

Demand for optical modules in the fourth quarter



Overview

Datacom Optical Component Revenue Surpasses \$19B in 2025
Signal AI's Optical Components Report is published quarterly and provides revenue-based market shar.

Key Takeaways

Optical module demand surged in Q4 2025, driven by hyperscale AI investments, 800GbE adoption, and ramping 1.6TbE shipments, with quarterly datacom revenue up 87% year-over-year.

Datacom Market Trends

In the fourth quarter of 2025, datacom optical module demand experienced unprecedented growth, largely fueled by hyperscale cloud operators increasing capital expenditures for AI workloads. Quarterly datacom revenue rose 87% year-over-year, reflecting strong adoption of 400GbE and 800GbE modules, while 1.6TbE modules began ramping, heavily weighted to Q4, with nearly 10 million units forecast for 2026.

Over 42 million high-speed datacom modules shipped in 2025, an 80% increase over 2024, with 800GbE modules being the primary growth driver. Hyperscalers such as AWS, Microsoft Azure, and Google Cloud contributed significantly to this surge, upgrading data center interconnects to support AI and cloud workloads.



Telecom Market Trends

The telecom optical module market also showed strong Q4 performance. Coherent and pluggable modules, including 400ZR/ZR+ and 800G pluggables, accounted for a substantial portion of deployed bandwidth, with telecom revenue up 35% over 2024. North American operators' spending growth in Q4 2024 and ongoing 5G network optimization contributed to continued demand for high-speed optical modules in fronthaul, midhaul, and backhaul applications.

Expansion of fiber-to-the-home networks and trunk transmission upgrades further supported module demand, particularly for 400G and 800G modules.

Key Drivers of Q4 Demand

Hyperscale A

AI and cloud computing: AI training clusters and high-bandwidth workloads drove datacom module adoption. Transition to higher data rates: The shift from 100G to 400G and 800G modules accelerated in Q4, with 1.6TbE starting volume shipments.

5G network expansion and optimization: Telecom operators continued upgrading infrastructure, increasing demand for coherent and pluggable modules. Supply chain and production capacity: Global production of 400G modules reached 10 million units by 2024, supporting Q4 demand, though lead times remained extended due to supply constraints.

Outlook

Demand for optical modules is expected to remain strong through 2026 and beyond, with datacom growth driven by AI and cloud workloads and telecom growth supported by 5G and fiber expansion. The adoption of 1.6TbE modules and continued deployment of 800GbE and 400ZR/ZR+ modules will sustain high shipment volumes in upcoming quarters.

Overall, Q4 2025 marked a record-setting period for optical module demand, reflecting both technological upgrades and strategic investments by hyperscale and telecom operators.

Article Content

Datacom Optical Component Revenue Surpasses \$19B in 2025

Signal AI's Optical Components Report is published quarterly and provides revenue-based market share of company sales into four optical component markets: Datacom, Telecom,

LightCounting :: Component shortages limit growth in transceiver sales

Demand for optical connectivity remains strong, but component shortages hobbled growth in sales of optical transceivers in Q4 2024. The first half of 2025 will be impacted as well.

Lumentum Announces Fourth Quarter and Full Fiscal Year 2025 Results

Looking ahead, we expect continued strong demand for our AI data center and long-haul solutions, giving us confidence in surpassing \$600 million in quarterly revenue by June 2026 or

POET Technologies Reports Fourth Quarter 2024 Financial Results

TORONTO, March 31, 2025 (GLOBE NEWSWIRE) — POET Technologies Inc. (" POET " or the " Company ") (TSX Venture: PTK; NASDAQ: POET), the designer and developer of Photonic

POET Technologies Ramps Up Production After \$375 Million Capital...

POET Technologies' fourth quarter 2025 results reveal a decisive shift from R&D to full-scale commercialization, backed by over \$375 million in recent financing, strategic partnerships, and

Explosive Results! Optical Module Giant Lumentum: Q2 ...

Benefiting from strong demand for optical circuit switches (OCS) and co-packaged optics (CPO), optical module giant Lumentum not only delivered a report card with both revenue and profit

Optical Modules

Our research indicates that demand for 400G/800G and even 1.6T optical modules for cloud data centers and AI training clusters has been accelerating over the past two years, with the

Signal AI: AI drives 800GbE Module Growth | Lightwave Online

Based on accelerating demand, Signal AI's 2024 forecast for 800GbE modules was increased by 8%, and initial estimates of 1600ZR modules were also added to the Optical

Optical Modules Market Research Report 2034

Beyond hyperscale buildouts, national broadband expansion programs in Asia Pacific, Europe, and North America are driving fresh demand for coherent optical modules in metropolitan and long-haul

2025 Optical Module Market Share and Demand Report

The 2025 optical communication industry is driven by AI data centers (AIDCs) and 5G rollouts, with high-speed optical modules (400G/800G/1.6T) emerging as core growth engines.

POET Technologies Reports First Quarter 2026 Financial Results

--POET Technologies Inc., the designer and developer of Photonic Integrated Circuits, light sources and optical modules for the AI and data center markets, today reported its unaudited

POET Technologies Reports First Quarter 2026 Financial Results

POET Technologies Inc. ("POET" or the "Company") (NASDAQ: POET), the designer and developer of Photonic Integrated Circuits (PICs), light sources and optical modules for the AI and

DCI pushes optical demand to grow 16% in 2026 | Lightwave Online

Demand for DCI and optical wavelengths surged 20% year-over-year in Q1 2026, with direct purchases for DCI increasing by an estimated 40%.

VSH Surges Nearly 300% YTD: What's Driving the Strong Uptrend?

The company highlighted strong demand for power conversion solutions, multiphase DC-to-DC converter modules, chipset power-management products, AI optical modules and emerging

POET Technologies Reports Fourth Quarter 2024 Financial Results

POET is a design and development company offering high-speed optical modules, optical engines and light source products to the artificial intelligence systems market and to hyperscale data centers.

Optical Transceiver Market Set to Double as AI Data Centers Drive ...

The third is the gradual emergence of co-packaged optics, integrating optical engines directly onto switch silicon to overcome the power and density limits of pluggable modules. The

AI Computing Power Demand Boosts Gallium Arsenide: How US

TradingKey - Since the second quarter of 2026, prices across the Gallium Arsenide (GaAs) industry chain, from substrates to foundries, have undergone comprehensive upward

POET Press Release: POET Technologies Reports Fourth Quarter

Globe Newswire 31-Mar-2026 4:40 PM TORONTO, March 31, 2026 (GLOBE NEWSWIRE) -- POET Technologies Inc. (" POET " or the " Company ") (TSXV: PTK, NASDAQ: POET), the designer and

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

