

3M™ Expanded Beam Optical Connector System

Developmental Status Notice

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Product Description

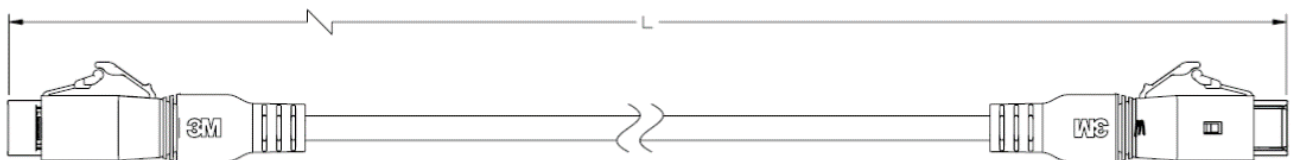
Note: The data presented in this preliminary data sheet are 3M's best estimates for the current product construction being evaluated. While this product is being developed for general commercialization, this product is still considered developmental at this time and changes in the product construction or process conditions may occur that can cause subsequent changes in product characteristics or performance. User should consult with 3M before making any business plans in reliance upon the future availability or the current properties of this product.

The 3M™ Expanded Beam Optical (EBO) Connector System is a multi-fiber connector system based on a new expanded beam ferrule technology. Conventional multi-fiber connectors make use of physical contact between fibers. The 3M EBO ferrule expands the beam between connectors, reducing the connector's sensitivity to dust and the need for frequent cleaning. The system supports low insertion loss and high return loss connectivity with a common technology for single mode or multimode fibers. Critical mating alignment is controlled by the expanded beam ferrule without the use of metal guide pins protruding from the end of the connector. The system utilizes a hermaphroditic connector geometry with an LC-connector style latch to engage bulkhead adapters.

Key Features

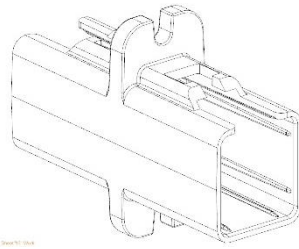
- Hermaphroditic connector geometry eliminates the need for separate male and female connectors
- Ferrule design supports 12 single mode or multimode fibers
- Simple connector latch for quick, effortless disconnect
- Low connector mating force

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Patch cord with 3M connectors

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Bulkhead adapter

Product Construction

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Expanded Beam Optical Connector System	
Property	Value
Number of optical fibers	12
Type of optical fiber	Single mode or multimode, 125 μm diameter cladding
Connector colors	Green – single mode; Aqua – multimode OM3, Violet – multimode OM4
Bulkhead adapter colors	Green – single mode; Aqua – multimode OM3, Violet – multimode OM4
Connector strain relief boot color	Black

Applications

- Data center multi-fiber optical interconnect
- Multi-fiber patch cord and fanout assemblies
- Multi-fiber interconnect for test and measurement

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product once it is approved by 3M for general commercialization and development work is completed.

3M™ Expanded Beam Optical Connector System		
Property	Single mode	Multimode
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Operating wavelength	1310 nm	850 nm
Insertion loss maximum	0.7 dB	0.3 dB
Return loss minimum	55 dB	25 dB
Operating temperature range	-10°C to +60°C	-10°C to +60°C

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Certificate of Analysis (COA)

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3M Electronics Materials Solutions Division
Interconnect Solutions
6801 River Place Blvd.
Austin, TX 78726-9000
www.3M.com/interconnect

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