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Applied Optoelectronics Introduces Next-Generation Laser for Ultra-High-Speed Digital Broadband

High Frequency Lasers Designed to Meet New DOCSIS 3.1 Standard

SUGAR LAND, Texas, Jan. 30, 2014 (GLOBE NEWSWIRE) -- Applied Optoelectronics, Inc. (Nasdaq:AAOI), a leading provider of fiber-optic access network products for the cable broadband, internet data center, and fiber-to-the-home markets today announces a new line of next-generation laser components enabling ultra-high-speed bandwidth cable broadband infrastructure.

AOI's new laser components are used as transmitters in cable TV head-end applications where they aggregate video and broadband signals onto the optical fiber for transmission to the consumer. The new devices are designed for use at higher frequencies, such as those specified by the recently ratified DOCSIS 3.1 cable internet standard.

"Due to ever-increasing bandwidth demand by consumers, CATV operators will be deploying advanced architectures," explains Dr. Fred Chang, Sr. VP of AOI's Optical Component Business Unit. "The new DOCSIS 3.1 standard unlocks higher frequencies in the cable plant which in turn allows operators to offer more and more bandwidth to consumers without adding new optical fibers in their plant."

The new transmitter lasers apply dense wavelength division multiplexing (DWDM), which combines tightly-spaced wavelengths from different laser sources onto a single optical fiber. With the new lasers, service providers will be able to deliver up to 79 NTSC analog channels plus additional QAM digital CATV signals per wavelength. Compared to the previous generation of similar lasers, these new designs deliver 44% greater bandwidth above 550 MHz for more QAM channels and enhanced total bandwidth capacity.

The new generation of lasers can support RF frequencies up to 1.2 GHz, and offer low chirp (50MHz/mA) to enable transmission distances up to 60 km. These features are combined with low second- and third-order distortions to provide the greatest degree of tolerance for system impairments. The lasers are packaged in a 14-pin "butterfly" housing, which includes an integrated thermoelectric cooler for precise wavelength control and standard OC-48 pin assignments.

AOI manufactures the QAM laser chip in-house at its laser fabrication facility in Houston, Texas. AOI's components are the key to the next generation of cable broadband equipment needed by the CATV industry and offered by AOI.

For more information about AOI's complete portfolio of cable broadband components, contact us by email at sales@ao-inc.com, or visit our website at www.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 CATV broadband, internet datacenter, and fiber-to-the-home markets. AOI supplies optical networking lasers, components and equipment to tier-1 customers in all three 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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