ARIA Fiber Optic Cable Assemblies are available with your choice of fiber count, features, flame rating, connector type, polish type, fiber type, and cable type.

All assemblies are 100% tested and certified to Telcordia GR-326-CORE Issue 4 specifications.

Bend-Insensitive Fiber Available

Cable bends can create high loss in congested areas.

ARIA Bend-Insensitive cable assemblies are ITU-T G.657.A1 compliant and ensure low loss even with a 10mm bend radius.

Pulling Eye Available  Fanout Kits Available  Cable Breakouts Available

Example: 144-Fiber Micro Cable with Singlemode G.657.A1 Bend Insensitive Fiber, 36" 900μm Breakout, and LC/UPC Connectors
Multi-Fiber Cable Assemblies

Fiber Optic Cable Assemblies

Cable Types

**Indoor Cable** is used exclusively within buildings and must have a flame-retardant jacket to fit this purpose.

**Indoor/Outdoor Cable** is designed to meet the rigorous environment of the outdoors but can be routed indoors, where flame rating requirements apply. This eliminates the need for a “transition splice” to an indoor-rated cable when routing an outdoor cable into a building.

**Outdoor Cable** features rugged construction engineered to withstand conditions seen outside such as: extreme temperature fluctuations, UV light resistance, and protection from mechanical forces. Outdoor cable cannot extend into a building more than 50 feet from its point of entrance according to the National Electrical Code (NEC).

Jacket Rating

**Riser (OFNR - Optical Fiber Nonconductive Riser)** cable jackets are rated for flame generation and are held to a lower standard than plenum cables.

**Plenum (OFNP - Optical Fiber Nonconductive Plenum)** cable jackets are intended for use in spaces that facilitate environmental air handling and are rated for both flame and smoke generation.

**LSZH (Low-Smoke Zero Halogen)** cable jackets eliminate toxic gases that are produced when water interacts with a burning cable jacket. LSZH jackets are not available with a plenum rating.

Armor

- Non-Armored
- Armored
- Interlocking Armor

Examples

- **72-Fiber Distribution Cable with Singlemode G.652.D Fiber, 36" 900μm Breakout, and SC/UPC Connectors**
- **48-Fiber Micro Cable with Multimode OM4 Fiber, 18" 3mm Breakout, and MPO Connectors**
- **36-Fiber Indoor/Outdoor Distribution Cable with Singlemode G.652.D Fiber, 36" 2mm Breakout, and ST/UPC Connectors**
High Density Connectors Available
- SC and LC uniboot connectors reduce fiber congestion
- LC connectors with pull tabs ease connector insertion and removal
- LC uniboot polarity switchable connectors reduce fiber congestion and provide polarity flexibility

Endface Clarity, Insertion & Return Loss Testing
Endface Clarity is the cleanliness and smoothness of the connector endface

Insertion Loss refers to the amount of optical power lost through a jumper

Return Loss refers to the optical power reflected at the connector toward the source

Endface Geometry Testing
Radius of curvature is the roundness of the ferrule’s endface
Fiber height is the height or depth that the fiber core protrudes or undercuts the ferrule endface
Apex offset is the distance between the highest point of the polished ferrule’s endface and the fiber’s axis

Testing Requirements
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endface Clarity</td>
<td>No scratches, pits, dirt, or oil at 400x magnification</td>
</tr>
<tr>
<td>Insertion Loss (dB)</td>
<td>0.20 Maximum, &lt;0.15 Typical</td>
</tr>
<tr>
<td>MPO Insertion Loss (dB)</td>
<td>0.75 (Singlemode), 0.60 (Multimode), 0.35 (Elite)</td>
</tr>
<tr>
<td>Return Loss (dB)</td>
<td>&lt;-55 (UPC Connectors), &lt;-65 (APC)</td>
</tr>
<tr>
<td>Radius of Curvature (mm)</td>
<td>7 to 25 (UPC and MM Connectors), 5 to 12 (APC)</td>
</tr>
<tr>
<td>Fiber Height (nm)</td>
<td>±50 (UPC and MM Connectors), ±100 (APC)</td>
</tr>
<tr>
<td>Apex Offset (µm)</td>
<td>&lt;50</td>
</tr>
</tbody>
</table>

PASS

Fiber Specifications
<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Wavelengths (nm)</th>
<th>Max Atten. (db/km)</th>
<th>1 GbE Max Distance (m)</th>
<th>10 GbE Max Distance (m)</th>
<th>40 GbE Max Distance (m)</th>
<th>100 GbE Max Distance (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/125μm SMF</td>
<td>1310/1550</td>
<td>0.35/0.25</td>
<td>5000</td>
<td>1000/4000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>62.5/125μm OM1</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>300/550</td>
<td>33</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>50/125μm OM2</td>
<td>850/1300</td>
<td>3.5/1.5</td>
<td>600/600</td>
<td>82</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>50/125μm OM3</td>
<td>850/1300</td>
<td>3.0/1.5</td>
<td>1000/600</td>
<td>300</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td>50/125μm OM4</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>N/A</td>
<td>550</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>50/125μm OM5</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>N/A</td>
<td>550</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>
Multi-Fiber Cable Assemblies
Fiber Optic Cable Assemblies

**Cable Constructions**

**Distribution** cables consist of 900µm fibers with Kevlar reinforcement. For larger fiber counts, the fibers are arranged in subunits around a central strength member.

**Breakout** cables consist of 2mm simplex cables.

**Micro** cables (or micro distribution cables) consist of 250µm fibers with Kevlar reinforcement. 12-Fiber cables can be as small as 2.0mm in diameter and are available in a zipcord format. For larger fiber counts, the fibers are arranged in subunits around a central strength member.

**Ribbon** cables consist of a single central tube that contains optical fibers arranged in ribbons. For larger fiber counts, ribbons are arranged in subunits.

**Ribbon** cables consist of a single central tube that contains optical fibers arranged in ribbons. For larger fiber counts, ribbons are arranged in subunits.
Multi-Fiber Cable Assemblies
Fiber Optic Cable Assemblies

Cable Constructions (Continued)

**Loose Tube** cables are designed for outdoor use and consist of a buffer tube that contains loose 250µm fibers. For larger fiber counts, buffer tubes are arranged around a central strength member.

**Flat drop** cables consist of a central buffer tube, Kevlar, and two strength members in an ovular outer jacket.

**Outer Cable Jacket Colors**
The TIA-598-D standard designates the following as the standard outer cable jacket colors.

- **Yellow**: Indoor cable with singlemode optical fiber
- **Orange**: Indoor cable with OM1 or OM2 multimode optical fiber
- **Aqua**: Indoor cable with OM3 or OM4 multimode optical fiber
- **Erika Violet**: Sometimes used to designate indoor cable with OM4 multimode optical fiber
- **Lime Green**: Indoor cable with OM5 multimode optical fiber
- **Blue**: Sometimes used to designate indoor cable with SM BI fiber or polarization-maintaining fiber
- **Black**: Outdoor cable

**Inner Cable Fiber Colors**
Fibers are grouped in sets of 12. Inside a cable, the fibers and sometimes subunits are colored for identification as shown below. If more than 12 fibers or subunits are present, tracer marks are used.

<table>
<thead>
<tr>
<th>Fiber Number</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blue</td>
</tr>
<tr>
<td>2</td>
<td>Orange</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Brown</td>
</tr>
<tr>
<td>5</td>
<td>Slate</td>
</tr>
<tr>
<td>6</td>
<td>White</td>
</tr>
<tr>
<td>7</td>
<td>Red</td>
</tr>
<tr>
<td>8</td>
<td>Black</td>
</tr>
<tr>
<td>9</td>
<td>Yellow</td>
</tr>
<tr>
<td>10</td>
<td>Violet</td>
</tr>
<tr>
<td>11</td>
<td>Rose</td>
</tr>
<tr>
<td>12</td>
<td>Aqua</td>
</tr>
</tbody>
</table>
### Multi-Fiber Cable Assemblies

#### Fiber Optic Cable Assemblies

<table>
<thead>
<tr>
<th><strong>Part Number</strong></th>
<th><strong>MFC</strong></th>
</tr>
</thead>
</table>

#### Fiber Type
- S = SM 9/125μm G.652.D
- B = SM 9/125μm Bend Insensitive G.657.A1
- 1 = MM 62.5/125μm OM1
- 2 = MM 50/125μm OM2
- 3 = MM 50/125μm OM3
- 4 = MM 50/125μm OM4
- 5 = MM 50/125μm OM5

#### Number of Fibers
- XXX = XXX Fibers

#### Cable Construction
- D = Distribution (I or X)
- B = Breakout (X)
- M = Micro Round (I)
- Z = Micro Zipcord* (I)
- L = Loose Tube (X or O)
- R = Ribbon (I, X, or O)
- F = Flat Drop (O)

#### Cable Type
- I = Indoor
- X = Indoor/Outdoor
- O = Outdoor

#### Jacket Rating
- Leave Blank for Outdoor Cable
- R = Riser (OFNR)
- P = Plenum (OFNP)
- L = Low Smoke Zero Halogen (LSZH)

#### Fiber Type
- S = SM 9/125μm G.652.D
- B = SM 9/125μm Bend Insensitive G.657.A1
- 1 = MM 62.5/125μm OM1
- 2 = MM 50/125μm OM2
- 3 = MM 50/125μm OM3
- 4 = MM 50/125μm OM4
- 5 = MM 50/125μm OM5

#### Connector Type End 1
- SC = SC
- SB = SC Uniboot*
- LC = LC
- FC = FC
- ST = ST
- MP = MPO
- E2 = E2000
- CS = CS*
- SN = SN*
- 00 = No Connector

#### Polish Type End 1
- U = UPC
- A = APC*
- F = Flat**
- 0 = No Connector

#### LC Type End 1
- A = 50° Boot
- F = Flat Pull Tab
- U = Uniboot
- P = Uniboot Polarity Switchable
- 2 = Uniboot 20mm Pull Tab
- 4 = Uniboot 40mm Pull Tab
- R = Uniboot Polarity Switchable with Pull Tab

#### MPO Type End 1
- Leave Blank for Non-MPO Connector
- Choose 1 Option for Each Feature:
  - 1 = 12 or 2 = 24 Fiber Connector
  - S = Standard or E = Elite Ferrule
  - F = Female or M = Male Guide Pins
  - Choose a wiring method:
    - A = A, B = B, C = C, 1 = 1, or 2 = 2
    - SR4 = 40GBASE-SR4
    - SR10 = 100GBASE-SR10
    - 0 = Non-MPO to MPO Assembly

#### Breakout Type End 1
- 9 = 900μm (Color Coded)
- 2 = 2mm (Std. Indoor Jacket Color)
- 3 = 3mm (Std. Indoor Jacket Color)

#### Breakout Length End 1
- XXX = Length in Inches
  - (Typically: 18", 24", or 36")

#### Pulling Eye
- PE1 = Pulling Eye on End 1
- PE2 = Pulling Eye on End 2