. The Fifth Amendment also extended the Revolving Maturity Date of the Revolving Line from December 21, 2018 to March 21, 2019. We were in compliance with all covenants as of December 31, 2018. For additional information, see Note 12, *Loans Payable*, to the unaudited Condensed Consolidated Financial Statements in this Quarterly Report on Form 10-Q.

We believe that we have adequate financial resources to sustain our current operations in the coming year. We have established milestones that will be tracked to ensure that as funds are expended, we are achieving results before additional funds are committed. We anticipate sales growth during the remainder of fiscal 2019, primarily from infrared products. We structured our sales team to enhance our incremental organic growth position for our core aspheric lens business, prime our operations for the anticipated high growth of our new infrared products, and allow for the integration of strategic acquisitions. We are also benefiting from a substantial increase in revenue-generating opportunities and broader market applications as a result of our investments in technologies that decreased our lens production costs and expanded our production capacity. We believe we can further improve upon our track record of growth – and do so more profitably.

We generally rely on cash from operations and equity and debt offerings, to the extent available, to satisfy our liquidity needs and to maintain our ability to repay the Term II Loan. There are a number of factors that could result in the need to raise additional funds, including a decline in revenue or a lack of anticipated sales growth, increased material costs, increased labor costs, planned production efficiency improvements not being realized, increases in property, casualty, benefit and liability insurance premiums, and increases in other discretionary spending, particularly sales and marketing related. We will also continue efforts to keep costs under control as we seek renewed sales growth. Our efforts continue to be directed toward improving cash flow and profitability. If our efforts are not successful, we will need to raise additional capital. Should capital not be available to us at reasonable terms, other actions may become necessary in addition to cost control measures and continued efforts to increase sales. These actions may include exploring strategic options for the sale of the Company, the sale of certain product lines, the creation of joint ventures or strategic alliances under which we will pursue business opportunities, the creation of licensing arrangements with respect to our technology, or other alternatives.

Cash Flows – Financings:

Net cash used in financing activities was approximately \$872,000 in the first half of fiscal 2019, compared to approximately \$14,000 used in the first half of fiscal 2018. Cash used in financing activities for the first half of fiscal 2019 reflects approximately \$897,000 in principal payments on our loans and capital leases, net of approximately \$25,000 in proceeds from the exercise of stock options and from the sale of Class A common stock under the 2014 ESPP. Cash used in financing activities for the first half of fiscal 2018 reflected approximately \$676,000 in principal payments on our loans and capital leases, offset by approximately \$662,000 in proceeds from the exercise of our June 2012 warrants, proceeds from the exercise of stock options, and proceeds from the sale of Class A common stock under the 2014 ESPP.

Cash Flows – Operating and Investing:

Cash flow used in operations was approximately \$399,000 for the first half of fiscal 2019, compared to cash provided by operations of approximately \$1.6 million for the first half of fiscal 2018. The decrease in cash flow from operations is primarily due to the decrease in net income for the first half of fiscal 2019, as compared to the first half of fiscal 2018. We anticipate improvement in our cash flows provided by operations in future periods due to sales growth, and continued margin improvements based on production efficiencies and reductions in product costs, offset by marginal increases in selling, administrative, and new product development expenditures.

During the first half of fiscal 2019, we expended approximately \$1.2 million in investments in capital equipment, compared to approximately \$1.9 million in the first half of fiscal 2018. The majority of our capital expenditures during the first half of fiscal 2019 were for the purchase of equipment to enhance our lens coating capabilities and capacity, to allow minimal disruption during the process of relocating our Irvington Facility, as well as to strategically expand our production capabilities in other areas. Capital expenditures for the first half of fiscal 2018 were related the purchase of equipment used to enhance or expand our production capacity and capabilities, as well as the costs for the expansion and improvements to LPOIZ's Zhenjiang facility. Overall, we anticipate that the level of capital expenditures during fiscal 2019 will be lower than in fiscal 2018, however, the total amount expended will depend on opportunities and circumstances.

Contractual Obligations and Commitments

As of December 31, 2018, our principal commitments consisted of obligations under operating and capital leases, and debt agreements. No material changes occurred during the first half of fiscal 2019 in our contractual cash obligations to repay debt or to make payments under operating and capital leases, or in our contingent liabilities as disclosed in our Annual Report on Form 10-K for the year ended June 30, 2018.

Off-Balance Sheet Arrangements

We do not engage in any activities involving variable interest entities or off-balance sheet arrangements.

Critical Accounting Policies and Estimates

Other than the policy changes disclosed in Note 2, *Significant Accounting Policies*, to the unaudited Condensed Consolidated Financial Statements in Item 1, Part I of this Quarterly Report, there have been no material changes to our critical accounting policies and estimates during the six months ended December 31, 2018 from those disclosed in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, of our Annual Report on Form 10-K for the year ended June 30, 2018.

Recent Accounting Pronouncements

See Note 2, *Significant Accounting Policies*, to the unaudited Condensed Consolidated Financial Statements in Item 1 of Part I of this Quarterly Report for a description of recent accounting pronouncements and accounting changes.

How We Operate

We have continuing sales of two basic types: occasional sales via ad-hoc purchase orders of mostly standard product configurations (our “turns” business) and the more challenging and potentially more rewarding business of customer product development. In this latter type of business, we work with customers to help them determine optical specifications and even create certain optical designs for them, including complex multi-component designs that we call “engineered assemblies.” This is followed by “sampling” small numbers of the product for the customers’ test and evaluation. Thereafter, should a customer conclude that our specification or design is the best solution to their product need; we negotiate and “win” a contract (sometimes called a “design win”) – whether of a “blanket purchase order” type or a supply agreement. The strategy is to create an annuity revenue stream that makes the best use of our production capacity, as compared to the turns business, which is unpredictable and uneven. This annuity revenue stream can also generate low-cost, high-volume type orders. A key business objective is to convert as much of our business to the design win and annuity model as is possible. We face several challenges in doing so:

- Maintaining an optical design and new product sampling capability, including a high-quality and responsive optical design engineering staff;
- The fact that as our customers take products of this nature into higher volume, commercial production (for example, in the case of molded optics, this may be volumes over one million pieces per year) they begin to work seriously to reduce costs – which often leads them to turn to larger or overseas producers, even if sacrificing quality; and
- Our small business mass means that we can only offer a moderate amount of total productive capacity before we reach financial constraints imposed by the need to make additional capital expenditures – in other words, because of our limited cash resources and cash flow, we may not be able to service every opportunity that presents itself in our markets without arranging for such additional capital expenditures.

Despite these challenges to winning more “annuity” business, we nevertheless believe we can be successful in procuring this business because of our unique capabilities in optical design engineering that we make available on the merchant market, a market that we believe is underserved in this area of service offering. Additionally, we believe that we offer value to some customers as a source of supply in the United States should they be unwilling to commit their entire source of supply of a critical component to foreign merchant production sources.

Our Key Performance Indicators:

Usually on a weekly basis, management reviews a number of performance indicators, both qualitative and quantitative. These indicators change from time to time as the opportunities and challenges in the business change. These indicators are used to determine tactical operating actions and changes. We believe that our non-financial production indicators, such as those noted, are proprietary information.

Financial indicators that are considered key and reviewed regularly are as follows:

- sales backlog;
- revenue dollars and units by product group; and
- other key indicators.

These indicators are also used to determine tactical operating actions and changes and are discussed in more detail below.

Sales Backlog

Sales growth has been and continues to be our best indicator of success. Our best view into the efficacy of our sales efforts is in our “order book.” Our order book equates to sales “backlog.” It has a quantitative and a qualitative aspect: quantitatively, our backlog’s prospective dollar value and qualitatively, what percent of the backlog is scheduled by the customer for date-certain delivery. We define our “12-month backlog” as that which is requested by the customer for delivery within one year and which is reasonably likely to remain in the backlog and be converted into revenues. This includes customer purchase orders and may include amounts under supply contracts if they meet the aforementioned criteria. Generally, a higher 12-month backlog is better for us.

Our 12-month backlog at December 31, 2018 was approximately \$18.1 million, an increase of 41%, compared to \$12.8 million as of June 30, 2018. Backlog growth rates for the last five fiscal quarters are as follows:

Quarter	Backlog (\$ 000)	Change From Prior Year End	Change From Prior Quarter End
Q2 2018	\$ 12,306	32%	43%
Q3 2018	\$ 12,898	38%	5%
Q4 2018	\$ 12,828	38%	-1%
Q1 2019	\$ 13,994	9%	9%
Q2 2019	\$ 18,145	41%	30%

The increase in our 12-month backlog from the first quarter to the second quarter of fiscal 2019 was largely due to the renewal of a large annual contract during the second quarter, which we will begin shipping against in the third quarter of fiscal 2019. Our 12-month backlog has continued to grow since the previous renewal of this contract in the second quarter of fiscal 2018, as shipments against this industrial contract have been offset by increased bookings in other areas, including from the telecommunications, commercial and medical sectors.

We continue to diversify our business by developing new applications for our products in markets, including advanced driver assistance systems (“ADAS”), light detection and ranging (“LIDAR”) sensing, spectrographic, and fiber delivery technologies. Many of these products are being designed for higher margin applications within the automotive electronics, medical and defense sectors. The acquisition of ISP has also broadened our capabilities to include additional glass types and the ability to make much larger lenses, providing long-term opportunities for our technology roadmap and market share expansion. Based on our backlog and recent quote activity, we expect increases in revenue from sales of both molded and turned infrared products for the remainder of fiscal 2019.

Revenue Dollars and Units by Product Group

The following table sets forth revenue dollars and units for our three product groups for the three and six-month periods ended December 31, 2018 and 2017:

	(unaudited)					
	Three Months Ended December 31,		QTR % Change	Six Months Ended December 31,		QTR % Change
	2018	2017		2018	2017	
Revenue						
PMO	\$ 4,126,091	\$ 3,318,482	24%	\$ 7,238,195	\$ 6,540,846	11%
Infrared Products	3,729,845	4,237,564	-12%	8,690,772	7,838,351	11%
Specialty Products	692,571	805,327	-14%	1,169,261	1,554,269	-25%
Total revenue	\$ 8,548,507	\$ 8,361,373	2%	\$ 17,098,228	\$ 15,933,466	7%
Units						
PMO	647,363	474,954	36%	1,078,141	1,066,749	1%
Infrared Products	39,109	35,424	10%	88,033	62,929	40%
Specialty Products	21,188	28,359	-25%	34,861	45,801	-24%
Total revenue	707,660	538,737	31%	1,201,035	1,175,479	2%

Three months ended December 31, 2018

Our revenue increased approximately \$187,000, or 2%, for the second quarter of fiscal 2019, as compared to the prior year period, primarily driven by an increase in PMO product sales, offset by decreases in infrared and specialty product sales.

Revenue from the PMO product group for the second quarter of fiscal 2019 was \$4.1 million, an increase of approximately \$808,000, or 24%, as compared to the same period of the prior fiscal year. Sales of PMO units increased by 36%, as compared to the prior year period, however, average selling prices decreased 9%, due to the mix of products shipped. The increase in revenue and units sold was primarily due to an increase in sales to customers in the telecommunications market.

Revenue generated by the infrared product group during the second quarter of fiscal 2019 was \$3.7 million, a decrease of \$508,000, or 12%, as compared to the same period of the prior fiscal year. The decrease in revenue is primarily due to the timing of the renewal of a large annual contract, as we shipped the balance of the existing contract before the renewal was finalized, which reflects our expanding manufacturing capacity. During the second quarter of fiscal 2019, sales of infrared units increased by 10%, as compared to the prior year period, and average selling prices decreased by 20%. These changes are driven by an increase in sales of molded infrared products, which are higher in volume and lower in price than diamond turned infrared products. Industrial applications, firefighting cameras and other public safety applications are the primary drivers of the increased demand for infrared products.

In the second quarter of fiscal 2019, our specialty products revenue decreased by \$113,000, or 14%, as compared to the same period of the prior fiscal year. This decrease is primarily due to lower sales to customers in the commercial and industrial markets, partially offset by increased sales to medical customers.

Six months ended December 31, 2018

Our revenue increased approximately \$1.2 million, or 7%, for the first half of fiscal 2019, as compared to the prior year period, driven by increases in both infrared and PMO, partially offset by a decrease in specialty product sales.

Revenue from the PMO product group for the first half of fiscal 2019 was approximately \$7.2 million, an increase of approximately \$697,000, or 11%, as compared to the same period of the prior fiscal year. Sales of PMO units increased by 1%, as compared to the prior year period, and average selling prices increased 9%, due to the mix of products shipped. The increase in revenue is primarily due to an increase in sales to customers in the telecommunications markets, as well as to customers in the defense market, partially offset by decreases in sales to customers in the medical and commercial markets.

Revenue generated by the infrared product group during the first half of fiscal 2019 was approximately \$8.7 million, an increase of \$852,000, or 11%, as compared to the same period of the prior fiscal year. During the first half of fiscal 2019, sales of infrared units increased by 40%, as compared to the prior year period, and average selling prices decreased by 21%. These changes are due to the following: (i) a shift in infrared revenue mix driven by a large-volume order, as compared to the half quarter of the prior fiscal year, and (ii) an increase in sales of molded infrared products, which are higher in volume and lower in price than diamond turned infrared products. Industrial applications, firefighting cameras and other public safety applications are the primary drivers of the increased demand for infrared products.

In the first half of fiscal 2019, our specialty products revenue decreased by \$385,000, or 25%, as compared to the same period of the prior fiscal year. This decrease was primarily related to revenues generated for NRE projects, which are now included in this product group. NRE revenue is project based and the timing of any such projects is wholly dependent on our customers and their project activity. The first half of fiscal 2018 included a large NRE project, which was not repeated in the first half of fiscal 2019. There was also a decrease in sales of specialty products to customers in the commercial and industrial markets, partially offset by increased sales to medical customers.

Other Key Indicators

Other key indicators include various operating metrics, some of which are qualitative and others are quantitative. These indicators change from time to time as the opportunities and challenges in the business change. They are mostly non-financial indicators, such as on-time delivery trends, units of shippable output by major product line, production yield rates by major product line, and the output and yield data from significant intermediary manufacturing processes that support the production of the finished shippable product. These indicators can be used to calculate such other related indicators as fully-yielded unit production per-shift, which varies by the particular product and our state of automation in production of that product at any given time. Higher unit production per shift means lower unit cost and, therefore, improved margins or improved ability to compete, where desirable, for price-sensitive customer applications. The data from these reports is used to determine tactical operating actions and changes. Management also assesses business performance and makes business decisions regarding our operations using certain non-GAAP measures. These non-GAAP measures are described in more detail below under the heading "Non-GAAP Financial Measures."

Non-GAAP Financial Measures

We report our historical results in accordance with GAAP; however, our management also assesses business performance and makes business decisions regarding our operations using certain non-GAAP measures. We believe these non-GAAP financial measures provide useful information to management and investors that is supplementary to our financial condition and results of operations computed in accordance with GAAP; however, we acknowledge that our non-GAAP financial measures have a number of limitations. As such, you should not view these disclosures as a substitute for results determined in accordance with GAAP, and they are not necessarily comparable to non-GAAP measures that other companies use.

Adjusted Net Income

Adjusted net income is a non-GAAP financial measure used by management, lenders, and certain investors, as a supplemental measure in the evaluation of some aspects of a corporation's financial position and core operation performance. Management uses adjusted net income to evaluate our underlying operating performance. We believe adjusted net income may be helpful for investors as one means of evaluating our operational performance.

We calculate adjusted net income by excluding the change in the fair value of the warrants issued in connection with our private placement in June 2012 from net income. The fair value of the June 2012 warrants was re-measured each reporting period until the warrants were exercised or expired (which expiration occurred on December 11, 2017). In each reporting period during the term of June 2012 warrants, the change in the fair value of the June 2012 warrants was either recognized as non-cash expense or non-cash income. The change in the fair value of the June 2012 warrants was not impacted by our actual operations but was instead strongly tied to the change in the market value of our Class A common stock. The following table reconciles adjusted net income to net income for the three and six months ended December 31, 2018 and 2017:

	(unaudited)			
	Quarter Ended:		Six Months Ended:	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Net income (loss)	\$ 16,276	\$ 423,350	\$ (566,615)	\$ 641,046
Change in fair value of warrant liability	—	243,012	—	194,632
Adjusted net income (loss)	\$ 16,276	\$ 666,362	\$ (566,615)	\$ 835,678
% of revenue	0%	8%	-3%	5%

Our adjusted net income for the second quarter of fiscal 2019 was approximately \$16,000, as compared to adjusted net income of approximately \$666,000 for the same period of the prior fiscal year. The decrease in adjusted net income in the second quarter of fiscal 2019, was caused by an additional \$200,000 in SG&A expenses related to the relocation of the Irvington Facility, an increase in new product development costs of approximately \$106,000, an approximately \$213,000 unfavorable difference in foreign currency exchange gains and losses, and a decrease of \$170,000 in income tax benefits.

Our adjusted net loss for the first half of fiscal 2019 was approximately \$567,000, as compared to adjusted net income of approximately \$836,000 for the same period of the prior fiscal year. The decrease in adjusted net income in the first half of fiscal 2019 was caused by a decrease in gross margin of approximately \$217,000, an additional \$291,000 in SG&A expenses related to the relocation of the Irvington Facility, an increase in new product development costs of approximately \$194,000, and an approximately \$797,000 unfavorable difference in foreign exchange gains and losses.

EBITDA and Adjusted EBITDA

EBITDA and adjusted EBITDA are non-GAAP financial measures used by management, lenders, and certain investors as a supplemental measure in the evaluation of some aspects of a corporations' financial position and core operating performance. Investors sometimes use EBITDA, as it allows for some level of comparability of profitability trends between those businesses differing as to capital structure and capital intensity by removing the impacts of depreciation and amortization. EBITDA also does not include changes in major working capital items, such as receivables, inventory and payables, which can also indicate a significant need for, or source of, cash. Since decisions regarding capital investment and financing and changes in working capital components can have a significant impact on cash flow, EBITDA is not necessarily a good indicator of a business' cash flows. We use EBITDA for evaluating the relative underlying performance of our core operations and for planning purposes. We calculate EBITDA by adjusting net income to exclude net interest expense, income tax expense or benefit, depreciation and amortization, thus the term "Earnings Before Interest, Taxes, Depreciation and Amortization" and the acronym "EBITDA."

We also calculate an adjusted EBITDA, which excludes the effect of the non-cash income or expense associated with the mark-to-market adjustments, related to our June 2012 warrants. The fair value of the June 2012 warrants was re-measured each reporting period until the warrants were either exercised or expired (which expiration occurred on December 11, 2017). Each reporting period, the change in the fair value of the June 2012 warrants was either recognized as a non-cash expense or non-cash income. The change in the fair value of the June 2012 warrants was not impacted by our actual operations but was instead strongly tied to the change in the market value of our Class A common stock. Management uses adjusted EBITDA to evaluate our underlying operating performance and for planning and forecasting future business operations. We believe this adjusted EBITDA is helpful for investors to better understand our underlying business operations. The following table reconciles EBITDA and adjusted EBITDA to net income for the three and six months ended December 31, 2018 and 2017:

	(unaudited)			
	Quarter Ended:		Six Months Ended:	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Net income (loss)	\$ 16,276	\$ 423,350	\$ (566,615)	\$ 641,046
Depreciation and amortization	821,530	821,016	1,683,676	1,625,674
Income tax benefit	(23,403)	(193,508)	(202,363)	(135,524)
Interest expense	153,289	193,747	298,302	395,008
EBITDA	967,692	1,244,605	\$ 1,213,000	\$ 2,526,204
Change in fair value of warrant liability	—	243,012	—	194,632
Adjusted EBITDA	\$ 967,692	\$ 1,487,617	\$ 1,213,000	\$ 2,720,836
% of revenue	11%	18%	7%	17%

Our adjusted EBITDA for the second quarter of fiscal 2019 was approximately \$968,000, compared to approximately \$1.5 million for the same period of the prior fiscal year. The decrease in adjusted EBITDA in the second quarter of fiscal 2019 was caused by an additional \$200,000 in SG&A expenses related to the relocation of the Irvington Facility, an increase in new product development costs of approximately \$106,000, and an approximately \$213,000 unfavorable difference in foreign currency exchange gains and losses.

Our adjusted EBITDA for the first half of fiscal 2019 was approximately \$1.2 million, compared to approximately \$2.7 million for the same period of the prior fiscal year. The decrease in adjusted EBITDA in the first half of fiscal 2019 was caused by a decrease in gross margin of approximately \$217,000, an additional \$291,000 in SG&A expenses related to the relocation of the Irvington Facility, an increase in new product development costs of approximately \$194,000, and an approximately \$797,000 unfavorable difference in foreign exchange gains and losses.

Item 4. Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2018, the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2018 in reporting on a timely basis information required to be disclosed by us in the reports we file or submit under the Exchange Act.

During the fiscal quarter ended December 31, 2018, there was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

None

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None

Item 3. Defaults Upon Senior Securities

None

Item 4. Mine Safety Disclosures

None

Item 5. Other Information

None.

Item 6. Exhibits

The following exhibits are filed herewith as a part of this report.

Exhibit Number	Description
3.1.1	Certificate of Incorporation of LightPath Technologies, Inc., filed June 15, 1992 with the Secretary of State of Delaware, which was filed as an exhibit to our Registration Statement on Form SB-2 (File No: 33-80119) filed with the Securities and Exchange Commission on December 7, 1995, and is incorporated herein by reference thereto.
3.1.2	Certificate of Amendment to Certificate of Incorporation of LightPath Technologies, Inc., filed October 2, 1995 with the Secretary of State of Delaware, which was filed as an exhibit to our Registration Statement on Form SB-2 (File No: 33-80119) filed with the Securities and Exchange Commission on December 7, 1995, and is incorporated herein by reference thereto.
3.1.3	Certificate of Designations of Class A common stock and Class E-1 common stock, Class E-2 common stock, and Class E-3 common stock of LightPath Technologies, Inc., filed November 9, 1995 with the Secretary of State of Delaware, which was filed as an exhibit to our Registration Statement on Form SB-2 (File No: 33-80119) filed with the Securities and Exchange Commission on December 7, 1995, and is incorporated herein by reference thereto.
3.1.4	Certificate of Designation of Series A Preferred Stock of LightPath Technologies, Inc., filed July 9, 1997 with the Secretary of State of Delaware, which was filed as Exhibit 3.4 to our Annual Report on Form 10-KSB40 filed with the Securities and Exchange Commission on September 11, 1997, and is incorporated herein by reference thereto.
3.1.5	Certificate of Designation of Series B Stock of LightPath Technologies, Inc., filed October 2, 1997 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Quarterly Report on Form 10-QSB (File No. 000-27548) filed with the Securities and Exchange Commission on November 14, 1997, and is incorporated herein by reference thereto.
3.1.6	Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed November 12, 1997 with the Secretary of State of Delaware, which was filed as Exhibit 3.1 to our Quarterly Report on Form 10-QSB (File No. 000-27548) filed with the Securities and Exchange Commission on November 14, 1997, and is incorporated herein by reference thereto.

- [3.1.7](#) Certificate of Designation of Series C Preferred Stock of LightPath Technologies, Inc., filed February 6, 1998 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Registration Statement on Form S-3 (File No. 333-47905) filed with the Securities and Exchange Commission on March 13, 1998, and is incorporated herein by reference thereto.
- [3.1.8](#) Certificate of Designation, Preferences and Rights of Series D Participating Preferred Stock of LightPath Technologies, Inc. filed April 29, 1998 with the Secretary of State of Delaware, which was filed as Exhibit 1 to our Registration Statement on Form 8-A (File No. 000-27548) filed with the Securities and Exchange Commission on April 28, 1998, and is incorporated herein by reference thereto.
- [3.1.9](#) Certificate of Designation of Series F Preferred Stock of LightPath Technologies, Inc., filed November 2, 1999 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Registration Statement on Form S-3 (File No: 333-94303) filed with the Securities and Exchange Commission on January 10, 2000, and is incorporated herein by reference thereto.
- [3.1.10](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed February 28, 2003 with the Secretary of State of Delaware, which was filed as Appendix A to our Proxy Statement (File No. 000-27548) filed with the Securities and Exchange Commission on January 24, 2003, and is incorporated herein by reference thereto.
- [3.1.11](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed March 1, 2016 with the Secretary of State of Delaware, which was filed as Exhibit 3.1.11 to our Quarterly Report on Form 10-Q (File No: 000-27548) filed with the Securities and Exchange Commission on November 14, 2016, and is incorporated herein by reference thereto.
- [3.1.12](#) Certificate of Amendment of Certificate of Incorporation of LightPath Technologies, Inc., filed October 30, 2017 with the Secretary of State of Delaware, which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on October 31, 2017, and is incorporated herein by reference thereto.
- [3.1.13](#) Certificate of Amendment of Certificate of Designations of Class A Common Stock and Class E-1 Common Stock, Class E-2 Common Stock, and Class E-3 Common Stock of LightPath Technologies, Inc., filed October 30, 2017 with the Secretary of State of Delaware, which was filed as Exhibit 3.2 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on October 31, 2017, and is incorporated herein by reference thereto.
- [3.1.14](#) Certificate of Amendment of Certificate of Designation, Preferences and Rights of Series D Participating Preferred Stock of LightPath Technologies, Inc., filed January 30, 2018 with the Secretary of State of Delaware, which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on February 1, 2018, and is incorporated herein by references thereto.
- [3.2.1](#) Amended and Restated Bylaws of LightPath Technologies, Inc., which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on February 3, 2015, and is incorporated herein by reference thereto.
- [3.2.2](#) First Amendment to Amended and Restated Bylaws of LightPath Technologies, Inc., which was filed as Exhibit 3.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on September 21, 2017, and is incorporated herein by reference thereto.

<u>10.1</u>	Fifth Amendment to Second Amended and Restated Loan and Security Agreement dated October 30, 2018, which was filed as Exhibit 10.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on November 1, 2018, and is incorporated herein by reference thereto.
<u>10.2</u>	Affirmation of Guarantee of Geltech, Inc., which was filed as Exhibit 10.2 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on November 1, 2018, and is incorporated herein by reference thereto.
<u>10.3</u>	First Amendment to Lease, dated January 9, 2019 by and between Light Path Technologies Inc. and CIO University Tech, LLC*
<u>10.4</u>	LightPath Technologies, Inc. 2018 Stock and Incentive Compensation Plan, which was filed as Exhibit 10.1 to our Current Report on Form 8-K (File No: 000-27548) filed with the Securities and Exchange Commission on November 19, 2018, and is incorporated herein by reference thereto.
<u>31.1</u>	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 *
<u>31.2</u>	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 *
<u>32.1</u>	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 of Chapter 63 of Title 18 of the United States Code *
<u>32.2</u>	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 of Chapter 63 of Title 18 of the United States Code *
101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document *
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document *
101.LAB	XBRL Taxonomy Extension Label Linkbase Document *
101.PRE	XBRL Taxonomy Presentation Linkbase Document *

*filed herewith

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.

LIGHTPATH TECHNOLOGIES, INC.

Date: February 7, 2019

By: /s/ J. James Gaynor
J. James Gaynor
President and Chief Executive Officer

Date: February 7, 2019

By: /s/ Donald O. Retreage, Jr.
Donald O. Retreage, Jr.
Chief Financial Officer

FIRST AMENDMENT TO LEASE

THIS FIRST AMENDMENT TO LEASE (this "**First Amendment**") is entered into as of the 9th day of January, 2019 (the "**First Amendment Effective Date**") by and between **CIO UNIVERSITY TECH, LLC**, a Delaware limited liability company ("**Landlord**"), and **LIGHTPATH TECHNOLOGIES, INC.**, a Delaware corporation ("**Tenant**").

WITNESSETH:

WHEREAS, on or about April 20, 2018, Landlord, as landlord, and Tenant, as tenant, entered into that certain Lease (the "**Lease**") wherein Tenant leased certain real property in Orange County, Florida consisting of approximately 12,378 square feet of rentable area known as Suite 180 located at 12565 Research Parkway, Orlando, FL 32826 (the "**Premises**"); and

WHEREAS, the Commencement Date under the Lease was December 1, 2018; and

WHEREAS, Landlord and Tenant desire to memorialize a rent credit as a full and final settlement of any amounts that may be due from Landlord to Tenant as a result of the delivery of the Premises to Tenant after the Outside Commencement Date; and

WHEREAS, Landlord and Tenant desire to amend the Lease in certain respects hereinafter set forth.

NOW THEREFORE, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby covenant and agree as follows:

1. Recitals. The above recitals are true and correct and are hereby incorporated by this reference.

2. Definitions. All capitalized terms not defined herein shall have the meanings ascribed to them in the Lease.

3. Delay Concession. Landlord shall provide a rent concession to Tenant in the amount of Twenty-Four Thousand Two Hundred Three and 70/100 Dollars (\$24,203.70) (the "**Delay Concession**"), which Delay Concession shall be credited against Annual Minimum Rent and Additional Rent due from Tenant to Landlord for the month of February 2019. Tenant shall pay any amounts of Annual Minimum Rent and Additional Rent for February 2019 in excess of the Delay Concession as they come due under the Lease. The parties acknowledge that the Delay Concession is a full and final settlement of amounts owed from Landlord to Tenant as a result of delivery of the Premises after the Outside Commencement Date pursuant to Section 2.2 of the Lease.

4. Brokerage Commission. Tenant represents and warrants it has dealt with no broker, agent, or other person representing Tenant in connection with this First Amendment other than Landlord's broker, Tower Realty Partners, Inc. ("**Landlord Broker**"), and Tenant shall

indemnify and hold Landlord and Landlord's property manager and leasing agent(s) harmless from and against any and all claims by any other broker, agent, or other person claiming a commission or other form of compensation by virtue of having dealt with Tenant in connection with the negotiation and execution of this First Amendment, including all costs, expenses and liabilities incurred by Landlord in connection with any such claim, including, without limitation, attorneys' fees and expenses. Landlord represents and warrants it has dealt with no broker, agent, or other person representing Landlord in connection with this First Amendment other than Landlord Broker and Landlord shall indemnify and hold Tenant harmless from and against any and all claims by any other broker, agent, or other person claiming a commission or other form of compensation by virtue of having dealt with Landlord in connection with the negotiation and execution of this First Amendment, including all costs, expenses and liabilities incurred by Tenant in connection with any such claim, including, without limitation, attorneys' fees and expenses. Landlord Broker will be compensated by Landlord through a separate agreement for any fee or commission that may be due and payable to Landlord Broker by virtue of its involvement in this First Amendment.

5. Miscellaneous.

(a) Ratification. The foregoing terms and conditions are hereby incorporated into the Lease effective as of the First Amendment Effective Date. Except as specifically amended by the provisions of this First Amendment, the terms and provisions of the Lease shall continue to control the rights and obligations of the parties. The Lease, as amended, contains the entire agreement between Landlord and Tenant as to the Premises, and there are no other agreements, oral or written, between Landlord and Tenant relating to the Premises. Tenant certifies as of the First Amendment Effective Date: (a) that it has no offsets, defenses, or claims as to its obligations under the Lease; (b) that there are no defaults existing under the Lease on the part of either Landlord or Tenant; and (c) there is no existing basis for Tenant to terminate the Lease.

(b) Conflict. In the event of a conflict between the provisions of this First Amendment and the provisions of the Lease, the provisions of this First Amendment shall control.

(c) Successors and Assigns. This First Amendment shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns.

(d) No Offer. Submission of this First Amendment by Landlord or Tenant is not an offer to enter into this First Amendment. Neither Landlord nor Tenant shall be bound by this First Amendment until both Landlord and Tenant have executed it and delivered the same to the other party.

(e) Final Agreement. This First Amendment constitutes the final agreement between the parties. It is the complete and exclusive expression of the parties' agreement on the matters contained in this First Amendment. All prior and contemporaneous negotiations and agreements between the parties on the matters contained in this First Amendment are expressly merged into and superseded by this First Amendment. The

provisions of this First Amendment may not be explained, supplemented, or qualified through evidence of trade usage or a prior course of dealings. In entering into this First Amendment, neither party has relied upon any statement, representation, warranty, or agreement of the other party except for those expressly contained in this First Amendment. There are no conditions precedent or approvals of any First parties to the effectiveness of this First Amendment, other than those (if any) expressly stated in this First Amendment.

(f) Counterparts. This First Amendment may be executed in counterparts, each of which, when taken together, shall constitute one and the same document. A facsimile signature of either party shall constitute an original signature of such party for all purposes and is binding on said party. This First Amendment is effective upon full execution of this First Amendment.

(g) Rules of Construction. This First Amendment shall be interpreted without regard to any presumption or rule requiring construction against the party causing this First Amendment to be drafted. No inference shall be drawn from the modification or deletion of versions of the provisions of this First Amendment contained in any drafts exchanged between the parties before execution of the final version of this First Amendment that would be inconsistent in any way with the construction or interpretation that would be appropriate if the prior drafts had never existed.

(h) Review by Counsel. Each party has reviewed this First Amendment and all of its terms with legal counsel, or had an opportunity to review this First Amendment with legal counsel, and is not relying on any representations made to him by any other person concerning the effect of this First Amendment.

[SIGNATURES ON THE FOLLOWING PAGES]

IN WITNESS WHEREOF, Landlord and Tenant have executed this First Amendment in manner and form sufficient to bind them as of the day and year first above written.

Signed, sealed and delivered in the presence of:

/s/ Cori Hansen
Print Name: Cori Hansen
(name of first witness)

/s/ Nina Fitzpatrick
Print Name: Nina Fitzpatrick
(name of second witness)

Signed, sealed and delivered in the presence of:

/s/ Natalie Cockayne
Print Name: Natalie Cockayne
(name of first witness)

/s/ Dorothy M. Cipolla
Print Name: Dorothy M. Cipolla
(name of second witness)

LANDLORD:

CIO UNIVERSITY TECH, LLC, a
Delaware limited liability company

By: SCCP CENTRAL VALLEY GP CORP., a Delaware corporation, as Manager

BY: /s/ James Farrar
NAME: James Farrar
TITLE: President

TENANT:

LIGHTPATH TECHNOLOGIES, INC., a
Delaware corporation

BY: /s/ J. James Gaynor
NAME: J. James Gaynor
TITLE: President & CEO

Certification of Chief Executive Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934

I, J. James Gaynor, certify that:

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

Date: February 7, 2019

/s/ J. James Gaynor
J. James Gaynor
President and Chief Executive Officer

Certification of Chief Financial Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934

I, Donald O. Retreage, Jr., certify that:

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

Date: February 7, 2019

/s/ Donald O. Retreage, Jr.
Donald O. Retreage, Jr.
Chief Financial Officer

Certification of Chief Executive Officer
Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code

Pursuant to U.S.C. Section 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned Chief Executive Officer of LightPath Technologies, Inc. (the "Company") does hereby certify, to the best of such officer's knowledge, that:

1. The Quarterly Report on Form 10-Q of the Company for the quarterly period ended December 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 7, 2019

/s/ J. James Gaynor
J. James Gaynor,
President and Chief Executive Officer

The certifications set forth above are being furnished as an exhibit solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall they be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to LightPath Technologies, Inc. and will be retained by LightPath Technologies, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Certification of Chief Financial Officer
Pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code

Pursuant to U.S.C. Section 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned Chief Financial Officer of LightPath Technologies, Inc. (the "Company") does hereby certify, to the best of such officer's knowledge, that:

1. The Quarterly Report on Form 10-Q of the Company for the quarterly period ended December 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 7, 2019

/s/ Donald O. Retreage, Jr.

Donald O. Retreage, Jr.,

Chief Financial Officer

The certifications set forth above are being furnished as an exhibit solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall they be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to LightPath Technologies, Inc. and will be retained by LightPath Technologies, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.
