High Density Fiber Optic Cabling for All Configurations

Fiber Mountain’s pre-terminated multi-fiber cables are suitable for all data center cabling needs. Capable of handling high-speed 10G, 25G, 40G, or 100G applications, these ultra high-quality fiber optic cables couple with Fiber Mountain’s OPX Cross-Connects and L-Series Fiber Port Aggregators to provide superb performance. High quality glass-core bend-insensitive fibers ensure efficient and consistent data transmission, while robust LC or MPO connectors minimize insertion and return loss. All cables are available in Single Mode or Multimode with either A, B, or C polarity and UL-rated Plenum, Riser, or LSZH jackets.

Thorough Safety & Compliance Testing

Each Fiber Mountain cable is serialized before being tested. Multimode cables are tested at a wavelength of 850nm, while Single Mode cables are tested at both 1310nm and 1510nm. Copies of all test reports are included with shipments, documenting Insertion Loss and Return Loss for each end of the cable. All fibers are cleaned and tested to industry and regulatory standards (see table on reverse). Cables are also secured in at least two places to prevent stress during shipping and handling.

Fiber Specifications

<table>
<thead>
<tr>
<th>Fiber Specifications</th>
<th>Single Mode Fibers</th>
<th>Multimode Fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Attenuation</td>
<td>0.5 dB/km @ 1310 and 1550nm</td>
<td>3.0 dB/km @ 1310 and 1550nm</td>
</tr>
<tr>
<td>Effective Modal Bandwidth (EMB)</td>
<td>N/A</td>
<td>4700 MHz-km</td>
</tr>
<tr>
<td>Over Filled Launch (OFL) Bandwidth</td>
<td>N/A</td>
<td>3500 MHz-km</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insertion &amp; Return Loss</th>
<th>SM LC UPC</th>
<th>SM MPO APC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (1310nm and 1550nm)</td>
<td>0.1 dB typical</td>
<td>0.1 dB typical</td>
</tr>
<tr>
<td>Return Loss (1310nm and 1550nm)</td>
<td>0.3 dB max</td>
<td>0.35 dB max</td>
</tr>
<tr>
<td>Return Loss (1310nm and 1550nm)</td>
<td>-50 dB min</td>
<td>-55 dB min</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insertion &amp; Return Loss</th>
<th>MM LC UPC</th>
<th>MM MPO UPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (850nm)</td>
<td>0.1 dB typical</td>
<td>0.1 dB typical</td>
</tr>
<tr>
<td>Return Loss (850nm)</td>
<td>0.3 dB max</td>
<td>0.35 dB max</td>
</tr>
<tr>
<td>Return Loss (850nm)</td>
<td>-20 dB min</td>
<td>-20 dB min</td>
</tr>
</tbody>
</table>

Fiber Optic Cable Options

- MPO-to-MPO and LC-to-LC configurations
- Plenum, Riser, or LSZH
- Standard and custom lengths are available
- Single mode OS2 or Multimode OM4 (OM5 also available upon request)
Cable Mechanical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>LC Cable</th>
<th>12-Fiber MPO Cable</th>
<th>24-Fiber MPO Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating</td>
<td>0°C to +70°C</td>
<td>Operating: 0°C to +70°C</td>
<td>Operating: 0°C to +70°C</td>
</tr>
<tr>
<td>Storage</td>
<td>-40°C to +75°C</td>
<td>Storage: -40°C to +75°C</td>
<td>Storage: -40°C to +75°C</td>
</tr>
<tr>
<td><strong>Nominal Outer Diameter</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.0 x 4.0 mm (0.08 x 0.16 in)</td>
<td>3.0 mm (0.12 in)</td>
<td>3.8 mm (0.15 in)</td>
</tr>
<tr>
<td><strong>Minimum Bend Radius</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation</td>
<td>5.0 cm (2.0 in)</td>
<td>Installation: 4.5 cm (1.8 in)</td>
<td>Installation: 5.7 cm (2.2 in)</td>
</tr>
<tr>
<td>Operation</td>
<td>3.0 cm (12 in)</td>
<td>Operation: 3.0 cm (12 in)</td>
<td>Operation: 3.8 cm (1.5 in)</td>
</tr>
<tr>
<td><strong>Maximum Tensile Strength</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation</td>
<td>100 N (22 lbf)</td>
<td>Installation: 220 N (50 lbf)</td>
<td>Installation: 330 N (75 lbf)</td>
</tr>
<tr>
<td>Operation</td>
<td>30 N (7 lbf)</td>
<td>Operation: 75 N (17 lbf)</td>
<td>Operation: 110 N (25 lbf)</td>
</tr>
<tr>
<td><strong>Bend Radius (under no load, in a controlled bend)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mm</td>
<td>10 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td><strong>Bend Radius (under long-term tension)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 mm</td>
<td>20 mm</td>
<td>20 mm</td>
</tr>
</tbody>
</table>

**Regulatory & Certifications**

All Fiber Mountain fiber optic cables meet the following regulatory requirements:

- IEC 61300-3-35
- Telcordia GR-409-CORE
- UL Listed Type OFNR/OFNP CSA FT4, CSA FT6
- RoHS Directive 2002/95/EC
- EIA/TIA 568-133

LSZH cables are OFNR listed and meet the requirements of IEC:

- 61034-1
- 61034-2
- 60332-1
- 60332-1-2
- 60754-1
- 60754-2

**About Fiber Mountain**

Glass Core represents a new way of thinking about data center infrastructure. With integrated software and hardware innovations, Glass Core infrastructure enables intelligent Layer 1 SDN switching with highdensity optical connectivity for a software-controlled physical layer and unprecedented network speed and agility.

**Services**

Fiber Mountain provides a variety of value added services, including hands-on training, on-site installation, and 24x7 technical support. Contact Fiber Mountain for a schedule of available services.

**Warranty**

Return to factory hardware repair or replacement for one year.
Cable Catalog Configurator

**Connector Capability**
- (N) Non-ICID
- (C) ICID
- (D) Single End ICID (NFC only)
- (E) NFC Only

**Fiber Type**
- (S) Single Mode OS2
- (M) Multimode OM4
- (5) Multimode OM5

**Fiber Type / Connector A / Connector B**
- (02–LCU–LCU) 2 Fiber UPC LC-to-LC
- (02–LCA–LCA) 2 Fiber APC LC-to-LC
- (08–MF8–MF8) 8 Fiber MPO-to-MPO (Unpinned)
- (12–MF12–MF12) 12 Fiber MPO-to-MPO (Unpinned)
- (24–MF24–MF24) 24 Fiber MPO-to-MPO (Unpinned)
- (08–MM8–MM8) 8 Fiber MPO-to-MPO (Pinned)
- (12–MM12–MM12) 12 Fiber MPO-to-MPO (Pinned)
- (24–MM24–MM24) 24 Fiber MPO-to-MPO (Pinned)

**Construction**
- (C) Interconnect
- (B) Backbone
- (A) Armored

**Polarity**
- (A) Type A or A-A
- (B) Type B or A-B
- (C) Type C
- (D) Other
- (E) Simplex

**Jacket Color**
- (Y) Yellow (Single Mode)
- (A) Aqua (Multimode)
- (H) Heather Violet
- (E) Erika Violet
- (L) Lime Green

**Jacket Type**
- (P) OFNP (Plenum)
- (R) OFNR (Riser)
- (L) LSZH

**Cable Length (in meters)**
- Examples:
  - (003M) 3 meters
  - (005M) 5 meters
  - (010M) 10 meters

**Custom Order Options**
- Available Upon Request

- OM4 + and OM5
- Simplex and Backbone cables
- APC LC connectors
- Custom connector configurations
- Custom cable lengths

**Note:** Custom orders including the options above may result in longer lead times

**Cable Order Examples**

**Single Mode, 2-fiber LC-to-LC, Yellow Plenum Jacket, Polarity Type A, 7 meters**

FNS02—LCU—LCU—PYC—A0—007M

**Single Mode, 12-fiber MPO-to-MPO Unpinned, Yellow LSZH Jacket, Polarity Type A, 3 meters**

FNS12—MF12—MF12—LYC—A0—003M

**Multimode, 12-fiber MPO-to-MPO Pinned, Aqua Plenum Jacket, Polarity Type B, 10 meters**

FNM12—MM12—MM12—PAC—B0—010M

**Multimode, 24-fiber MPO-to-MPO Unpinned, Aqua Plenum Jacket, Polarity Type A, 5 meters**

FNM24—MF24—MF24—PAC—A0—005M