

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

FORM 10-Q

(Check One)

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

For the quarterly period ended March 31, 2019

**TRANSITION PURSUANT TO SECTION 13 OR 15(D)
OF THE SECURITIES EXCHANGE ACT**

For the transition period from _____ to _____

COMMISSION FILE NO. (0-16577)

CYBEROPTICS CORPORATION

(Exact name of registrant as specified in its charter)

Minnesota

(State or other jurisdiction of incorporation or organization)

41-1472057

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

5900 Golden Hills Drive

MINNEAPOLIS, MINNESOTA

(Address of principal executive offices)

55416

(Zip Code)

(763) 542-5000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, no par value	CYBE	NASDAQ Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large Accelerated Filer

Non-Accelerated Filer

Accelerated Filer

Smaller Reporting Company

Emerging Growth Company

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date. At April 30, 2019, there were 7,106,675 shares of the registrant's Common Stock, no par value, issued and outstanding.

PART I. FINANCIAL INFORMATION

ITEM 1. INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

INTERIM CONDENSED CONSOLIDATED BALANCE SHEETS
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands, except share information)	March 31, 2019	December 31, 2018
ASSETS		
Cash and cash equivalents	\$ 9,315	\$ 9,248
Marketable securities	7,684	5,771
Accounts receivable, less allowances of \$270 at March 31, 2019 and \$314 at December 31, 2018	13,037	15,859
Inventories	17,582	16,163
Other current assets	1,652	2,096
Total current assets	49,270	49,137
Marketable securities, long-term	8,688	10,322
Equipment and leasehold improvements, net	3,362	2,861
Intangible assets, net	324	333
Goodwill	1,366	1,366
Right-of-use assets (operating leases)	2,338	—
Other assets	252	259
Deferred tax assets	5,332	5,422
Total assets	\$ 70,932	\$ 69,700
LIABILITIES AND STOCKHOLDERS' EQUITY		
Accounts payable	\$ 6,180	\$ 8,513
Advance customer payments	843	636
Accrued expenses	2,643	3,568
Current operating lease liabilities	254	—
Total current liabilities	9,920	12,717
Other liabilities	103	629
Long-term operating lease liabilities	3,591	—
Reserve for income taxes	143	143
Total liabilities	13,757	13,489
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, no par value, 5,000,000 shares authorized, none outstanding	—	—
Common stock, no par value, 25,000,000 shares authorized, 7,106,675 shares issued and outstanding at March 31, 2019 and 7,100,825 shares issued and outstanding at December 31, 2018	35,940	35,637
Accumulated other comprehensive loss	(1,557)	(1,690)
Retained earnings	22,792	22,264
Total stockholders' equity	57,175	56,211
Total liabilities and stockholders' equity	\$ 70,932	\$ 69,700

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

INTERIM CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands, except per share amounts)	Three Months Ended March 31,	
	2019	2018
Revenues	\$ 14,976	\$ 14,120
Cost of revenues	7,950	7,901
Gross margin	7,026	6,219
Research and development expenses	2,293	2,180
Selling, general and administrative expenses	4,163	4,357
Income (loss) from operations	570	(318)
Interest income and other	59	62
Income (loss) before income taxes	629	(256)
Income tax expense (benefit)	134	(83)
Net income (loss)	\$ 495	\$ (173)
Net income (loss) per share – Basic	\$ 0.07	\$ (0.02)
Net income (loss) per share – Diluted	\$ 0.07	\$ (0.02)
Weighted average shares outstanding – Basic	7,100	6,986
Weighted average shares outstanding – Diluted	7,322	6,986

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

INTERIM CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands)	Three Months Ended March 31,	
	2019	2018
Net income (loss)	\$ 495	\$ (173)
Other comprehensive income, before tax:		
Foreign currency translation adjustments	87	220
Unrealized gains (losses) on available-for-sale securities:		
Unrealized gains (losses)	58	(40)
Reclassification adjustment for gains included in net income	—	—
Total unrealized gains (losses) on available-for-sale securities	58	(40)
Other comprehensive income before income taxes	145	180
Income tax provision (benefit)	(12)	9
Other comprehensive income after income taxes	133	189
Total comprehensive income	\$ 628	\$ 16

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

INTERIM CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands)	Three Months Ended March 31,	
	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	\$ 495	\$ (173)
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	663	625
Provision (recovery) for doubtful accounts	(44)	17
Deferred taxes	71	(139)
Foreign currency transaction (gains) losses	70	(34)
Share-based compensation	244	259
Unrealized loss on available-for-sale equity security	1	14
Changes in operating assets and liabilities:		
Accounts receivable	2,866	(1,357)
Inventories	(1,625)	(239)
Other assets	445	(229)
Accounts payable	(2,353)	1,579
Advance customer payments	207	130
Accrued expenses	(600)	36
Net cash provided by operating activities	<u>440</u>	<u>489</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from maturities of available-for-sale marketable securities	1,052	2,162
Proceeds from sales of available-for-sale marketable securities	—	70
Purchases of available-for-sale marketable securities	(1,263)	(2,621)
Additions to equipment and leasehold improvements	(183)	(348)
Additions to patents	(32)	(22)
Net cash used in investing activities	<u>(426)</u>	<u>(759)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from exercise of stock options	59	182
Net cash provided by financing activities	<u>59</u>	<u>182</u>
Effects of exchange rate changes on cash and cash equivalents	<u>(6)</u>	<u>(8)</u>
Net increase (decrease) in cash and cash equivalents	67	(96)
Cash and cash equivalents – beginning of period	9,248	6,944
Cash and cash equivalents – end of period	<u>\$ 9,315</u>	<u>\$ 6,848</u>

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

**NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
CYBEROPTICS CORPORATION**

1. INTERIM REPORTING:

The interim condensed consolidated financial statements of CyberOptics Corporation ("we", "us" or "our") presented herein as of March 31, 2019, and for the three month periods ended March 31, 2019 and 2018, are unaudited but, in the opinion of management, include all adjustments, consisting of normal recurring adjustments necessary for a fair presentation of financial position, results of operations and cash flows for the periods presented.

The results of operations for the three month periods ended March 31, 2019 do not necessarily indicate the results to be expected for the full year. The December 31, 2018 consolidated balance sheet data was derived from audited consolidated financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America. The unaudited interim condensed consolidated financial statements should be read in conjunction with our consolidated financial statements and notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2018.

2. RECENT ACCOUNTING DEVELOPMENTS:

In February 2016, the Financial Accounting Standards Board (the "FASB") issued new lease accounting guidance, ASU 2016-02, *Leases* (also referred to as Topic 842) which we adopted on January 1, 2019. Under Topic 842, at the commencement date, lessees are required (a) to recognize a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and (b) to record a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842), Targeted Improvements*, which gave companies the option of applying the new standard at the adoption date, rather than retrospectively to the earliest period presented in the financial statements, with recognition of a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We choose the option to apply the new standard at the adoption date, and therefore we were not required to restate the financial statements for prior periods, nor are we required to provide the disclosures required by Topic 842 for prior periods. Upon adoption, we recognized an approximate \$2.6 million right-of-use asset, and an approximate \$3.2 million lease liability. Our previously recognized liability for lease incentives recorded under prior accounting standards was eliminated. The cumulative-effect adjustment to the opening balance of retained earnings related to our adoption of Topic 842 was inconsequential. Our adoption of Topic 842 did not impact our cash flows or have a material impact on our results of operations. We have expanded our consolidated financial statement disclosures to comply with the requirements of Topic 842.

In February 2018, the FASB issued ASU 2018-02, *Reclassification of Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"), which allows an entity to elect an option to reclassify the stranded tax effects related to the application of the Tax Cuts and Jobs Act (the TCJA) from accumulated other comprehensive loss to retained earnings. ASU 2018-02 was effective January 1, 2019 and can be applied either in the period of adoption or retrospectively to all applicable periods. We did not elect to reclassify the stranded tax effects related to the application of the TCJA from accumulated other comprehensive loss to retained earnings.

In January 2017, the FASB issued guidance on simplifying the test for goodwill impairment, ASU 2017-04, *Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"). Under ASU 2017-04, goodwill impairment would be measured as the amount by which a reporting unit's carrying value exceeds its fair value, but not in an amount in excess of the carrying value of goodwill. The new standard eliminates the requirement to determine goodwill impairment by calculating the implied fair value of goodwill by hypothetically assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. ASU 2017-04 is to be applied prospectively to impairment tests beginning January 1, 2020, with early adoption permitted. We are currently evaluating when we will adopt ASU 2017-04 and do not expect the adoption to have a material impact on our consolidated financial statements.

3. REVENUE RECOGNITION:

Our revenue performance obligations are satisfied at a point in time or over time as work progresses.

The following is a summary of our revenue performance obligations in the three months ended March 31, 2019 and the three months ended March 31, 2018:

(In thousands except percentages)	Three Months Ended March 31, 2019		Three Months Ended March 31, 2018	
	Revenues	Percent of Revenues	Revenues	Percent of Revenues
Revenue recognized over time	\$ 346	2%	\$ 894	6%
Revenue recognized at a point in time	14,630	98%	13,226	94%
	\$ 14,976	100%	\$ 14,120	100%

See Note 10 for additional information regarding disaggregation of revenue.

Contract Balances

Contract assets consist of unbilled amounts from sales where we recognize the revenue over time and the revenue recognized exceeds the amount billed to the customer at a point in time. Accounts receivable are recorded when the right to payment becomes unconditional. Contract liabilities consist of payments received in advance of performance under the contract. Contract liabilities are recognized as revenue when we perform under the contract.

The following summarizes our contract assets and contract liabilities:

(In thousands)	March 31, 2019	December 31, 2018
Contract assets, included in other current assets	\$ 123	\$ —
Contract liabilities, included in advance customer payments/other liabilities	\$ 336	\$ 366

Changes in contract assets in the three months ended March 31, 2019 resulted from unbilled amounts under sensor product arrangements and longer duration 3D scanning service projects in which revenue is recognized over time. Changes in contract liabilities primarily resulted from reclassification of beginning contract liabilities to revenue as performance obligations were satisfied or from cash received in advance and not recognized as revenue. See Note 8 for changes in contractual obligations related to deferred warranty revenue. Unsatisfied performance obligations are generally expected to be recognized as revenue over the next one to three years. There were no impairment losses for contract assets in the three months ended March 31, 2019 and 2018.

The following summarizes the amounts reclassified from beginning contract liabilities to revenue:

(In thousands)	Three Months Ended March 31,	
	2019	2018
Amounts reclassified from beginning contract liabilities to revenue	\$ 30	\$ 57
Amounts reclassified from deferred warranty revenue	114	120
Total	\$ 144	\$ 177

4. MARKETABLE SECURITIES:

Our investments in marketable securities are classified as available-for-sale and consist of the following:

(In thousands)	March 31, 2019			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-Term				
U.S. government and agency obligations	\$ 4,358	\$ 2	\$ (14)	\$ 4,346
Corporate debt securities and certificates of deposit	2,265	6	(3)	2,268
Asset backed securities	1,073	—	(3)	1,070
Marketable securities – short-term	\$ 7,696	\$ 8	\$ (20)	\$ 7,684
Long-Term				
U.S. government and agency obligations	\$ 5,004	\$ 19	\$ (8)	\$ 5,015
Corporate debt securities and certificates of deposit	389	1	—	390
Asset backed securities	3,220	10	(6)	3,224
Equity security	42	17	—	59
Marketable securities – long-term	\$ 8,655	\$ 47	\$ (14)	\$ 8,688

(In thousands)	December 31, 2018			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-Term				
U.S. government and agency obligations	\$ 3,377	\$ —	\$ (20)	\$ 3,357
Corporate debt securities and certificates of deposit	1,787	3	(5)	1,785
Asset backed securities	633	—	(4)	629
Marketable securities – short-term	<u>\$ 5,797</u>	<u>\$ 3</u>	<u>\$ (29)</u>	<u>\$ 5,771</u>
Long-Term				
U.S. government and agency obligations	\$ 6,114	\$ 10	\$ (23)	\$ 6,101
Corporate debt securities and certificates of deposit	754	1	(3)	752
Asset backed securities	3,422	2	(15)	3,409
Equity security	42	18	—	60
Marketable securities – long-term	<u>\$ 10,332</u>	<u>\$ 31</u>	<u>\$ (41)</u>	<u>\$ 10,322</u>

(In thousands)	In Unrealized Loss Position For Less Than 12 Months		In Unrealized Loss Position For Greater Than 12 Months	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
March 31, 2019				
U.S. government and agency obligations	\$ 149	\$ —	\$ 4,618	\$ (22)
Corporate debt securities and certificates of deposit	—	—	932	(3)
Asset backed securities	—	—	2,112	(9)
Marketable securities	<u>\$ 149</u>	<u>\$ —</u>	<u>\$ 7,662</u>	<u>\$ (34)</u>
December 31, 2018				
U.S. government and agency obligations	\$ 1,548	\$ (4)	\$ 4,608	\$ (39)
Corporate debt securities and certificates of deposit	250	—	1,178	(8)
Asset backed securities	1,023	(3)	2,137	(16)
Marketable securities	<u>\$ 2,821</u>	<u>\$ (7)</u>	<u>\$ 7,923</u>	<u>\$ (63)</u>

Our investments in marketable debt securities all have maturities of less than five years. Net pre-tax unrealized gains for marketable debt securities of \$4,000 at March 31, 2019 and net pre-tax losses for marketable debt securities of \$54,000 at December 31, 2018 have been recorded as a component of accumulated other comprehensive loss in stockholders' equity. We have determined that the net pre-tax unrealized losses for marketable debt securities at March 31, 2019 and December 31, 2018 were caused by fluctuations in interest rates and are temporary in nature. We review our marketable debt securities to identify and evaluate investments that have indications of possible impairment. Factors considered in determining whether a loss is other-than-temporary include the length of time and extent to which the fair value of the investment has been less than the cost basis, the credit quality of the investment and our ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value. No marketable securities were sold in the three months ended March 31, 2019. We received proceeds from sales of marketable securities of \$70,000 in the three months ended March 31, 2018. No gains or losses were recognized on any of these sales.

Investments in marketable securities classified as cash equivalents of \$4.9 million at March 31, 2019 and \$2.5 million at December 31, 2018 consist of corporate debt securities and certificates of deposit. There were no unrealized gains or losses with respect to any of these securities at March 31, 2019 or December 31, 2018.

Cash and marketable securities held by foreign subsidiaries totaled \$345,000 at March 31, 2019 and \$362,000 at December 31, 2018.

5. FAIR VALUE MEASUREMENTS:

We determine the fair value of our assets and liabilities based on the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. We use a fair value hierarchy with three levels of inputs, of which the first two are considered observable and the last is considered unobservable, to measure fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1). The next highest priority is based on quoted prices for similar assets or liabilities in active markets or quoted prices for identical or similar assets or liabilities in non-active markets or other observable inputs (Level 2). The lowest priority is given to unobservable inputs (Level 3). The following provides information regarding fair value measurements for our marketable securities as of March 31, 2019 and December 31, 2018 according to the three-level fair value hierarchy:

(In thousands)	Fair Value Measurements at March 31, 2019 Using			
	Balance March 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Marketable securities:				
U.S. government and agency obligations	\$ 9,361	\$ —	\$ 9,361	\$ —
Corporate debt securities and certificates of deposit	2,658	—	2,658	—
Asset backed securities	4,294	—	4,294	—
Equity security	59	59	—	—
Total marketable securities	<u>\$ 16,372</u>	<u>\$ 59</u>	<u>\$ 16,313</u>	<u>\$ —</u>

(In thousands)	Fair Value Measurements at December 31, 2018 Using			
	Balance December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Marketable securities:				
U.S. government and agency obligations	\$ 9,458	\$ —	\$ 9,458	\$ —
Corporate debt securities and certificates of deposit	2,537	—	2,537	—
Asset backed securities	4,038	—	4,038	—
Equity security	60	60	—	—
Total marketable securities	<u>\$ 16,093</u>	<u>\$ 60</u>	<u>\$ 16,033</u>	<u>\$ —</u>

During the three months ended March 31, 2019 and the year ended December 31, 2018, we owned no Level 3 securities, and there were no transfers within the three level hierarchy. A significant transfer is recognized when the inputs used to value a security have been changed which merit a transfer between the disclosed levels of the valuation hierarchy.

The fair value for our U.S. government and agency obligations, corporate debt securities and certificates of deposit and asset backed securities are determined based on valuations provided by external investment managers, which obtain the valuations from a variety of industry standard data providers. The fair value for our equity security is based on a quoted market price obtained from an active market.

The carrying amounts of financial instruments such as cash equivalents, accounts receivable, other assets, accounts payable, advance customer payments, accrued expenses and other liabilities are approximately equal to their related fair values due to their short-term maturities. Non-financial assets such as equipment and leasehold improvements, goodwill and intangible assets are subject to non-recurring fair value measurements if they are deemed impaired. We had no re-measurements of non-financial assets to fair value in the three months ended March 31, 2019 or the three months ended March 31, 2018.

6. SHARE-BASED COMPENSATION:

We have three share-based compensation plans that are administered by the Compensation Committee of the Board of Directors. We have an Employee Stock Incentive Plan for officers, other employees, consultants and independent contractors under which we have granted options and restricted stock units to officers and other employees, an Employee Stock Purchase Plan under which shares of our common stock may be acquired by employees at discounted prices, and a Non-Employee Director Stock Plan that provides for automatic grants of restricted shares of our common stock to non-employee directors. New shares of our common stock are issued upon stock option exercises, vesting of restricted stock units, issuances of shares to board members and issuances of shares under the Employee Stock Purchase Plan.

Employee Stock Incentive Plan

As of March 31, 2019, there were 273,014 shares of common stock reserved in the aggregate for issuance pursuant to future awards under our Employee Stock Incentive Plan and 540,378 shares of common stock reserved in the aggregate for issuance pursuant to outstanding awards under our Employee Stock Incentive Plan. Although our Compensation Committee has authority to issue options, restricted stock, restricted stock units, share grants and other share-based benefits under our Employee Stock Incentive Plan, to date only restricted stock units and stock options have been granted under the plan. Options have been granted at an option price per share equal to the market value of our common stock on the date of grant, vest over a four year period and expire seven years after the date of grant. Restricted stock units vest over a four year period and entitle the holders to one share of our common stock for each restricted stock unit. Reserved shares underlying outstanding awards, including options and restricted stock units, that are forfeited are available under the Employee Stock Incentive Plan for future grant.

Non-Employee Director Stock Plan

As of March 31, 2019, there were 60,000 shares of common stock reserved in the aggregate for issuance pursuant to future restricted share grants under our Non-Employee Director Stock Plan and 16,000 shares of common stock reserved in the aggregate for issuance pursuant to outstanding stock option awards under our Non-Employee Director Stock Plan (which previously authorized the granting of stock options to non-employee directors). Under the terms of the plan, each non-employee director receives annual restricted share grants of 2,000 shares of our common stock on the date of each annual meeting at which such director is elected to serve on the board. The annual restricted share grants of common stock vest in four equal quarterly installments during the year after the grant date, provided the non-employee director is still serving as a director on the applicable vesting date.

On the date of our 2018 annual meeting, we issued a total of 8,000 shares of our common stock to our non-employee directors, which were restricted as specified in the Non-Employee Director Stock Plan. The shares had an aggregate fair market value on the date of grant equal to \$130,000 (grant date fair value of \$16.25 per share). As of March 31, 2019, 6,000 of these shares were vested. The aggregate fair value of the outstanding unvested shares based on the closing price of our common stock on March 31, 2019 was \$34,000.

Stock Option Activity

The following is a summary of stock option activity in the three months ended March 31, 2019:

	Options Outstanding	Weighted Average Exercise Price Per Share
Outstanding, December 31, 2018	523,042	\$ 11.48
Granted	—	—
Exercised	(5,850)	9.92
Expired	(5,000)	8.50
Forfeited	(7,350)	16.67
Outstanding, March 31, 2019	504,842	\$ 11.45
Exercisable, March 31, 2019	350,718	\$ 9.40

The intrinsic value of an option is the amount by which the market price of the underlying common stock exceeds the option's exercise price. For options outstanding at March 31, 2019, the weighted average remaining contractual term of all outstanding options was 3.8 years and their aggregate intrinsic value was \$3.3 million. At March 31, 2019, the weighted average remaining contractual term of options that were exercisable was 3.0 years and their aggregate intrinsic value was \$2.9 million. The aggregate intrinsic value of stock options exercised in the three months ended March 31, 2019 was \$57,000. We received proceeds from stock option exercises of \$59,000 in the three months ended March 31, 2019 and \$182,000 in the three months ended March 31, 2018. The aggregate fair value of options that vested in the three months ended March 31, 2019 was \$5,000.

Restricted Shares and Restricted Stock Units

Restricted shares are granted under our Non-Employee Director Stock Plan. There were no restricted shares granted in the three months ended March 31, 2019. Restricted stock units are granted under our Employee Stock Incentive Plan. No restricted stock units were granted in the three months ended March 31, 2019. The aggregate fair value of outstanding restricted shares and restricted stock units based on the closing share price of our common stock as of March 31, 2019 was \$915,000. The aggregate fair value of restricted shares and restricted stock units that vested, based on the closing price of our common stock on the vesting date, was \$43,000 in the three months ended March 31, 2019.

The following is a summary of activity in non-vested restricted shares and restricted stock units in the three months ended March 31, 2019:

Non-vested restricted stock units and restricted shares	Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2018	56,411	\$ 17.59
Granted	—	—
Vested	(2,000)	16.25
Forfeited	(875)	16.19
Non-vested at March 31, 2019	53,536	\$ 17.66

Employee Stock Purchase Plan

We have an Employee Stock Purchase Plan available to eligible U.S. employees. Under the terms of the plan, eligible employees may designate from 1% to 10% of their compensation to be withheld through payroll deductions, up to a maximum of \$6,500 in each plan year, for the purchase of common stock at 85% of the lower of the market price on the first or last day of the offering period (which begins on August 1st and ends on July 31st of each year). No shares were purchased under this plan in the three months ended March 31, 2019. As of March 31, 2019, 174,469 shares remain available for future purchase under the Employee Stock Purchase Plan.

Share-Based Compensation Information

All share-based compensation awarded to our employees and non-employee directors, including grants of stock options, restricted stock units and restricted shares, are required to be recognized as an expense in our consolidated statement of operations based on the grant date fair value of the award. We utilize the straight-line method of expense recognition over the award's service period for our graded vesting options. The fair value of stock options has been determined using the Black-Scholes model. We have classified employee share-based compensation within our statements of operations in the same manner as our cash based employee compensation costs.

Share-based compensation expense in the three months ended March 31, 2019 totaled \$244,000, and included \$107,000 for stock options, \$29,000 for our Employee Stock Purchase Plan, \$76,000 for unvested restricted stock units and \$32,000 for unvested restricted shares.

Share-based compensation expense in the three months ended March 31, 2018 totaled \$259,000, and included \$125,000 for stock options, \$34,000 for our Employee Stock Purchase Plan, \$59,000 for unvested restricted stock units and \$41,000 for unvested restricted shares.

At March 31, 2019, the total unrecognized compensation cost related to non-vested share-based compensation arrangements was \$1.9 million and the related weighted average period over which such cost is expected to be recognized is 2.84 years.

7. CHANGES IN STOCKHOLDERS' EQUITY:

A reconciliation of the changes in our stockholders' equity is as follows:

(In thousands)	Common Stock		Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance, December 31, 2018	7,101	\$ 35,637	\$ (1,690)	\$ 22,264	\$ 56,211
Increase related to adoption of ASU 2016-02	—	—	—	33	33
Exercise of stock options	6	59	—	—	59
Share-based compensation	—	244	—	—	244
Other comprehensive income, net of tax	—	—	133	—	133
Net income	—	—	—	495	495
Balance, March 31, 2019	7,107	\$ 35,940	\$ (1,557)	\$ 22,792	\$ 57,175

(In thousands)	Common Stock		Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance December 31, 2017	6,980	\$ 34,080	\$ (1,409)	\$ 19,611	\$ 52,282
Increase related to adoption of ASU 2016-01	—	—	(44)	44	—
Decrease related to adoption of ASU 2014-09	—	—	—	(218)	(218)
Exercise of stock options, vesting of restricted stock units and grants of restricted shares, net of shares exchanged as payment	26	182	—	—	182
Stock-based compensation	—	259	—	—	259
Other comprehensive income, net of tax	—	—	189	—	189
Net loss	—	—	—	(173)	(173)
Balance, March 31, 2018	7,006	\$ 34,521	\$ (1,264)	\$ 19,264	\$ 52,521

8. OTHER FINANCIAL STATEMENT DATA:

Inventories consist of the following:

(In thousands)	March 31, 2019	December 31, 2018
Raw materials and purchased parts	\$ 9,114	\$ 8,821
Work in process	2,489	2,446
Finished goods	5,979	4,896
Total inventories	\$ 17,582	\$ 16,163

Accrued expenses consist of the following:

(In thousands)	March 31, 2019	December 31, 2018
Wages and benefits	\$ 1,174	\$ 2,166
Warranty liability	795	758
Income tax payable	459	393
Other	215	251
	\$ 2,643	\$ 3,568

Warranty costs:

We provide for the estimated cost of product warranties, which cover products for periods ranging from one to three years, at the time revenue is recognized. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of components provided by suppliers, warranty obligations do arise. These obligations are affected by product failure rates, the costs of materials used and service delivery expenses incurred in correcting a product failure. If actual product failure rates and material or service delivery costs differ from our estimates, revisions to the estimated warranty liability are required and could be material. At the end of each reporting period, we revise our estimated warranty liability based on these factors. The current portion of our warranty liability is included as a component of accrued expenses. The long-term portion of our warranty liability is included as a component of other liabilities.

A reconciliation of the changes in our estimated warranty liability is as follows:

(In thousands)	Three Months Ended March 31,	
	2019	2018
Balance at beginning of period	\$ 789	\$ 767
Accrual for warranties	174	103
Warranty revision	17	(26)
Settlements made during the period	(154)	(101)
Balance at end of period	826	743
Current portion of estimated warranty liability	(795)	(690)
Long-term estimated warranty liability	\$ 31	\$ 53

Deferred warranty revenue:

The current portion of our deferred warranty revenue is included as a component of advance customer payments. The long-term portion of our deferred warranty revenue is included as a component of other liabilities. A reconciliation of the changes in our deferred warranty revenue is as follows:

(In thousands)	Three Months Ended March 31,	
	2019	2018
Balance at beginning of period	\$ 218	\$ 259
Revenue deferrals	87	111
Amortization of deferred revenue	(114)	(120)
Total deferred warranty revenue	191	250
Current portion of deferred warranty revenue	(186)	(231)
Long-term deferred warranty revenue	\$ 5	\$ 19

9. INTANGIBLE ASSETS:

Intangible assets consist of the following:

(In thousands)	March 31, 2019			December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Patents	\$ 2,785	\$ (2,564)	\$ 221	\$ 2,754	\$ (2,533)	\$ 221
Software	206	(148)	58	206	(141)	65
Marketing assets and customer relationships	101	(56)	45	101	(54)	47
Non-compete agreements	101	(101)	—	101	(101)	—
	\$ 3,193	\$ (2,869)	\$ 324	\$ 3,162	\$ (2,829)	\$ 333

Amortization expense for our intangible assets in the three months ended March 31, 2019 and the three months ended March 31, 2018 was as follows:

(In thousands)	Three Months Ended March 31,	
	2019	2018
Patents	\$ 31	\$ 28
Software	7	8
Marketing assets and customer relationships	2	4
Non-compete agreements	—	5
	\$ 40	\$ 45

Amortization of patents has been classified as research and development expense in the accompanying consolidated statements of operations. Estimated aggregate future amortization expense based on current intangible assets is expected to be as follows: \$118,000 for the remainder of 2019; \$130,000 in 2020; \$55,000 in 2021; \$10,000 in 2022; \$9,000 in 2023; and \$2,000 in 2024.

Intangible and other long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. An impairment loss is recognized when future undiscounted cash flows expected to result from use of the asset and its eventual disposition are less than the carrying amount.

10. REVENUE CONCENTRATIONS, SIGNIFICANT CUSTOMERS AND GEOGRAPHIC AREAS:

The following summarizes our revenue by product line:

(In thousands)	Three Months Ended March 31,	
	2019	2018
High Precision 3D and 2D Sensors	\$ 3,749	\$ 5,055
Semiconductor Sensors	4,136	3,161
Inspection and Metrology Systems	7,091	5,904
Total	\$ 14,976	\$ 14,120

Export sales as a percentage of total sales in the three months ended March 31, 2019 were 71%. Export sales as a percentage of total sales in the three months ended March 31, 2018 were 72%. Virtually all of our export sales are negotiated, invoiced and paid in U.S. dollars. Export sales by geographic area are summarized below:

(In thousands)	Three Months Ended March 31,	
	2019	2018
Americas	\$ 371	\$ 71
Europe	2,658	2,580
Asia	7,532	7,461
Other	44	105
Total export sales	\$ 10,605	\$ 10,217

In the three months ended March 31, 2019, sales to significant customer A accounted for 15% of our total revenue. As of March 31, 2019, accounts receivable from significant customer A were \$915,000.

11. NET INCOME (LOSS) PER SHARE:

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Common equivalent shares consist of common shares to be issued upon exercise of stock options, vesting of restricted stock units, vesting of restricted shares and from purchases of shares under our Employee Stock Purchase Plan, as calculated using the treasury stock method. Net income per diluted share is computed by dividing net income by the weighted average number of common and common equivalent shares outstanding during the period. All common equivalent shares are excluded from the calculation of net loss per diluted share due to their anti-dilutive effect. Common equivalent shares are excluded from the calculation of net income per diluted share if their effect is anti-dilutive. The components of net income (loss) per basic and diluted share were as follows:

(In thousands except per share amounts)	Net Income	Weighted Average Shares Outstanding	Per Share Amount
Three Months Ended March 31, 2019			
Basic	\$ 495	7,100	\$ 0.07
Dilutive effect of common equivalent shares	—	222	—
Dilutive	\$ 495	7,322	\$ 0.07

(In thousands except per share amounts)	Net Loss	Weighted Average Shares Outstanding	Per Share Amount
Three Months Ended March 31, 2018			
Basic	\$ (173)	6,986	\$ (0.02)
Dilutive effect of common equivalent shares	—	—	—
Dilutive	\$ (173)	6,986	\$ (0.02)

Potentially dilutive shares excluded from the calculations of net income (loss) per diluted share due to their anti-dilutive effect were as follows: 160,000 shares in the three months ended March 31, 2019; and 615,000 shares in the three months ended March 31, 2018.

12. OTHER COMPREHENSIVE INCOME:

Reclassification adjustments are made to avoid double counting for items included in other comprehensive income that are also recorded as part of net income (loss). Reclassifications and taxes related to items of other comprehensive income are as follows:

(In thousands)	Three Months Ended March 31, 2019			Three Months Ended March 31, 2018		
	Before Tax	Tax Effect	Net of Tax Amount	Before Tax	Tax Effect	Net of Tax Amount
Foreign currency translation adjustments	\$ 87	\$ —	\$ 87	\$ 220	\$ —	\$ 220
Net changes related to available-for-sale securities:						
Unrealized losses	58	(12)	46	(40)	9	(31)
Reclassifications included in interest income and other	—	—	—	—	—	—
Net changes related to available-for-sale securities	58	(12)	46	(40)	9	(31)
Other comprehensive income	\$ 145	\$ (12)	\$ 133	\$ 180	\$ 9	\$ 189

At March 31, 2019 and March 31, 2018, components of accumulated other comprehensive loss are as follows:

(In thousands)	Foreign Currency Translation Adjustments	Available- for- Sale Securities	Accumulated Other Comprehensive Loss
Balances at December 31, 2018	\$ (1,649)	\$ (41)	\$ (1,690)
Other comprehensive income before reclassifications	87	46	133
Amounts reclassified from accumulated other comprehensive loss	—	—	—
Total change for the period	87	46	133
Balances at March 31, 2019	\$ (1,562)	\$ 5	\$ (1,557)

(In thousands)	Foreign Currency Translation Adjustments	Available- for- Sale Securities	Accumulated Other Comprehensive Loss
Balances at December 31, 2017	\$ (1,394)	\$ (15)	\$ (1,409)
Decrease related to adoption of ASU 2016-01	—	(44)	(44)
Other comprehensive income (loss) before reclassifications	220	(31)	189
Amounts reclassified from accumulated other comprehensive loss	—	—	—
Total change for the period	220	(75)	145
Balances at March 31, 2018	\$ (1,174)	\$ (90)	\$ (1,264)

13. INCOME TAXES:

We recorded income tax expense of \$134,000 in the three months ended March 31, 2019, compared to an income tax benefit of \$83,000 in the three months ended March 31, 2018. Our income tax expense in the three months ended March 31, 2019 reflected an effective income tax rate of approximately 21%, which included \$9,000 of excess tax benefits from employee share-based payments. Our income tax benefit in the three months ended March 31, 2018 reflected an effective income tax rates of approximately 32%, which included \$35,000 of excess tax benefits from employee share-based payments. Our effective tax rate in the three months ended March 31, 2019 and the three months ended March 31, 2018 was impacted by Global Intangible Low Tax Income (GILTI), U.S. federal R&D tax credits and excess tax benefits from employee share-based payments.

We have significant deferred tax assets as a result of temporary differences between taxable income on our tax returns and U.S. GAAP income, research and development tax credit carry forwards and federal, state and foreign net operating loss carry forwards. A deferred tax asset generally represents future tax benefits to be received when temporary differences previously reported in our consolidated financial statements become deductible for income tax purposes, when net operating loss carry forwards could be applied against future taxable income, or when tax credit carry forwards are utilized on our tax returns. We assess the realizability of our deferred tax assets and the need for a valuation allowance based on the guidance provided in current financial accounting standards.

Significant judgment is required in determining the realizability of our deferred tax assets. The assessment of whether valuation allowances are required considers, among other matters, the nature, frequency and severity of any current and cumulative losses, forecasts of future profitability, the duration of statutory carry-forward periods, our experience with loss carry forwards not expiring unused and tax planning alternatives. In analyzing the need for valuation allowances, we first considered our history of cumulative operating results for income tax purposes over the past three years in each of the tax jurisdictions in which we operate, our financial performance in recent quarters, statutory carry forward periods and tax planning alternatives. In addition, we considered both our near-term and long-term financial outlook. After considering all available evidence (both positive and negative), we concluded that recognition of valuation allowances for substantially all of our U.S. and Singapore based deferred tax assets was not required.

The Inland Revenue Authority of Singapore is reviewing our 2016 and 2015 income tax returns. We anticipate that the outcome of these audits will not have a significant impact on our financial position or results of operations.

14. OPERATING LEASES:

We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (“ROU”) assets, current operating lease liabilities, and long-term operating lease liabilities in our consolidated balance sheets. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. The operating lease ROU excludes lease incentives. As our leases do not provide an implicit rate, we use our incremental borrowing rate to determine the present value of lease payments. Our leases may include renewal options to extend the lease term, the exercise of which are at our sole discretion. Our lease terms do not include any option to extend the lease, because it is not reasonably certain that we will exercise the option. Lease expense is recognized on a straight-line basis over the lease term. We have lease agreements with lease and non-lease components (e.g., common-area or other maintenance costs) which are generally accounted for separately and expensed monthly. We do not recognize a ROU asset and lease liability for leases having a term of 12 months or less at the effective date.

We lease a 61,208 square foot mixed office and warehouse facility in Golden Valley, Minnesota. The lease has a term of 91 months and expires on July 31, 2026. The lease contains a rent escalation clause, one three year renewal option and incentives. Rental expense, including the effects of lease incentives, is recognized on a straight-line basis over the term of the lease. We are also required to pay insurance, property taxes and other operating expenses related to the leased facility which are not fixed or tied to an index.

We lease a 19,805 square foot mixed office and warehouse facility in Singapore. The lease expires in July 2020, contains a rent escalation clause and one three year renewal option. We also have operating leases in the United Kingdom and China, which expire May 2023 and November 2020, respectively. We did not enter into any new leases in the three months ended March 31, 2019.

The components of our costs for operating leases in the three months ended March 31, 2019 are as follows:

Component	(In thousands)
Operating lease cost	\$ 180
Variable lease cost	67
Short-term lease cost	2
Total	<u>\$ 249</u>

Variable lease costs generally consists of real estate taxes and insurance for leased facilities which are paid based on actual costs incurred by the lessor.

At March 31, 2019, the future maturities of lease liabilities are as follows:

Twelve months ending March 31,	(In thousands)
2020	\$ 688
2021	711
2022	615
2023	630
2024	646
2025 & Thereafter	1,571
Total lease payments	<u>4,861</u>
Less: amount representing interest	1,016
Present value of operating lease liabilities	<u>\$ 3,845</u>

At March 31, 2019, the weighted average remaining term for our operating leases is 6.56 years, and the weighted average discount rate applied to our operating leases was 5.73%.

Cash paid for amounts included in the measurement of operating lease liabilities in the three months ended March 31, 2019 was \$98,000. Incentives recorded as leasehold improvements in the three months ended March 31, 2019 were \$691,000.

15. CONTINGENCIES:

We are periodically a defendant in miscellaneous lawsuits, claims and disputes in the ordinary course of business. While the outcome of these matters cannot be predicted with certainty, management presently believes the disposition of these matters will not have a material effect on our financial position, results of operations or cash flows.

In the normal course of business to facilitate sales of our products and services, we at times indemnify other parties, including customers, with respect to certain matters. In these instances, we have agreed to hold the other parties harmless against losses arising out of intellectual property infringement or other types of claims. These agreements may limit the time within which an indemnification claim can be made, and almost always limit the amount of the claim. It is not possible to determine the maximum potential amount under these indemnification agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made, if any, under these agreements have not had a material impact on our operating results, financial position or cash flows.

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

FORWARD LOOKING STATEMENTS:

The following management's discussion and analysis of the financial condition and results of operations of CyberOptics Corporation ("we", "us" and "our") contains a number of estimates and predictions that are forward looking statements rather than statements based on historical fact. Among other matters, we discuss (i) our level of anticipated revenues, gross margins, and expenses; (ii) the timing of orders and shipments of our existing products, particularly the SQ3000, our 3D automated optical inspection ("AOI") system; (iii) the timing of initial revenue and projected improvements in gross margins from sales of new products that have been recently introduced, that we have under development or that we anticipate introducing in the future; (iv) the amount of anticipated revenue and potential revenue opportunity from recently introduced new products or potential new products we may launch in the future; and (v) our assessment of trends in the general economy and their impact on the markets for our products. Although we have made these statements based on our experience and expectations regarding future events, there may be events or factors that we have not anticipated, and the accuracy of our forward-looking statements and estimates are subject to a number of risks, including those risks identified in our Annual Report on Form 10-K for the year ended December 31, 2018.

RESULTS OF OPERATIONS

General

As a leading global developer and manufacturer of high precision 3D sensors, our strategy is to leverage our 3D sensor technologies in our three key vertical markets: surface mount technology ("SMT"); semiconductor; and metrology. A key element in our strategy is the continued development and sale of new high precision 3D sensors based on our proprietary multi-reflection suppression ("MRS") technology. We believe that MRS is a break-through optical technology for high precision inspection and metrology, with the potential to expand our markets in the future.

Manufacturing yield challenges as electronics and semiconductors become more complex are driving the need for more precise inspection and metrology. As a result, we believe 3D inspection and metrology represent high-growth segments in both the SMT and semiconductor capital equipment markets. We expect a growing number of opportunities in the markets for SMT and semiconductor inspection and metrology, because our 3D MRS technology platform is well suited for many applications in these markets, particularly with respect to complex circuit boards and semiconductor back-end, mid-end and advanced packaging inspection and metrology applications. We are taking advantage of current market trends by deploying our 3D MRS sensor technology in the following products:

- Our SQ3000 and SQ3000™ 3D CMM AOI systems, which are designed to expand our presence in SMT and semiconductor markets requiring high precision measurement and inspection. In these markets, identifying defects has become highly challenging and critical due to smaller and more complex electronics packaging and increasing component density on circuit boards. The SQ3000™ 3D CMM combines automated optical inspection and metrology functionality in a single product. Manufacturers in a variety of industries, including the SMT and semiconductor markets can use the SQ3000™ 3D CMM as an in-line or off-line metrology tool to help solve complex manufacturing and product quality challenges.
- Our high-precision 3D MRS sensors, which we sell to original equipment manufacturers ("OEMs") that produce inspection and metrology equipment for the SMT and semiconductor industries. We have entered into an agreement to supply KLA with high-precision 3D MRS sensors for its back-end semiconductor packaging inspection systems. We also have entered into an agreement to supply Nordson-YESTECH with high precision 3D MRS sensors for its inspection systems serving the SMT market.
- Our next generation ultra-high resolution 3-micron pixel 3D MRS sensor is capable of measuring feature sizes down to 30 microns accurately and at high speeds, and is suitable for many semiconductor mid-end and advanced packaging inspection and metrology applications. We are targeting one micron, three-sigma accuracy, at speeds that would inspect more than 20 300-millimeter wafers in an hour. We are currently demonstrating this technology to OEMs and system integrators and directly to semiconductor manufacturers. We believe sales of 3D MRS-enabled sensors and systems for semiconductor back-end, mid-end and advanced packaging inspection and metrology applications represent significant long-term growth opportunities, and we expect sales of sensors and systems for these applications to ramp up in the second half of 2019 and beyond.

Revenue from MRS based products, including 3D AOI systems, high precision 3D MRS sensors and CyberGage®360 totaled \$4.3 million in the three months ended March 31, 2019, virtually unchanged from the three months ended March 31, 2018. Sales of 3D MRS sensors declined 18% on a year-over-year basis in the three months ended March 31, 2019 to \$1.7 million, as OEM customers reduced their orders due to sluggish market conditions in the global SMT and semiconductor markets. Despite the weak market conditions, sales of 3D MRS-enabled SQ3000 AOI systems increased 12% on a year-over-year basis in the three months ended March 31, 2019 to \$2.5 million. We believe we will be able to increase sales of products based on our MRS technology in the SMT, semiconductor and metrology markets. We anticipate increasing sales of MRS-based products by utilizing new OEM customers, system integrators and by expanding direct sales to end-user customers.

We have continued to invest in our WaferSense® family of products, because fabricators of semiconductors and other customers view these products as valuable tools for improving yields and productivity. Additional WaferSense® applications are currently under development, and strong future sales growth is anticipated for our WaferSense® family of products.

Our backlog was \$11.6 million at March 31, 2019, a decrease from \$13.6 million at December 31, 2018 and \$12.1 million at March 31, 2018. Our backlog at March 31, 2019, which includes orders of \$1.7 million for MX600 memory module inspection systems, was affected by sluggish market conditions in the global SMT and semiconductor markets that emerged late in the fourth quarter of 2018. As a result, we are forecasting sales of \$15.0 to \$16.5 million for the second quarter of 2019, which includes \$1.1 million of revenue from our MX600 order backlog. We believe that our family of 3D MRS-enabled sensors, inspection and metrology systems are providing us with a significant competitive advantage and strong growth opportunities in our targeted markets. Higher sales of these technologically advanced products, coupled with the steadily growing acceptance of our WaferSense family, is forecasted to drive our sales growth and profitability in 2019 and beyond. We believe that we have the resources required to attain our growth objectives, given our available cash and marketable securities balances totaling \$25.7 million at March 31, 2019.

Revenues

Our revenues increased by 6% to \$15.0 million in the three months ended March 31, 2019, from \$14.1 million in the three months ended March 31, 2018. The following table sets forth revenues by product line for the three months ended March 31, 2019 and 2018:

(In thousands)	Three Months Ended March 31,		
	2019	2018	% Change
High Precision 3D and 2D Sensors	\$ 3,749	\$ 5,055	(26)%
Semiconductor Sensors	4,136	3,161	31 %
Inspection and Metrology Systems	7,091	5,904	20 %
Total	\$ 14,976	\$ 14,120	6 %

Revenues from sales of high precision 3D and 2D sensors decreased by \$1.3 million or 26% to \$3.7 million in the three months ended March 31, 2019, from \$5.1 million in the three months ended March 31, 2018. In the three months ended March 31, 2019, OEM customers for high precision 3D and 2D sensors reduced their purchases of sensors in response to weak conditions in the global SMT and semiconductor markets. Sales of 3D MRS-enabled sensors decreased by \$376,000 or 18% to \$1.7 million in the three months ended March 31, 2019, when compared to the three months ended March 31, 2018. Sales of legacy 2D LaserAlign sensors decreased by \$930,000 or 32% to \$2.0 million in the three months ended March 31, 2019, when compared to the same period last year. Sales of high precision 3D and 2D sensors are dependent on the success of our OEM customers selling products that incorporate our sensors. Weakness in high precision 3D and 2D sensor sales is expected to persist, resulting in a significant year-over-year decline in sensor sales in the second quarter of 2019. Sales of high precision 3D and 2D sensors are expected to rebound during the second half of 2019 as SMT and semiconductor markets begin to improve. We believe sales of our new 3D MRS enabled sensors will represent an increasing percentage of our total high precision 3D and 2D sensor sales in the future. However, quarterly sales of high precision 3D and 2D sensors are prone to significant fluctuations, both sequentially and on a year-over-year basis.

Revenues from sales of semiconductor sensors, principally our WaferSense product line, increased by \$975,000 or 31% to \$4.1 million in the three months ended March 31, 2019, from \$3.2 million in the three months ended March 31, 2018. The revenue increase was driven by orders received from advanced Asian semiconductor manufacturing facilities commissioned in 2018 that have deployed our WaferSense sensors to improve yield. Sales of WaferSense sensors are forecasted to be essentially flat on a year-over-year basis in the second quarter of 2019 due to short-term weakness in the semiconductor market. We anticipate that the benefits from growing market awareness of our WaferSense products, improved account penetration at major semiconductor manufacturers and capital equipment suppliers and new product introductions will lead to additional WaferSense product sales in future periods.

Revenues from sales of inspection and metrology systems increased by \$1.2 million or 20% to \$7.1 million in the three months ended March 31, 2019, from \$5.9 million in the three months ended March 31, 2018. The revenue increase resulted from higher sales of 3D MRS-enabled SQ3000 3D AOI systems, including the new SQ3000™ 3D CMM system, and \$1.6 million of revenue from sales of MX600 memory module inspection systems. Sales of SQ3000 systems increased by \$274,000 or 12% to \$2.5 million in the three months ended March 31, 2019, when compared to the three months ended March 31, 2018. Sales of legacy 2D AOI and solder paste inspection systems were lower in the three months ended March 31, 2019, when compared to the three months ended March 31, 2018. There were no sales of MX600 memory module inspection systems in the three months ended March 31, 2018. Consistent with the customer's current installation schedule, we expect to recognize \$1.1 million of MX600 sales in the second quarter of 2019. Sales of inspection and metrology systems are forecasted to grow strongly in the second quarter of 2019, driven by strong demand for SQ3000 3D AOI systems and the MX600 sales described above.

We believe a growing number of companies are transitioning from 2D AOI to 3D AOI systems to meet the increasingly demanding product inspection requirements in the semiconductor, electronics and industrial markets. As a result, demand for 3D AOI systems is growing rapidly. We anticipate sales of 3D MRS enabled SQ3000 3D AOI systems, including the new SQ3000™ 3D CMM system, will represent an increasing percentage of our total inspection and metrology system sales in the future. Also, we expect that the competitive advantages of our unique 3D MRS technology will provide us with an opportunity to capture significant market share in the 3D AOI systems market.

Export revenues totaled \$10.6 million or 71% of our total revenues in the three months ended March 31, 2019, compared to \$10.2 million or 72% of total revenues in the three months ended March 31, 2018. There was no significant change in export revenues as a percentage of total revenues in the three months ended March 31, 2019, when compared to the three months ended March 31, 2018.

Cost of Revenues and Gross Margin

Cost of revenues increased by \$49,000 or 1% to \$8.0 million in the three months ended March 31, 2019, from \$7.9 million in the three months ended March 31, 2018. The slight increase in cost of revenues in the three months ended March 31, 2019 was due to the corresponding 6% increase in revenues, mostly offset by a change in product mix, as sales of lower cost, higher gross margin products constituted a greater percentage of our total revenues. Items included in cost of revenues that fluctuate with the level of sales include raw materials, direct labor and factory overhead costs.

Total gross margin as a percentage of revenue was 47% in the three months ended March 31, 2019, compared to 44% in the three months ended March 31, 2018. The increase in gross margin percentage was due to sales of higher margin semiconductor sensors representing a greater percentage of our total revenues. In addition, there were fewer sales of 2D and 3D inspection systems in the broader SMT market, which tend to have lower gross margins due to competitive pricing pressures. We anticipate that our gross margin percentage in the second quarter of 2019 will be down slightly on a year-over-year basis from the second quarter of 2018, principally due to expected changes in product mix, including more sales of inspection systems in the lower margin general purpose SMT market and an x-ray system sale.

Our markets are highly price competitive, particularly in the electronic assembly and SMT markets. As a result, we have experienced ongoing pressure on our gross margins. We compensate for this pressure to reduce the price of our products by introducing new products with more features and improved performance and through manufacturing cost reduction programs. Sales of many products that we have recently introduced or are about to introduce, including our current and future SQ3000 3D AOI systems, 3D MRS sensors and WaferSense products, have, or are expected to have, more favorable gross margins than many of our existing products. Our next generation 3D MRS-enabled sensor and system products are being designed for more complex and demanding inspection applications in the SMT and semiconductor markets. Sales prices and gross profit margins of products for these applications tend to be higher than margins for products sold in the broader SMT market.

Operating Expenses

Research and development ("R&D") expenses were \$2.3 million or 15% of revenues in the three months ended March 31, 2019, compared to \$2.2 million or 15% of revenues in the three months ended March 31, 2018. The increase in R&D expenses was the result of higher compensation costs due to hiring of employees and pay increases for existing employees working in our R&D department. Current R&D expenditures are primarily focused on continued development of our MRS technology, including 3D sensor subsystems and commercialization of our next generation ultra-high resolution 3-micron pixel sensor, and ongoing development of new applications for our WaferSense product line.

Selling, general and administrative ("S,G&A") expenses were \$4.2 million or 28% of revenues in the three months ended March 31, 2019, compared to \$4.4 million or 31% of revenues in the three months ended March 31, 2018. The decrease in S,G&A expenses was due to lower compensation costs from voluntary employee departures, a small reduction due to foreign currency impacts and a small reduction in our allowance for doubtful accounts.

Total operating expenses in the second quarter of 2019 are expected to be up slightly on a year-over-year basis when compared to the second quarter of 2018.

Interest Income and Other

Interest income and other includes interest earned on investments and gains and losses associated with foreign currency transactions, primarily intercompany financing transactions associated with our subsidiaries in the United Kingdom, Singapore and China. We recognized losses from foreign currency transactions of \$18,000 in the three months ended March 31, 2019, compared to gains from foreign currency transactions of \$43,000 in the three months ended March 31, 2018.

Income Taxes

We recorded income tax expense of \$134,000 in the three months ended March 31, 2019, compared to an income tax benefit of \$83,000 in the three months ended March 31, 2018. Our income tax expense in the three months ended March 31, 2019 reflected an effective income tax rate of approximately 21%, which included \$9,000 of excess tax benefits from employee share-based payments. Our income tax benefit in the three months ended March 31, 2018 reflected an effective income tax rate of approximately 32%, which included \$35,000 of excess tax benefits from employee share-based payments. Our effective income tax rate in the three months ended March 31, 2019 and the three months ended March 31, 2018 was impacted by Global Intangible Low Tax Income (GILTI), U.S. federal R&D tax credits and excess tax benefits from employee share-based payments.

We have significant deferred tax assets as a result of temporary differences between taxable income on our tax returns and U.S. GAAP income, research and development tax credit carry forwards and federal, state and foreign net operating loss carry forwards. A deferred tax asset generally represents future tax benefits to be received when temporary differences previously reported in our consolidated financial statements become deductible for income tax purposes, when net operating loss carry forwards could be applied against future taxable income, or when tax credit carry forwards are utilized on our tax returns. We assess the realizability of our deferred tax assets and the need for a valuation allowance based on the guidance provided in current financial accounting standards.

Significant judgment is required in determining the realizability of our deferred tax assets. The assessment of whether valuation allowances are required considers, among other matters, the nature, frequency and severity of any current and cumulative losses, forecasts of future profitability, the duration of statutory carry-forward periods, our experience with loss carry forwards not expiring unused and tax planning alternatives. In analyzing the need for valuation allowances, we first considered our history of cumulative operating results for income tax purposes over the past three years in each of the tax jurisdictions in which we operate, our financial performance in recent quarters, statutory carry forward periods and tax planning alternatives. In addition, we considered both our near-term and long-term financial outlook. After considering all available evidence (both positive and negative), we concluded that recognition of valuation allowances for substantially all of our U.S. and Singapore deferred tax assets was not required.

The Inland Revenue Authority of Singapore is reviewing our 2016 and 2015 income tax returns. We anticipate that the outcome of these audits will not have a significant impact on our financial position or results of operations.

Backlog

Backlog totaled \$11.6 million at March 31, 2019, a decrease from \$13.6 million at December 31, 2018 and \$12.1 million at March 31, 2018. Our products are typically shipped two weeks to two months after receipt of an order. Sales of some inspection system products may require customer acceptance due to performance or other acceptance criteria included in the terms of sale. For these product sales, revenue is recognized at the time of customer acceptance. Our backlog at any time may vary significantly based on the timing of orders from OEM customers. In some instances, our OEM customers may place orders for shipment of products covering periods of nine months or longer. Accordingly, backlog may not be an accurate indicator of performance in the future.

Liquidity and Capital Resources

Our cash and cash equivalents increased by \$67,000 in the three months ended March 31, 2019. Proceeds of \$440,000 from operating activities, proceeds of \$1.1 million from maturities of marketable securities, and proceeds of \$59,000 from the exercise of stock options added to our cash and cash equivalents. These sources of cash were mostly offset by purchases of marketable securities totaling \$1.3 million and purchases of fixed asset and payment of capitalized patent costs totaling \$215,000. Our cash and cash equivalents fluctuate in part because of sales and maturities of marketable securities and investment of cash balances in marketable securities, and from other sources of cash. Accordingly, we believe the combined balances of cash and marketable securities provide a more reliable indication of our available liquidity than cash balances alone. Combined balances of cash and marketable securities increased by approximately \$400,000 to \$25.7 million as of March 31, 2019 from \$25.3 million as of December 31, 2018.

Operating activities provided \$440,000 of cash in the three months ended March 31, 2019. The amount of cash provided by operations was favorably impacted by our net income of \$495,000. Net income was affected by non-cash expenses totaling \$1.0 million for depreciation and amortization, provision for doubtful accounts, deferred income taxes, non-cash losses from foreign currency transactions, share-based compensation costs and an unrealized loss on our available-for-sale equity security. Changes in operating assets and liabilities providing cash in the three months ended March 31, 2019, included a decrease in accounts receivable of \$2.9 million, a decrease in other assets of \$445,000 and an increase in advance customer payments of \$207,000. Changes in operating assets and liabilities using cash in the three months ended March 31, 2019, included an increase in inventories of \$1.6 million, a decrease in accounts payable of \$2.4 million and a decrease in accrued expenses of \$600,000. Accounts receivable decreased due to lower sales in the first quarter of 2019 when compared to the fourth quarter of 2018. Other assets decreased because deposits previously paid to a key supplier of materials were used to purchase inventories. Advance customer payments increased due to receipt of a customer deposit for a metrology product we expect to ship in the second quarter of 2019. Inventories increased because materials were purchased to support higher sales levels that were originally anticipated for the first quarter of 2019. Sales were lower than initially anticipated due to sluggish conditions in the global SMT and semiconductor markets. The purchase of additional materials for MX600 memory module inspection systems also contributed to the increase in inventories. Accounts payable decreased due to timing of inventory purchases, with more materials being acquired in the fourth quarter of 2018 and the early part of the first quarter of 2019. These materials were subsequently paid for in the first quarter of 2019, resulting in the lower accounts payable balance. Accrued expenses decreased due to payment of 2018 bonuses in the first quarter of 2019.

Investing activities used \$426,000 of cash in the three months ended March 31, 2019. Changes in the level of investment in marketable securities, resulting from purchases, sales and maturities of those securities, used \$211,000 of cash in the three months ended March 31, 2019. We used \$215,000 of cash in the three months ended March 31, 2019 for the purchase of fixed assets and capitalized patent costs.

Financing activities from the exercise of stock options provided \$59,000 of cash in the three months ended March 31, 2019.

At March 31, 2019, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities. These entities are established by some companies for the purpose of establishing off-balance sheet arrangements or for other contractually narrow or limited purposes.

Our cash, cash equivalents and marketable securities totaled \$25.7 million at March 31, 2019. We believe that on-hand cash, cash equivalents and marketable securities, coupled with anticipated future cash flow from operations, will be adequate to fund our cash flow needs for the foreseeable future.

ITEM 3 – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 4 – CONTROLS AND PROCEDURES

a. Under the supervision and with the participation of our management, including our Chief Executive Officer and 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 Securities Exchange Act of 1934 (the “Exchange Act”). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective in ensuring that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in applicable rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, in a manner that allows timely decisions regarding required disclosure.

b. There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during the period covered by this quarterly report 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 1A – RISK FACTORS

In addition to the other information set forth in this report, you should carefully consider the factors discussed in Part I “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2018, which could materially affect our business, financial condition or future results.

ITEM 2 – UNREGISTERED SALES OF EQUITY SECURITIES, USE OF PROCEEDS AND ISSUER PURCHASES OF EQUITY SECURITIES

None.

ITEM 3 – DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 – MINE SAFETY DISCLOSURES

None.

ITEM 5 – OTHER INFORMATION

None.

ITEM 6 – EXHIBITS

- 31.1: Certification of Chief Executive Officer pursuant to Rule 15d-14(a) (17 CFR 240.15d-14(a)) and Section 302 of the Sarbanes Oxley Act of 2002
- 31.2: Certification of Chief Financial Officer pursuant to Rule 15d-14(a) (17 CFR 240.15d-14(a)) and Section 302 of the Sarbanes Oxley Act of 2002
- 32: Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
- 101: Financial statements formatted in Inline Extensible Business Reporting Language: (i) the Condensed Consolidated Balance Sheets, (ii) the Condensed Consolidated Statement of Operations, (iii) the Condensed Consolidated Statements of Comprehensive Income, (iv) the Condensed Consolidated Statements of Cash Flows and (v) the Notes to the Interim Condensed Consolidated Financial Statements

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.

CYBEROPTICS CORPORATION

/s/ Subodh Kulkarni

By Subodh Kulkarni, President and Chief Executive Officer
(Principal Executive Officer and Duly Authorized Officer)

/s/ Jeffrey A. Bertelsen

By Jeffrey A. Bertelsen, Vice President, Chief Financial
Officer and Chief Operating Officer
(Principal Accounting Officer and Duly Authorized Officer)

Dated: May 8, 2019

I, Subodh Kulkarni, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CyberOptics Corporation.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(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: May 8, 2019

/s/ Subodh Kulkarni

Signature

Name: Subodh Kulkarni

Title: President and Chief Executive Officer

I, Jeffrey A. Bertelsen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CyberOptics Corporation.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(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: May 8, 2019

/s/ Jeffrey A. Bertelsen

Signature

Name: Jeffrey A. Bertelsen

Title: Vice President, Chief Financial Officer and Chief Operating Officer

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

In connection with the Quarterly Report of CyberOptics Corporation (the “Company”) on Form 10-Q for the period ended March 31, 2019 as filed with the Securities and Exchange Commission on or about the date hereof (the “Report”), the undersigned, Subodh Kulkarni, Chief Executive Officer of the Company, and Jeffrey A. Bertelsen, Chief Financial Officer of the Company, each certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ Subodh Kulkarni

Subodh Kulkarni
President and Chief Executive Officer
May 8, 2019

/s/ Jeffrey A. Bertelsen

Jeffrey A. Bertelsen
Vice President, Chief Financial Officer and Chief Operating Officer
May 8, 2019

END OF FILING