TeraSPEED® Plenum Distribution Cable 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

Cable Type
Distribution

Construction Type
Non-armored

Fiber Type, quantity
8

Jacket Color
Red

Subunit Type
Gel-free

Total Fiber Count
8

Dimensions

Diameter Over Jacket
5.02 mm | 0.198 in

Representative Image
Mechanical Specifications

Minimum Bend Radius, loaded 75 mm | 2.953 in
Minimum Bend Radius, unloaded 50 mm | 1.969 in
Tensile Load, long term, maximum 200 N | 44.962 lbf
Tensile Load, short term, maximum 667 N | 149.948 lbf
Compression 10 N/mm | 57.101 lb/in
Compression Test Method FOTP-41 | IEC 60794-1 E3
Flex 100 cycles
Flex Test Method FOTP-104 | IEC 60794-1 E6
Impact 5.88 N-m | 52.042 in lb
Impact Test Method FOTP-25 | IEC 60794-1 E4
Strain See long and short term tensile loads
Strain Test Method FOTP-33 | IEC 60794-1 E1
Twist 10 cycles
Twist Test Method FOTP-85 | IEC 60794-1 E7
Vertical Rise, maximum 500 m | 1,640.42 ft

Optical Specifications


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 OFNP (ETL) and c(ETL)
Flame Test Method NFPA 130 | 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 25 kg/km | 16.799 lb/kft

Regulatory Compliance/Certifications
Agency Classification
ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system

Included Products
CS-8W-TB - TeraSPEED® Singlemode Fiber

* Footnotes
Operating Temperature Specification applicable to non-terminated bulk fiber cable
## TeraSPEED® Singlemode Fiber

### Product Classification

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>CommScope®</th>
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<tbody>
<tr>
<td>Product Type</td>
<td>Optical fiber</td>
</tr>
</tbody>
</table>

### 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>±0.7 µm</td>
</tr>
<tr>
<td>Cladding Non-Circularity, maximum</td>
<td>0.7 %</td>
</tr>
<tr>
<td>Coating Diameter (Colored)</td>
<td>249 µm</td>
</tr>
<tr>
<td>Coating Diameter (Uncolored)</td>
<td>242 µm</td>
</tr>
<tr>
<td>Coating Diameter Tolerance (Colored)</td>
<td>±13 µm</td>
</tr>
<tr>
<td>Coating Diameter Tolerance (Uncolored)</td>
<td>±5 µm</td>
</tr>
<tr>
<td>Coating/Cladding Concentricity Error, maximum</td>
<td>12 µm</td>
</tr>
<tr>
<td>Core Diameter</td>
<td>8.3 µm</td>
</tr>
<tr>
<td>Core/Clad Offset, maximum</td>
<td>0.5 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>

### Dimensions

| Fiber Curl, minimum                                     | 4 m | 13.123 ft |

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Macrobending, 20 mm mandrel, 1 turn</th>
<th>0.75 dB @ 1,550 nm</th>
<th>1.50 dB @ 1,625 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macrobending, 30 mm mandrel, 10 turns</td>
<td>0.25 dB @ 1,550 nm</td>
<td>1.00 dB @ 1,625 nm</td>
</tr>
</tbody>
</table>
Macrobending, 60 mm mandrel, 100 turns | 0.05 dB @ 1,550 nm | 0.05 dB @ 1,625 nm
Coating Strip Force, maximum | 8.9 N | 2.001 lbf
Coating Strip Force, minimum | 1.3 N | 0.292 lbf
Dynamic Fatigue Parameter, minimum | 20

Optical Specifications

Cabled Cutoff Wavelength, maximum | 1260 nm
Point Defects, maximum | 0.1 dB
Zero Dispersion Slope, maximum | 0.092 ps/[km-nm-nm]
Zero Dispersion Wavelength, maximum | 1324 nm
Zero Dispersion Wavelength, minimum | 1300 nm

Optical Specifications, Wavelength Specific

Attenuation, maximum | 0.50 dB/km @ 1,310 nm | 0.50 dB/km @ 1,385 nm | 0.50 dB/km @ 1,490 nm | 0.50 dB/km @ 1,550 nm | 0.50 dB/km @ 1,575 nm | 0.70 dB/km @ 1,270 nm
Backscatter Coefficient | -79.6 dB @ 1,310 nm | -82.1 dB @ 1,550 nm
Dispersion, maximum | 18 ps/(nm-km) at 1550 nm | 3.5 ps/(nm-km) from 1285 nm to 1330 nm at 1310 nm
Index of Refraction | 1.467 @ 1,310 nm | 1.467 @ 1,385 nm | 1.468 @ 1,550 nm
Mode Field Diameter | 10.4 µm @ 1,550 nm | 9.2 µm @ 1,310 nm | 9.6 µm @ 1,385 nm
Mode Field Diameter Tolerance | ±0.4 µm @ 1310 nm | ±0.5 µm @ 1550 nm | ±0.6 µm @ 1385 nm
Polarization Mode Dispersion Link Design Value, maximum | 0.04 ps/sqrt(km)

Environmental Specifications

Heat Aging, maximum | 0.05 dB/km @ 85 °C
Temperature Dependence, maximum | 0.05 dB/km
Temperature Humidity Cycling, maximum | 0.05 dB/km
Water Immersion, maximum | 0.05 dB/km @ 23 °C

Regulatory Compliance/Certifications
### Agency & Classification

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<td>ISO 9001:2015</td>
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* 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