

# **Expanded Beam Optical (EBO)**Interconnect Solutions

Expanded Beam Optical (EBO) Interconnect Solutions deliver high-performance, low-maintenance, reliable and scalable fiber connectivity for tomorrow's data centers.



#### **FEATURES AND ADVANTAGES**



Provides the ability to develop novel connector designs that are not limited by spring forces

Low mating/un-mating forces, even with high fiber counts

Delivers high performance and reliability while providing stability under multiple re-mating cycles
Low insertion and high return loss

Offers flexible, scalable designs Single- and multi-mode solutions

Delivers a plug-and-play solution for data center turn-up and minimal downtime Low dust sensitivity for easy

Low dust sensitivity for easy deployment

Fiber Types	Single-mode, multi-mode
Connector Types	EBO-12, EBO-MP12, EBO-HD144
Fibers per Connector	12 to 144
Connector Insertion Loss	Single-mode: <0.7 dB Multi-mode: <0.3 dB
Connector Return Loss	Single-mode: >55 dB Multi-mode: >25 dB
Operating Temperature	-10 to +60°C

Allows flexibility in connector design to meet specific needs across data centers and beyond 3M™ EBO ferrule

**Requires no external guide pins** All critical alignment features are

incorporated into the ferrule

Minimizes cleaning and inspection requirements, resulting in faster turn-up of optical systems
Plug-and-play assembly

### Reduces supply chain risks for the end user

Open-market business model with multiple sources provides end users flexibility at scale

## Permits automated fiber alignment and bonding

Design uses precision-molded fiber grooves, not holes

Provides freedom for optimal alignment, mating retention force and low mating/de-mating force Ferrules are mated using fiber suspension







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#### MARKETS AND APPLICATIONS

#### **Telecommunications and Networking**

Infrastructure
Switch-to-switch connections
Intra-rack
Data centers
Hubs
Servers



#### **SPECIFICATIONS**

#### **Reference Information**

Standards:

GR-1435

Fibers per Ferrule: 12

Fiber Types:

Single-Mode: OS1, OS2

Multi-Mode: OM3, OM4, OM5

Connector Types: EBO-12, EBO-MP12, EBO-HD144

RoHS: Yes

Halogen Free: Yes

#### **Optical**

Connector Insertion Loss (IL):

<0.7 dB (single-mode)

<0.3 dB (multi-mode)

Connector Return Loss (RL):

>55 dB (single-mode)

>25 dB (multi-mode)

Operating Wavelength:

1,310nm (single-mode)

850nm (multi-mode)

### Physical

Connector Housings:

Single-Mode: Green

Multi-Mode: Aqua

Mating Force (approx.): 0.7N per ferrule

Fiber Diameter: 125µm

Cable Outside Diameter: 3.00mm

Operating Temperatures: -10 to +60°C

www.molex.com/en-us/products/optical-solutions/fiber-optic-connectors-and-adapters