

Lumentum Holdings Inc.
Form 10-K
August 29, 2017
Table of Contents

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

Form 10-K

(Mark One)

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

For the fiscal year ended July 1, 2017

OR

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

For the transition period from

to

Commission File Number 001-36861
Lumentum Holdings Inc.
(Exact name of Registrant as specified in its charter)

Delaware 47-3108385
(State or other jurisdiction of (I.R.S. Employer
incorporation or organization) Identification Number)
400 North McCarthy Boulevard, Milpitas, California 95035
(Address of principal executive offices including Zip code)

(408) 546-5483
(Registrant's telephone number, including area code)

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

Title of each class	Name of exchange on which registered
Common Stock, par value of \$0.001 per share	Nasdaq Global Select Market

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

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Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by

Table of Contents

reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 definition of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
(Do not check if a smaller reporting company) Emerging Growth company

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

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

As of December 31, 2016, the aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately \$1,655 million based on the closing sales price of the registrant’s common stock as reported on the NASDAQ Stock Market on December 30, 2016 of \$38.65 per share. Shares of common stock held by officers, directors and holders of more than five percent of the outstanding common stock have been excluded from this calculation because such persons may be deemed to be affiliates.

As of August 18, 2017, the Registrant had 61,515,528 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the information called for by Part III of this Annual Report on Form 10-K is hereby incorporated by reference from the definitive proxy statement for the Registrant’s annual meeting of stockholders, which will be filed with the Securities and Exchange Commission not later than 120 days after the Registrant’s fiscal year ended July 1, 2017.

Table of Contents

TABLE OF CONTENTS

	Page
<u>PART I</u>	
<u>ITEM 1. BUSINESS</u>	<u>3</u>
<u>ITEM 1A. RISK FACTORS</u>	<u>12</u>
<u>ITEM 1B. UNRESOLVED STAFF COMMENTS</u>	<u>25</u>
<u>ITEM 2. PROPERTIES</u>	<u>26</u>
<u>ITEM 3. LEGAL PROCEEDINGS</u>	<u>26</u>
<u>ITEM 4. MINE SAFETY DISCLOSURE</u>	<u>26</u>
<u>PART II</u>	
<u>ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	<u>27</u>
<u>ITEM 6. SELECTED FINANCIAL DATA</u>	<u>29</u>
<u>ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	<u>31</u>
<u>ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	<u>46</u>
<u>ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	<u>47</u>
<u>ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	<u>95</u>
<u>ITEM 9A. CONTROLS AND PROCEDURES</u>	<u>95</u>
<u>ITEM 9B. OTHER INFORMATION</u>	<u>96</u>
<u>PART III</u>	
<u>ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	<u>97</u>
<u>ITEM 11. EXECUTIVE COMPENSATION</u>	<u>97</u>
<u>ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	<u>97</u>
<u>ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE</u>	<u>97</u>
<u>ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES</u>	<u>97</u>
<u>PART IV</u>	
<u>ITEM 15. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES</u>	<u>98</u>
<u>ITEM 16. FORM 10-K SUMMARY</u>	<u>101</u>
<u>SIGNATURES</u>	<u>102</u>

Table of Contents

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (this “Annual Report”) contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, (the “Exchange Act”). These statements are based on our current expectations and involve risks, uncertainties and assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. These statements relate to, among other things, our markets, products and strategy, sales, gross margins, operating expenses, capital expenditures and requirements, liquidity, product development and R&D efforts, manufacturing plans, litigation, effective tax rates and tax reserves, our corporate and financial reporting structure, and our plans for growth and innovation, and are often identified by the use of words such as, but not limited to, “anticipate,” “believe,” “can,” “continue,” “could,” “estimate,” “expect,” “intend,” “might,” “plan,” “project,” “seek,” “should,” “target,” “will,” “would” and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management, which are in turn based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section entitled “Risk Factors” included under Part I, Item 1A below. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Table of Contents

PART I

ITEM 1. BUSINESS

General

Overview

Lumentum Holdings Inc. (“we”, “our”, “Lumentum” or the “Company”) is an industry leading provider of optical and photonic products addressing a range of end market applications including data communications (“Datacom”) and telecommunications (“Telecom”) networking and commercial lasers (“commercial lasers”) for manufacturing, inspection and life-science applications, as defined by revenue and market share. In addition, we are using our core optical and photonic technology and our volume manufacturing capability to expand into emerging markets that benefit from advantages that optical or photonics-based solutions provide, including 3D sensing for consumer electronics and diode light sources for a variety of consumer and industrial applications. The majority of our customers are original equipment manufacturers (“OEMs”) that incorporate our products into their products which address end-market applications. For example, we sell fiber optic components that our network equipment manufacturer (“NEM”) customers assemble into communications networking systems, which they sell to network service providers or enterprises with their own networks. Increasingly, we are also selling Datacom products to owners and operators of large data centers, which we refer to as hyperscale datacenters. Similarly, many of our customers for our Lasers products incorporate our products into tools they produce, which are used for manufacturing processes by their customers.

We operate in two reportable segments: Optical Communications (“OpComms”) and Commercial Lasers (“Lasers”).

We have a global marketing and sales footprint that enables us to address global market opportunities for our products. We have manufacturing capabilities and facilities in North America, Asia-Pacific and Europe, the Middle East and Africa (“EMEA”) with employees engaged in R&D, administration, manufacturing, support and sales and marketing activities. Our headquarters are located in Milpitas, CA and we employed approximately 2,057 full-time employees around the world as of July 1, 2017.

Lumentum was incorporated in Delaware as a wholly owned subsidiary of JDS Uniphase Corporation (“JDSU”) on February 10, 2015 and is comprised of the former communications and commercial optical products (“CCOP”) segment and WaveReady product lines of JDSU. In August 2015, we became an independent publicly-traded company through the distribution by JDSU to its stockholders of 80.1% of our outstanding common stock (the “Separation”). Each JDSU stockholder of record as of the close of business on July 27, 2015 received one share of Lumentum common stock for every five shares of JDSU common stock held on such date. JDSU was renamed Viavi Solutions Inc. (“Viavi”) and at the time of distribution, retained ownership of 19.9% of Lumentum’s outstanding shares.

Our business traces its origins to Uniphase Corporation, which was formed in 1979, and became publicly traded in 1992. Uniphase was originally a supplier of commercial lasers, and later, a leading supplier of optical transmission products. In 1999, JDS Fitel Inc., a pioneer in products for fiber optic networking which was formed in 1981, merged with Uniphase to become JDSU, a global leader in optical networking. Subsequent acquisitions by JDSU broadened the depth and breadth of the OpComms and Lasers businesses, as well as the intellectual property, technology and product offerings, of what is now Lumentum. Notable amongst these acquisitions in the OpComms business were Agility Communications, Inc. in 2005 and Picolight, Inc. in 2007 which respectively brought widely tunable, long wavelength laser technology for metro and long haul networking applications and short wavelength vertical-cavity surface-emitting lasers (“VCSELs”) for enterprise, datacenter networking, and 3D sensing applications. The fundamental laser component technologies which we acquired through these acquisitions, forms the basis of virtually all optical networks today and we believe will continue to do so for the foreseeable future. These technologies will enable us to develop highly integrated products to satisfy our communications customers’ ever increasing needs for smaller, lower power and lower cost optical products. Notable acquisitions in the Lasers business were Lightwave Electronics Corporation in 2005 and Time-Bandwidth Products Inc. (“Time-Bandwidth”) in 2014. Both of these Lasers acquisitions brought high power pulsed solid-state laser products and technology to our business which address the micro laser machining market and expanded our addressable market.

Industry Trends and Business Risks

Our business is driven by end-market applications which benefit from the performance advantages that optical solutions enable.

Table of Contents

The OpComms markets we serve are experiencing continually increasing needs for higher data transmission speeds, fiber optic network capacity and network agility. This is driven by rapid growth in both the number of higher bandwidth broadband connections, notably those associated with mobile devices, such as high-definition video, online gaming, cloud computing and the number and scale of datacenters that require fiber optic links to enable the higher speeds and increased scale necessary to deliver high bandwidth video and other services. Our technology, which was originally developed for communications applications is also finding use in other emerging market opportunities including 3D sensing applications that employ our laser technology in mobile devices, computers, augmented and virtual reality and other consumer electronics devices.

In the Lasers markets, customer demand is driven by the need to enable faster, higher precision volume manufacturing techniques with lower power consumption, reduced manufacturing footprint and increased productivity. These capabilities are critical as industries develop products that are smaller and lighter, increasing productivity and yield and lowering their energy consumption.

Our optical and laser solutions, developed in close collaboration with OEM partners, are well positioned to meet demand resulting from these trends. We do, however, expect to continue to encounter a number of industry and market risks and uncertainties. These risks and uncertainties may limit our visibility, and consequently, our ability to predict future revenue, profitability and general financial performance, and could create quarter over quarter variability in our financial measures. For example, the demand environment in China has fluctuated significantly over the past year, and has created volatility and uncertainty in our future demand. We cannot predict when or to what extent these uncertainties will be resolved. Our revenues, profitability and general financial performance may also be affected by: (i) pricing pressures, particularly within our OpComms markets, due to, among other things, a highly concentrated customer base, increasing competition, particularly from Asia-Pacific-based competitors, and a general commoditization trend for certain products; (ii) high product mix variability which affects revenue and gross margin; (iii) fluctuations in customer buying patterns, which cause volatility in demand, revenue and profitability; and (iv) the current trend of communication industry consolidation, which is expected to continue, that directly affects our customer bases and adds additional risk and uncertainty to our financial and business projections.

Reportable Segments

We are an industry leading provider of optical and photonic products defined by revenue and market share addressing a range of end-market applications including optical communications and commercial lasers. We have two operating segments, Optical Communications, which we refer to as OpComms, and Commercial Lasers, which we refer to as Lasers. The two operating segments were primarily determined based on how the Chief Operating Decision Maker (“CODM”) views and evaluates our operations. Operating results are regularly reviewed by the CODM to make decisions about resources to be allocated to the segments and to assess their performance. Other factors, including market separation and customer specific applications, go-to-market channels, products and manufacturing, are considered in determining the formation of these operating segments.

The table below discloses the percentage of our total net revenue attributable to our two reportable segments. In addition, it discloses the percentage of our total net revenue attributable to product offerings within the OpComms segment:

	Years Ended		
	July 1, 2017	July 2, 2016	June 27, 2015
Optical Communications:	85.6 %	84.3 %	82.9 %
Telecom	61.0 %	61.5 %	60.6 %
Datacom	20.1 %	18.1 %	17.4 %
Consumer and Industrial	4.5 %	4.7 %	4.9 %
Lasers	14.4 %	15.7 %	17.1 %

For further information regarding our operating segments, please refer to “Note 19. Operating Segments and Geographic Information” in the Notes to Consolidated Financial Statements.

OpComms
Markets

Our OpComms products address the following markets: telecommunications (Telecom), data communications (Datacom) and Consumer and Industrial.

Our OpComms products include a wide range of components, modules and subsystems to support and maintain customers in our two primary markets: Telecom and Datacom. The Telecom market includes carrier networks for access (local), metro (intracity), long-haul (city-to-city and worldwide) and submarine (undersea) networks. The Datacom market addresses enterprise,

Table of Contents

cloud and data center applications, including storage-access networks (“SANs”), local-area networks (“LANs”) and wide-area networks (“WANs”). These products enable the transmission and transport of video, audio and text data over high-capacity fiber-optic cables. We maintain leading positions in the fast growing OpComms markets, including reconfigurable optical add/drop multiplexers (“ROADMs”), tunable 10-gigabit small form-factor pluggable transceivers and tunable small form-factor pluggable transceivers. Our 10G, 40G legacy transceivers and a growing portfolio of 100G pluggable transceivers support LAN/SAN/WAN needs and the cloud for customers building enterprise and hyperscale data center networks.

In the Consumer and Industrial markets, our OpComms products include laser light sources, which are integrated into 3D sensing platforms being used in applications for mobile devices, gaming, computers, virtual and augmented reality, other consumer electronics devices, and industrial segments. These systems simplify the way people interact with technology by enabling the use of natural body gestures, like the wave of a hand, to control a product or application. Systems can also be used for identification, safety, and process efficiency, among numerous other application spaces. Emerging applications for this technology include various mobile device applications, autonomous vehicles, self-navigating robotics and drones in industrial applications and 3D capture of objects coupled with 3D printing. Our laser light sources are also used in a variety of other industrial laser and processing applications.

Customers

Our OpComms customers include Ciena, Cisco Systems, Coriant, Fujitsu, Arista, Alphabet (formerly Google), Facebook, Yahoo, Microsoft, Huawei Technologies, FiberHome, Infinera, Microsoft, and Nokia Networks (including Alcatel-Lucent International). During fiscal 2017, 2016, and 2015, net revenue generated from a single customer which represented 10% or more of our total net revenue of the applicable fiscal year is summarized in the table below:

	Years Ended		
	July 1, 2017	July 2, 2016	June 27, 2015
CIENA	18.5%	17.1%	14.4%
HUAWEI	16.7%	17.1%	*
CISCO	12.4%	13.0%	11.8%

*Represents less than 10% of total net revenue

Trends

To remain competitive, network operators worldwide must offer broader suites of digital services. To do this, they are migrating to Internet-protocol (“IP”) networks and expanding long-haul, metro regional and metro access networks, which effectively deliver broadband services while lowering capital and operating costs of dense-wavelength-division multiplexing networks.

The growing demand for capacity encourages the adoption of OpComms products across the Datacom and Telecom markets. Demand for capacity in the Datacom market is driven by the growing needs of LANs and WANs. Growth in Datacom is also driven by web and cloud services companies that are expanding data center infrastructure, increasing the need for network capacity within and between these data centers.

Demand in the Telecom market is driven by new bandwidth-intensive applications that can result in sudden and severe changes in demand almost anywhere on the network. Increasing agility in optical networks by employing ROADMs, wavelength selective switches, wavelength tunable transmission products and other agile optical products provides an effective way to respond to unpredictable bandwidth demands and to manage expenses. With more agile optical networks, a network operator can add capacity by using remote management applications rather than dispatching technicians to perform manual operations in the field.

In addition, the high-end routers, switches and cross-connect equipment that must handle legacy and internet-protocol traffic are becoming increasingly complex in order to meet higher bandwidth, scalability, speed and reliability needs. Products must provide higher levels of functionality and performance in compact designs that must also meet requirements for quality, reliability and cost.

Deployment of fiber closer to the end user increases the availability of high-bandwidth services and we expect it will result in increased demand on the metro regional and long-haul networks into which these services feed. The dynamically reconfigurable nature of today’s agile networks enables lower operating costs and other competitive

advantages, allowing service providers to use and scale network capacity more flexibly, streamline service provisioning, accelerate rerouting around points of failure and modify network topology through simple point-and-click network management systems.

5

Table of Contents

Our optical products are well positioned to meet these demands. Our innovation has resulted in products that have more functionality, are less than half the size, require less power and are more cost-effective, particularly in the area of photonic integrated circuits. Higher levels of integration have also led to development of our Super Transport Blade, which delivers all transport functions (wavelength switching, pre-amplification, post-amplification, optical supervisory channel and monitoring) in a single, integrated platform, essentially replacing three blades with one.

Strategy

In our OpComms segment, we are focused on technology leadership through collaborative innovation with our customers, cost leadership and functional integration. We align the latest technologies with industry leading, scalable manufacturing and operations to drive the next phase of optical communications for Telecom and Datacom applications that are faster, more agile and more reliable, making us a valuable business and technology partner for NEMs, consumer electronic companies, cloud service providers and data center operators.

Competition

We compete against various public and private companies in the markets we serve. Publicly traded companies providing optical communications components include II-VI, Acacia Communications, Foxconn Interconnect Technology, Finisar, Fujitsu Optical Components, Furukawa Electric, Neophotonics, Oclaro, Applied Optoelectronic, Innolight Technology, and Sumitomo Electric Industries.

Offerings

In addition to a full selection of active and passive components, we offer increasing levels of functionality and integration in modules, circuit packs and subsystems for transmission, amplification, wavelength management and more.

In the Telecom market, we provide transmission and transport solutions for optical networks that make up the backbone of the wireline Telecom infrastructure, thereby enabling the internet. Transmission products, such as our tunable transponder, transceiver and transmitter modules, transmit and receive high-speed data signals at the ingress/egress points of the network. These products use dense wavelength division multiplexing technology to enable high capacity (from 20 to 40Tb/s in the C-Band) links driven by increasing internet demand. We also offer components including tunable lasers, receivers and modulators to address the higher end of these same network applications.

Our transport products, such as ROADMs, amplifiers and optical channel monitors provide switching, routing and conditioning of signals. We also make components for transport, including 980nm, multi-mode and Raman pumps for optical amplifiers, and passive components. Passive components include switches, attenuators, photodetectors, gain flattening filters, isolators, WDM filters, AWG's, multiplex/de-multiplexers and integrated passive modules.

Our innovation led to the Super Transport Blade, which integrates all major optical transport functions into a single-slot blade. This all-in-one solution reduces the size, cost and power requirements of optical components, incorporates nano wavelength selective switch technology and enables greater chassis density and a smaller footprint. In the Datacom market, which relies on storing, moving and manipulating vast amounts of data, we offer transmission products, such as our optical transceivers for Fiber Channel and Ethernet applications. Our transceivers are also used to connect servers, switches, routers and other information technology infrastructure critical for today's email, enterprise resource planning and other cloud services such as streaming of high definition and 4k video.

Our integrated fiber optic transceivers provide cost effective and scalable connectivity and are used in the hardware that runs many of the applications people use daily such as email, social networking, cloud storage, online gaming and streaming video. They are available in several hot-pluggable form factors and allow for very compact, high-density hardware designs.

For the high 100G data rate, we offer several technologies to balance technical and commercial requirements. For high volume, short distance applications we developed our vertical-cavity surface-emitting lasers ("VCSELs"). VCSELs are ideal for short reaches because they are low power consumption, low cost and highly scalable. For high-performance, longer distance applications we have our distributed feedback laser ("DFB") and electro-absorption modulated laser ("EML"). Our individual lasers and compact laser arrays offer an innovative solution for the LANs, SANs, broadband Internet and metro-area network as well as hyperscale datacenter applications.

Our 3D sensing technology enables real time depth information to any photo or video image. This represents a fundamental transition for image capture akin to the transition from monochrome to color and gives devices the ability to see the world around them in three dimensions. The immediate applications include full body imaging for gaming, 3D scanning for space mapping and facial recognition for security. Emerging applications are in mobile devices, computers, augmented and virtual reality and other consumer electronics devices, automotive, robotics and industrial. 3D sensing can be applied to any device with a camera. The

6

Table of Contents

technologies to achieve accurate and stable 3D sensing are converging to laser based solutions. We are a leading supplier of the critical laser illumination sources for 3D sensing systems being used in applications for gaming, computing, mobile devices and home entertainment.

Lasers

Markets

Our Lasers products serve our customers in markets and applications such as sheet metal processing, general manufacturing, biotechnology, graphics and imaging, remote sensing, and precision machining such as drilling in printed circuit boards, wafer singulation, glass cutting and solar cell scribing.

Our Lasers prod