OptiSPEED® Plenum Distribution Cable, interlocking aluminum armored with plenum jacket, 8 fiber single-unit

Product Classification

Regional Availability
- Asia
- Australia/New Zealand
- Latin America
- Middle East/Africa
- North America

Portfolio
CommScope®

Product Type
Fiber indoor cable

General Specifications

Armor Type
Interlocking aluminum

Cable Type
Distribution

Construction Type
Armored

Fiber Type, quantity
8

Subunit Type
Gel-free

Total Fiber Count
8

Dimensions

Diameter Over Armor
10.8 mm | 0.425 in

Diameter Over Jacket
12.8 mm | 0.504 in

Representative Image
## Mechanical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Bend Radius, loaded</td>
<td>257 mm</td>
<td>10.118 in</td>
</tr>
<tr>
<td>Minimum Bend Radius, unloaded</td>
<td>180 mm</td>
<td>7.087 in</td>
</tr>
<tr>
<td>Tensile Load, long term, maximum</td>
<td>200 N</td>
<td>44.962 lbf</td>
</tr>
<tr>
<td>Tensile Load, short term, maximum</td>
<td>667 N</td>
<td>149.948 lbf</td>
</tr>
<tr>
<td>Compression</td>
<td>85 N/mm</td>
<td>485.363 lb/in</td>
</tr>
<tr>
<td>Compression Test Method</td>
<td>FOTP-41</td>
<td>IEC 60794-1 E3</td>
</tr>
<tr>
<td>Flex</td>
<td>25 cycles</td>
<td></td>
</tr>
<tr>
<td>Flex Test Method</td>
<td>FOTP-104</td>
<td>IEC 60794-1 E6</td>
</tr>
<tr>
<td>Impact</td>
<td>35 N-m</td>
<td>309.776 in lb</td>
</tr>
<tr>
<td>Impact Test Method</td>
<td>FOTP-25</td>
<td>IEC 60794-1 E4</td>
</tr>
<tr>
<td>Strain</td>
<td>See long and short term tensile loads</td>
<td></td>
</tr>
<tr>
<td>Strain Test Method</td>
<td>FOTP-33</td>
<td>IEC 60794-1 E1</td>
</tr>
<tr>
<td>Twist</td>
<td>10 cycles</td>
<td></td>
</tr>
<tr>
<td>Twist Test Method</td>
<td>FOTP-85</td>
<td>IEC 60794-1 E7</td>
</tr>
<tr>
<td>Vertical Rise, maximum</td>
<td>141 m</td>
<td>462.598 ft</td>
</tr>
</tbody>
</table>

## Optical Specifications

- **Fiber Type**: OM1, OptiSPEED®

## Environmental Specifications

- **Installation temperature**: 0 °C to +70 °C (+32 °F to +158 °F)
Operating Temperature
-20 °C to +70 °C (-4 °F to +158 °F)

Storage Temperature
-40 °C to +70 °C (-40 °F to +158 °F)

Cable Qualification Standards
ANSI/ICEA S-83-596 | Telcordia GR-409

Environmental Space
Plenum

Flame Test Listing
NEC OFCP (ETL) and c(ETL)

Flame Test Method
NFPA 262

Environmental Test Specifications

Heat Age
-20 °C to +85 °C (-4 °F to +185 °F)

Heat Age Test Method
IEC 60794-1 F9

Low High Bend
-20 °C to +70 °C (-4 °F to +158 °F)

Low High Bend Test Method
FOTP-37 | IEC 60794-1 E11

Temperature Cycle
-20 °C to +70 °C (-4 °F to +158 °F)

Temperature Cycle Test Method
FOTP-3 | IEC 60794-1 F1

Packaging and Weights

Cable weight
145 kg/km | 97.436 lb/kft

Regulatory Compliance/Certifications

Agency
ISO 9001:2015

Classification
Designed, manufactured and/or distributed under this quality management system

Included Products

CS-6F-TB OptiSPEED® OM1 Multimode Fiber

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable
OptiSPEED® OM1 Multimode Fiber

Product Classification

Portfolio: CommScope®
Product Type: Optical fiber

General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cladding Diameter</td>
<td>125 µm</td>
</tr>
<tr>
<td>Cladding Diameter Tolerance</td>
<td>±1.0 µm</td>
</tr>
<tr>
<td>Cladding Non-Circularity, maximum</td>
<td>1 %</td>
</tr>
<tr>
<td>Coating Diameter (Colored)</td>
<td>254 µm</td>
</tr>
<tr>
<td>Coating Diameter (Uncolored)</td>
<td>245 µm</td>
</tr>
<tr>
<td>Coating Diameter Tolerance (Colored)</td>
<td>±7 µm</td>
</tr>
<tr>
<td>Coating Diameter Tolerance (Uncolored)</td>
<td>±10 µm</td>
</tr>
<tr>
<td>Coating/Cladding Concentricity Error, maximum</td>
<td>12 µm</td>
</tr>
<tr>
<td>Core Diameter</td>
<td>62.5 µm</td>
</tr>
<tr>
<td>Core Diameter Tolerance</td>
<td>±2.5 µm</td>
</tr>
<tr>
<td>Core/Clad Offset, maximum</td>
<td>1 µm</td>
</tr>
<tr>
<td>Proof Test</td>
<td>689.476 N/mm²</td>
</tr>
<tr>
<td>Tight Buffer Diameter</td>
<td>900 µm</td>
</tr>
<tr>
<td>Tight Buffer Diameter Tolerance</td>
<td>±40 µm</td>
</tr>
</tbody>
</table>

Mechanical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macrobending, 75 mm mandrel, 100 turns</td>
<td>0.50 dB @ 1,300 nm</td>
</tr>
<tr>
<td>Coating Strip Force, maximum</td>
<td>8.9 N</td>
</tr>
<tr>
<td>Coating Strip Force, minimum</td>
<td>1.3 N</td>
</tr>
<tr>
<td>Dynamic Fatigue Parameter, minimum</td>
<td>18</td>
</tr>
</tbody>
</table>
Optical Specifications

- **Numerical Aperture**: 0.275
- **Numerical Aperture Tolerance**: ±0.015
- **Point Defects, maximum**: 0.15 dB
- **Zero Dispersion Slope, maximum**: 0.097 ps/(km-nm-nm)
- **Zero Dispersion Wavelength, maximum**: 1365 nm
- **Zero Dispersion Wavelength, minimum**: 1320 nm

Optical Specifications, Wavelength Specific

- **1 Gbps Ethernet Distance**: 300 m @ 850 nm | 550 m @ 1,300 nm
- **Attenuation, maximum**: 1.00 dB/km @ 1,300 nm | 3.00 dB/km @ 850 nm
- **Backscatter Coefficient**: -68.0 dB @ 850 nm | -75.7 dB @ 1,300 nm
- **Bandwidth, OFL, minimum**: 220 MHz-km @ 850 nm | 500 MHz-km @ 1,300 nm
- **Index of Refraction**: 1.491 @ 1,300 nm | 1.496 @ 850 nm
- **Standards Compliance**: TIA-492AAAA (OM1)

Environmental Specifications

- **Heat Aging, maximum**: 0.20 dB/km @ 85 °C
- **Temperature Dependence, maximum**: 0.1 dB/km
- **Temperature Humidity Cycling, maximum**: 0.2 dB/km
- **Water Immersion, maximum**: 0.20 dB/km @ 23 °C

Regulatory Compliance/Certifications

- **Agency**: ISO 9001:2015
- **Classification**: Designed, manufactured and/or distributed under this quality management system

* Footnotes

- **Temperature Dependence, maximum**: Temperature dependence is conducted at -60 °C to +85 °C (-76 °F to +185 °F)
- **Temperature Humidity Cycling, maximum**: Temperature humidity cycling is conducted at -10 °C to +85 °C (+14 °F to +185 °F) up to 95% relative humidity