DATASHEET

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External Laser Small Form Factor Pluggable (ELSFP) Optical Connectors ›

Supporting co-packaged optics (CPO) solutions for next-generation data center connectivity, the ELSFP Optical Connector system provides a complete solution for efficiently delivering power from an external laser source (ELS) to an optical chip connection, improving reliability and supporting field servicing. The blind-mate connection between the host and the pluggable module provides a durable, compact optical connection that together with electrical connections minimizes space requirements, enhances reliability and optimizes scalability.

ADVANTAGES AND FEATURES

Supports high-density CPO implementation

The compact form factor enables complex fiber connections from the front or rear panel to within the host system, efficiently delivering optical power to CPO systems and providing next-generation scalability and reach for data centers.

Minimizes sourcing challenges

The ELSFP Optical Connector is an Optical Internetworking Forum (OIF) compliant CPO technology-supporting design that simplifies connectivity to external laser sources and improves reliability. Intermate ability enables use with other OIF ELSFP-compliant solutions and reduces supply chain risks.

Fiber Count per Port	Up to 12 (MT ferrule)
Fiber Type	Polarization maintaining (PM) or singlemode (SM)
Validation	OIF, RoHS, REACH, GR 468, GR 1435, GR 1217 (6.3.3), TIA-604-5, IEC-61754-7-1

Enables scalable deployment of next-generation architectures

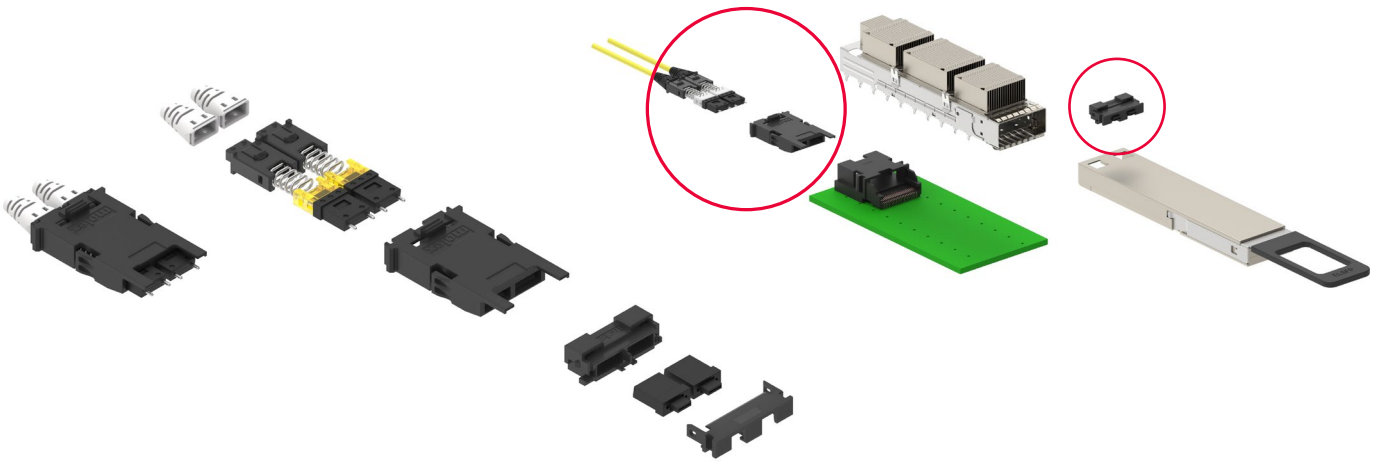
The blind-mate, pluggable-module fiber interface streamlines upgrades and expansions, minimizing barriers to CPO implementation.

Simplifies ELS optical connectivity

The ELS pluggable module houses high-power continuous-wave lasers coupled to CPO optical engines via optical fibers, reducing routing challenges and cabling complexity.

Streamlines design and integration work

The ELSFP system uses an OIF-defined interface to provide known electrical, thermal and mechanical characteristics, simplifying testing and accelerating deployment time.



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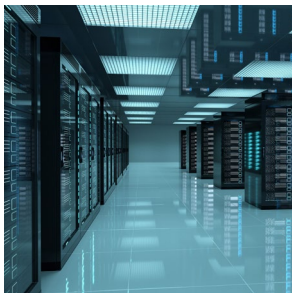
MARKETS AND APPLICATIONS

Networking
Backend networks
High-density networking systems
Switches

Servers and Storage
AI and machine-learning systems
Application-specific integrated circuits (ASICs)
Fiber optic data centers
Graphics-processing units
Hyperscale data center installations

Telecommunications
High-performance computing systems

Switches



Hyperscale Data Center Installations

High-Performance Computing Systems

SPECIFICATIONS

Reference Information
Packaging: Bag
Designed in: Millimeters
RoHS: Yes
Low Halogen: Yes
REACH: Yes
OIF: Yes
Validation: GR 468, GR 1435, GR 1217 (6.3.3), TIA-604-5, IEC-61754-7-1

Optical
Ferrule Type: 12-fiber low-loss MT
Number of Ferrules: One or two (MT)
Fiber Type: PM or SM
PM Fiber Count per Port: Up to 12
Optional SM Pass-Through Fiber Count per Port: Up to 12

Mechanical
Cable Types: Bare fiber or round cable
Durability (min.):
Cages/connectors—100 cycles
Modules—50 cycles

Physical
Relative Humidity (max.): 85%
Expected Service Temperature: +65°C
Operating Temperatures: -5 to +70°C
Storage Temperatures: -55 to +85°C

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