400G Light Modulator for Field Operations

Overview

Available for both O band (1310 nm) and C band (1550 nm), this modulator presents a 3-dB electro-optical bandwidth exceeding 145 GHz, therefore it is a key enabler for next-generation transceivers and data transmission at 200+ GBaud PAM4. The 'Carmel4' is a 400Gbps Photonic Integrated Circuit (PIC) engine supporting four optical transmit lanes operating at 100Gbps per lane with PAM-4 modulation (53. It is based on Silicon Photonics (SiP) technology and includes an integrated Continuous Wave (CW) laser, four low-loss. Innovation paves the way for a high-volume, silicon photonics 400G/lane platform to meet next-generation 3. 2T optical communication architectures for datacom and AI applications., and MIGDAL HAEMEK, Israel, 12th March, 2025 — OpenLight, the world leader in custom PASIC chip. Lumentum's electro-absorption modulated lasers (EMLs) provide the high bandwidth, signal integrity, and efficiency essential for short- and medium-reach optical connectivity inside AI and cloud data centers.

Article Content

May 31, 2026

DustPhotonics Carmel4: 400G DR4 Silicon Photonics Chip

The ''Carmel4'' is a 400Gbps Photonic Integrated Circuit (PIC) engine supporting four optical transmit lanes operating at 100Gbps per lane with PAM-4 modulation (53.125 Gbaud).

Jul 29, 2025

OpenLight and Tower Semiconductor Demonstrate 400G/lane Modulators ...

This is an extension of our PH18DA platform currently supporting customers at 100G and 200G/lane and now providing a robust solution for 400G/lane that is immediately ready for customer...

Oct 06, 2025

400G-QSFP56-DD-AI and Data Center Networking

InnoLight''s 400G QSFP56-DD AOC Series is based on VCSELs. These products feature eight channels of 50G PAM4 electrical signals and eight channels of 50G PAM4 optical signals, with a transmission ...

May 27, 2026

OpenLight and Tower Semiconductor Demonstrate... | OpenLight ...

Operating at 400G per lane, across all 4 CWDM (Coarse Wavelength Division Multiplexing) wavelengths, this enables a commercially viable path for both DR8 and FR4 next generation 3.2Tb ...

Feb 15, 2026

OpenLight, Tower, trial 400G/lane modulators

OpenLight says currently, pure silicon-based modulators are unable to support bit rates of 400G, pointing out a clear need for a cost-effective solution in the industry.

Feb 13, 2026

OpenLight and Tower Semiconductor Demonstrate

Operating at 400G per lane, across all 4 CWDM (Coarse Wavelength Division Multiplexing) wavelengths, this enables a commercially viable path for both DR8 ...

May 09, 2026

Customized QSFP-DD High-Power (Bright) DCO 400G DWDM ...

Please Note: Installing a third party transceiver does not void your network equipment warranty. Network equipment manufacturers all have guidelines stating that warranty support on their ...

Feb 02, 2026

3.2T-DR8

Our multi-channel ring resonator modulator excels with 145 GHz electro-optic bandwidth and competitive drive voltage and insertion loss.

Feb 08, 2026

OpenLight and Tower Semiconductor Demonstrate 400G/lane ...

Currently, pure silicon-based modulators are unable to support bit rates of 400G, pointing out a clear need for a cost-effective solution in the industry.

Aug 15, 2025

Cisco 400G Digital Coherent Optics QSFP-DD Optical Modules

Thanks to the miniaturization of the technology with a 7-nm manufacturing procedure and innovation in silicon photonic technology, it is now possible to squeeze a 400G-capable Digital Coherent WDM ...

Contact Us

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