# Compatible Low-Loss 400G Optical Modules from Korean Suppliers



## Overview

KOCENT OPTEC LIMITED specializes in manufacturing high-quality OEM 400G optical modules tailored for B2B buyers worldwide.

## Key Takeaways

South Korean suppliers such as Samsung Electronics and LG Innotek offer 400G low-power optical modules compatible with QSFP-DD and OSFP form factors, supporting high-speed data center and telecom applications.

### Market Overview in South Korea

South Korea is a leading hub for 400G optical module development, driven by its advanced telecom infrastructure, 5G deployment, and hyperscale data center expansion. The market was valued at approximately USD 1. 2 billion in 2023 and is projected to grow at a CAGR of 15–20% through 2028, reflecting strong demand for high-bandwidth, low-power optical solutions.

Key local players include Samsung Electronics, LG Innotek, and other ODM/OEMs, with increasing collaboration with international suppliers to enhance module performance and compatibility.

### Module Types and Compatibility

Korean suppliers produce 400GBASE-FR4 and 400G QSFP-DD modules that are compliant with IEEE 802. 3bs and 400GAUI-8/CEI-56G-VSR-PAM4 standards. These modules typically support: Transmission distances: up to 2 km over parallel single-mode fiber for FR4 modules.

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Form factors: QSFP-DD and OSFP, which are interoperable if the module type and standard match (e.g., 400G-FR4 QSFP-DD can connect with OSFP-FR4 modules under the same specification),. Low power consumption: Advanced designs using Silicon Photonics (SiP) and Indium Phosphide (InP) reduce power per gigabit by 25–30% compared to previous generations. Connector types: Duplex LC for FR4 modules, supporting CWDM wavelength multiplexing.

## Applications

These modules are optimized for: Hyperscale data centers requiring high inter-rack and inter-datacenter bandwidth. Telecom core network upgrades supporting 400G Ethernet. Cloud computing and AI workloads, where low-latency, high-throughput links are critical.

## Interoperability and Testing

Korean suppliers ensure hardware and software compatibility through rigorous testing. Modules are validated for: Plug-and-play operation across multiple switch and router brands. Compliance with RoHS and REACH regulations for environmental and safety standards.

Seamless integration with global 400G ecosystems, including Cisco, Arista, and Huawei platforms.

## Key Considerations for Procurement

When sourcing 400G low-power modules from Korean suppliers: Confirm form factor and standard (QSFP-DD vs OSFP, FR4 vs DR4) to ensure interoperability. Check power consumption specifications to match data center thermal and power budgets. Verify vendor testing and certifications for reliability and compliance.

Consider local support and supply chain advantages offered by Korean manufacturers for faster deployment and maintenance. By selecting modules from established Korean suppliers like Samsung Electronics and LG Innotek, organizations can access high-performance, low-power 400G optical modules that are compatible with global networking equipment and optimized for modern data center and telecom applications.

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## Article Content

OEM 400g Optical Module Manufacturer & Manufacturers

KOCENT OPTEC LIMITED specializes in manufacturing high-quality OEM 400G optical modules tailored for B2B buyers worldwide. Our products are designed to meet the demands of modern

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Key players include Samsung Electronics, LG Innotek, and local ODM/OEMs, with increasing participation from international suppliers seeking strategic partnerships.

400G SR4 QSFP-DD Optical Transceiver Module | FiberMall

This 400G QSFP-DD SR4 optical module has great compatibility and pairs seamlessly with multiple switches and routers, significantly reducing the cost and time of device integration.

400G LPO QSFP112 Optical Transceiver Modules | AscentOptics

Experience the future with our 400G LPO QSFP112, integrating Linear-Drive Technology for unparalleled short-range, high-bandwidth, and low-latency performance. Say goodbye to complex

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400G OSFP

The 400g SFP modules produced by SULITON are suitable for most switch brands on the market, such as MSA, Cisco, Huawei, Juniper, Dell, Edge-Core and other switches.

How 400G Optical Modules Are Shaping Next-Gen Networks

Discover key factors driving the rapid adoption of 400G optical transceivers, including AI, 5G, coherent optics, and market trends shaping next-gen network infrastructure.

PSE 100G/400G pluggable coherent optics

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Our pluggable coherent optical modules support a variety of data rates, including 100Gb/s and 400Gb/s to enable application optimization based on capacity, distance and port type.

200G/400G/800G Optical Transceiver Modules | FiberMall

200G/400G/800G optical module features up to 40km transmission distances using QSFP56/QSFP-DD footprints for data center interconnect applications - FiberMall

Selection Solution for 400G Optical Modules In Data Centers

This article is mainly about several options for 400G optical modules in data centers and the application scenarios.

400G Optical Modules 2026 Guide: DR4 vs. FR4 vs. LR8 Lab

Our CCIE/HCIE team shares lab-tested benchmarks for DR4, FR4, and LR8, focusing on power efficiency, latency, and AI cluster scalability.

400G Coherent Optics Guide: ZR, ZR+ & MZR Comparison

Master 400G coherent optics with our comprehensive guide covering ZR, ZR+, MZR variants, reach capabilities, power consumption & deployment strategies.

The Evolution of Optical Modules: Powering the Future

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The Ultimate Guide to SFP Modules (2026): Types, Speeds & Compatibility

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics, and how to choose the right transceiver for Cisco, Juniper, and more.

LPO Module: Enabling Low Cost and Latency for 400G and 800G

LPO, or pluggable optical module based on linear driver chip technology, is an optimized innovation of the traditional hot-pluggable Ethernet module with DSP design. The popular 200G,

Cisco 400G QSFP-DD High-Power (Bright) Optical

Learn how Cisco 400G QSFP-DD High-Power (Bright) Optical module''s small size and low power make it an optimal choice for a wide range of

400G Coherent Optical Devices: Architecture, Applications & Trends

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