



Applied Optoelectronics Announces 100 Gbps Single Lambda PAM4 Electro-absorption Modulated Lasers

February 21, 2018

SUGAR LAND, Texas, Feb. 21, 2018 (GLOBE NEWSWIRE) -- Applied Optoelectronics, Inc. (Nasdaq:AAOI), a leading provider of fiber-optic access network products for the internet datacenter, cable broadband, fiber-to-the-home and telecom markets, announced a 100 Gigabits per second (Gbps) electro-absorption modulated laser (EML) for next generation 400 Gbps optical transceivers.

High-speed EMLs are ideal for long distance transmission due to their small chirp and low chromatic dispersion in fiber. The new EMLs operate at 1310-nm, with a symbol rate of 53 Gbaud, and are suitable for use with pulse amplitude modulation, enabling a data rate of 100 Gbps over a single wavelength. Through careful optimization, AOI engineers were able to achieve a very high bandwidth of 38 GHz at 25°C and greater than 32 GHz up to transceiver case temperature of 70°C. The newly developed lasers have demonstrated good 100 Gbps PAM-4 eyes over transceiver case temperature of 70°C with a transmitter dispersion eye closure quaternary (TDECQ) value meeting IEEE 802.3 and 100G Lambda MSA standards.

The new lasers are based on AOI's mature high volume and high yield laser production technology, and are suitable for the development of 100G DR1 and 400G DR4/FR4 transceivers for up to 10 Km fiber transmission. Transceivers operating at 400 Gbps can be designed by combining four 100 Gbps lasers, either in a coarse wavelength division multiplexed (CWDM) or parallel single-mode (PSM) arrangement. The resulting transceiver can share a common optical bench platform and similar production techniques as AOI currently utilizes in its production of 100G transceivers. By leveraging this common platform, AOI expects to offer substantial cost and time-to-market advantages over its competitors.

"The 100 Gbps single lambda laser is a key enabling technology for high performance next generation 400G transceivers. With the addition of this new 100 Gbps EML laser and the previously announced 100 Gbps PAM4 directly modulated laser (DML), AOI extends its technological leadership in laser development for cost-effective and high-performance 400G transceivers to longer distance applications, potentially extending beyond the intra-datacenter realm," commented Dr. Jun Zheng, Vice President of R&D.

AOI will showcase a demonstration of both its 100G single lambda EML and DML March 13-15, 2018 at OFC in San Diego, CA. For inquiries about this demonstration, please visit AOI's booth #2739 or contact Willis Chen at wchen@ao-inc.com.

About Applied Optoelectronics

Applied Optoelectronics Inc. (AOI) is a leading developer and manufacturer of advanced optical products, including components, modules and equipment. AOI's products are the building blocks for broadband fiber access networks around the world, where they are used in the internet datacenter, CATV broadband, FTTH and telecom markets. AOI supplies optical networking lasers, components and equipment to tier-1 customers in all four of these markets. In addition to its corporate headquarters, wafer fab and advanced engineering and production facilities in Sugar Land, TX, AOI has engineering and manufacturing facilities in Taipei, Taiwan and Ningbo, China. For additional information, visit www.ao-inc.com.

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Source: Applied Optoelectronics, Inc.