

# **Optical module materials are in short supply**





## Overview

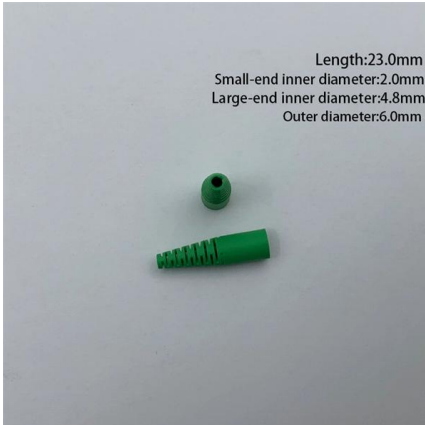
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The global shortage of rare earth metals is impacting the production of high-performance optical modules, with a 10% reduction in supply predicted by 2025. 75% of optical module manufacturers expect raw material costs to increase by 15-20% in 2024, due to inflation and supply chain. Resilient supply chains are highly critical to the EU economy. Six key messages from the 2023 EU Photonics survey Call for actions: Four recommendations "Trade is at the center of Europe's economic prosperity and competitiveness. 1 billion by 2025 and 35 percent of manufacturers reporting lead times beyond 12 weeks, the. When optical components shortages hit, the first failure is not usually the fiber run it is the transceiver lead time, the optics vendor mismatch, or a last-minute part swap that quietly breaks link budgets. This article helps network operators and early-stage data center teams keep throughput. Optical module chips are semiconductor devices that enable high-speed data transmission in fiber optic networks. In April 2026, the optical communications industry issued intensive signals of supply chain shortages, with contradictions between supply and demand erupting simultaneously across multiple sub-sectors.



## Optical module materials are in short supply

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### 2025 Optical Module Market Share and Demand Report

Overview of the optical communication module market demand and supply chain, and production capacity in various regions in 2025

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### Navigating Fiber Optic Supply Chain Challenges

Learn how to overcome fiber optic supply chain challenges with Cables Plus USA's in-stock inventory, quick-turn custom solutions, and expert support.

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### Optical Module Industry Statistics 2026

Supply chain disruptions in 2022 caused a 15% delay in delivering high-speed optical modules to data center clients, primarily due to semiconductor shortages. Global R& D spending in

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### InP substrate shortages emerge as new bottleneck for

A tightening supply of indium phosphide substrates is emerging as a bottleneck for artificial intelligence data centers and high-speed optical



### **Photonics Industry Supply Chain Survey 2023**

The key choke points for European Photonics companies on the supply input side are microelectronic and photonic semiconductors, optical components, basic raw materials and equipment.

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### **The Evolution of Optical Modules: Powering the Future**

Data centers, the beating hearts of this digital revolution, are tasked with processing and moving massive volumes of data at unprecedented speeds.

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### **How tight is the optical communications supply chain right now?**

Facing upstream material constraints, leading domestic optical module manufacturers have stated the impact is limited, indicating that top-tier firms have already built up inventories in advance through

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## Electronic Component Shortage 2025: Outlook

Electronic component shortages in 2025 continue to challenge supply chains. Explore key strategies to secure components, reduce delays, and stay

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## Increasing Challenges for Sourcing Laser Optics Materials

Trade sanctions and other geopolitical concerns between countries are limiting the supply of many optical materials. Thin film optical coating materials used for high-end filters and laser optics like

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## Optical Module Package Market 2025

The optical module industry faces persistent supply chain challenges, particularly for specialized components like high-performance laser diodes and photodetectors.

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## Chip shortage: how the semiconductor industry is

Chip shortage - less supply, more demand A confluence of problems led to the semiconductor shortage. In addition to long-standing issues within the

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### Navigating the Semiconductor Shortage: Proven Component

Navigate the 2025 semiconductor shortage with proven component sourcing strategies, from alternative sourcing to distributor partnerships.

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### Optical Modules Market Research Report 2034

Optical Modules Market Outlook 2025-2034 The global optical modules market was valued at \$14.8 billion in 2025 and is projected to reach \$39.6 billion by 2034,

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### Co-packaged optics are inching closer to

Co-packaged CPO can regain the attention Optics Evaluating CPO technology to ensure viability in market

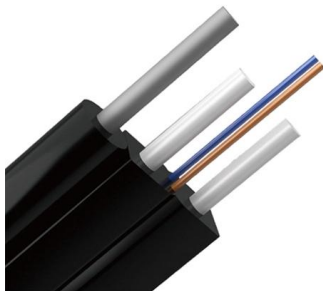
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### in the Current Fiber Broadband Supply Chain UPDATE

However, the pandemic also had negative impacts on the operation of the global supply chain, restricting access to and raising costs for all facets of a fiber broadband build. Raw materials, finished

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### Next-Gen Optics Need Next-Gen Materials: CPO

As data centers continue to evolve, Co-Packaged Optics (CPO) technology is gradually replacing traditional pluggable optical modules, emerging

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### Optical components supply shortages: a field-tested playbook

Learn practical ways to keep networks running during optical components shortages: sourcing paths, compatibility checks, burn-in, and troubleshooting for real links.

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### Global shortage of fiber-optic cable threatens digital growth

Global shortage of fiber-optic cable threatens digital growth. Rising prices of components cast shadow over 5G rollout and development of data centers.

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### Supply Chains and Pricing in Optics and Photonics

Before the pandemic, companies commonly received supplies "just in time" to keep inventory costs low. Now, however--given the pandemic's much-publicized supply-chain disruptions--many are ordering

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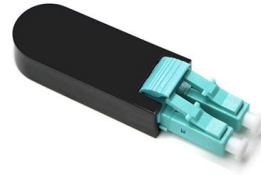




## Optical Module Industry Statistics 2026

Our in-depth market data report on Optical Module Industry. Explore verified statistics and the latest research.

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## LightCounting :: Optics Remains a Weak Link in the Industry Supply

In the report, we suggest that the main problem with the optical components and modules business is that it is a tiny part of a massive industry. Size matters when it comes to negotiating pricing.

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## PwC\_Semiconductor and Beyond\_2026

At PwC, we have worked alongside semiconductor leaders through multiple industry shifts, helping clients adapt to evolving market conditions, enhance supply chains and drive long-term sustainable

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## Your Sustainability Transformation Partner , Fujitsu Global

Our purpose: Make the world more sustainable by building trust in society through innovation.

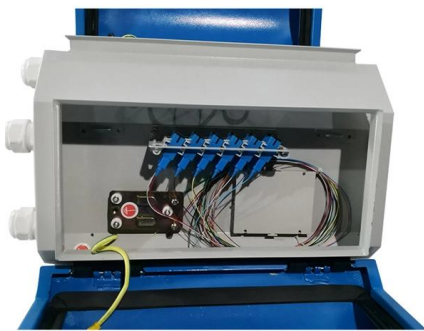
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## Optical Module: A Comprehensive Analysis from Source

Furthermore, as the importance of sustainability continues to grow, optical module design will also place greater emphasis on energy efficiency and

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## Increasing Challenges for Sourcing Laser Optics Materials

Material availability has always been critical for the development of optical technology, but the growth of high-power laser applications have increased the importance of materials beyond conventional

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## Why We're in the Midst of a Global Semiconductor

Shortages of semiconductors that have been hurting manufacturers of automobiles and other products illustrate the need for companies to ensure that

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## Optical Module Chip Market 2025

The optical module chip market faces significant headwinds from global supply chain disruptions. The highly specialized semiconductor manufacturing process for optical components creates bottlenecks,

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## 2025 Update: Electronic Component Shortages

Electronic component shortages are still disrupting supply chains in 2025. See what's fueling delays and how to adapt your sourcing strategy.

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## High demand and shortage of materials-Are fiber optic

The prices of fiber optics have skyrocketed since 2019 due to great demand and shortages in materials. Among the affected territories, Europe, India,

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## High-End PCB Materials Hit Critical Shortage as AI Demand Crushes

The artificial intelligence boom just delivered another supply chain reality check: high-end printed circuit board (PCB) materials are heading toward critical shortage territory as AI hardware

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