



NeoPhotonics Unveils Complete L-Band Coherent Optics Solution to Double Optical Fiber Capacity

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Includes NeoPhotonics 64 GBaud L-Band HB-CDM, 64 GBaud L-Band Micro-ICR and Ultra-Narrow Linewidth L-Band Micro-ITLA

SAN JOSE, Calif.--(BUSINESS WIRE)-- NeoPhotonics Corporation (NYSE: NPTN), a leading developer and manufacturer of silicon photonics and advanced hybrid photonic integrated circuit based lasers, modules and subsystems for bandwidth-intensive, high speed optical networks, today announced an L-Band suite of coherent optical components, including its [64 GBaud](#) L-Band High Bandwidth Coherent Driver Modulator (HB-CDM), 64 GBaud L-Band Intradyne Coherent Receiver (ICR) and ultra-narrow linewidth L-Band tunable laser Micro-ITLA. Together with NeoPhotonics standard C-Band coherent components, these new products enable customers to double the capacity of optical fiber links.

The C-Band is the primary band for telecommunications with wavelengths centered around 1550 nm. The L-Band uses wavelengths centered around 1590 nm and is primarily used to complement the C-Band to increase data capacity, especially in long-haul networks. By adding channels in the L-Band, operators can double the capacity of an optical fiber. NeoPhotonics 64 GBaud coherent components and tunable lasers enable single channel 600G data transmission over short haul data center interconnect (DCI) links using 64 QAM. These components also support 400G over metro distances of 400-600 km using 64 GBaud and [16 QAM](#) or 200G over long-haul distances of greater than 1000 km using 64 GBaud and QPSK.

The NeoPhotonics L-Band External Cavity (ECL) [micro-ITLA](#) incorporates the same laser architecture as our C-Band laser for a pure optical signal with an ultra-narrow linewidth and very low phase noise. In coherent systems, any error in the phase of the signal and reference lasers, due to the laser's linewidth, can cause data errors, thereby making narrow linewidth critical in systems using higher order modulation.

The NeoPhotonics 64 GBaud L-Band [HB-CDM](#) co-packages an Indium Phosphide based Mach-Zehnder (MZ) quadrature modulator chip with a linear, quad-channel, differential 64 GBaud driver. Both the C-Band and L-Band versions of the HB-CDM are designed to be compliant to the Optical Internetworking Forum (OIF) Implementation Agreement OIF-HB-CDM-01.0 "High Bandwidth Coherent Driver Modulator" (www.oiforum.com).

NeoPhotonics 64 GBaud L-Band [Micro-ICR](#) incorporates an integrated combiner chip and four balanced photodiodes with four differential linear amplifiers to provide four output channels at 64 GBaud. The form factor of the High Bandwidth Coherent Receiver is designed to be compliant with the OIF Implementation Agreement for Micro Integrated Intradyne Coherent Receivers; IA # OIF-DPC-MRX-02.0.

For applications that require more capacity than provided by the standard [C-Band](#), but do not require the full L-Band, each of these components is available in a "C++" version, which supports tuning across the full "Super C-band" covering 6.0 THz of spectrum or up to 50 percent more than standard systems. These C++ components can support 80 channels at 75 GHz channel spacing, which effectively increases the capacity of an optical fiber by as much as 50 percent over standard C-Band only systems at comparable distances.

"We are pleased to add L-Band versions to our existing suite of coherent components, thus providing customers with a complete solution to their fiber capacity requirements, whether C-Band, C++ Band or L-Band," said Tim Jenks, Chairman and CEO of NeoPhotonics. "Our ultra-pure tunable laser design and our high performance coherent modulator and receiver designs are very flexible and excel in different spectral regimes to provide the highest speed over distance performance," concluded Mr. Jenks.

About NeoPhotonics

NeoPhotonics is a leading developer and manufacturer of lasers and optoelectronic solutions that transmit, receive and switch high-speed digital optical signals for Cloud and hyper-scale data center internet content provider and telecom networks. The Company's products enable cost-effective, high-speed over distance data transmission and efficient allocation of bandwidth in optical networks. NeoPhotonics maintains headquarters in San Jose, California and ISO 9001:2015 certified engineering and manufacturing facilities in Silicon Valley (USA), Japan and China. For additional information visit www.neophotonics.com.

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LouVan Communications, Inc.
Michael Newsom
Mobile: +1 617-803-5385
Email: mike@louvanpr.com

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