



Fiber OSP cable, TeraSPEED® Single Jacket All-Dielectric, Gel-Free, Stranded Loose Tube, 18 fibers, Singlemode G.652.D and G.657.A1, Feet jacket marking, Black jacket color

## Product Classification

|                       |   |
|-----------------------|---|
| Regional Availability | Asia   Australia/New Zealand   EMEA   Latin America   North America |
| Portfolio             | CommScope®  |
| Product Type          | Fiber OSP cable   |
| Product Series        | D-LN  |

## General Specifications

|                              |                     |
|------------------------------|---------------------|
| Cable Type                   | Stranded loose tube |
| Construction Type            | Non-armored         |
| Subunit Type                 | Gel-free            |
| Filler, quantity             | 3                   |
| Jacket Color                 | Black               |
| Jacket Marking               | Feet                |
| Subunit, quantity            | 2                   |
| Fibers per Subunit, quantity | 12                  |
| Total Fiber Count            | 18                  |

## Dimensions

|                              |                    |
|------------------------------|--------------------|
| Buffer Tube/Subunit Diameter | 2.5 mm   0.098 in  |
| Diameter Over Jacket         | 10.2 mm   0.402 in |

## Representative Image



Material Specifications

Jacket Material

PE

Mechanical Specifications

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Minimum Bend Radius, loaded       | 153 mm   6.024 in                     |
| Minimum Bend Radius, unloaded     | 102 mm   4.016 in                     |
| Tensile Load, long term, maximum  | 800 N   179.847 lbf                   |
| Tensile Load, short term, maximum | 2700 N   606.984 lbf                  |
| Compression                       | 22 N/mm   125.623 lb/in               |
| Compression Test Method           | FOTP-41   IEC 60794-1 E3              |
| Flex                              | 25 cycles                             |
| Flex Test Method                  | FOTP-104   IEC 60794-1 E6             |
| Impact                            | 4.41 N-m   39.032 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            | 1307 m   4,288.058 ft                 |

Optical Specifications

Fiber Type

G.652.D and G.657.A1, TeraSPEED® | OS2

## Environmental Specifications

|                               |  |
|-------------------------------|--|
| Installation temperature      | -30 °C to +70 °C (-22 °F to +158 °F)             |
| Operating Temperature         | -40 °C to +70 °C (-40 °F to +158 °F)             |
| Storage Temperature           | -40 °C to +75 °C (-40 °F to +167 °F)             |
| Cable Qualification Standards | ANSI/ICEA S-87-640   EN 187105   Telcordia GR-20 |
| Environmental Space           | Aerial, lashed   Buried                          |
| Jacket UV Resistance          | UV stabilized                                    |
| Water Penetration             | 24 h   |
| Water Penetration Test Method | FOTP-82   IEC 60794-1 F5                         |

## Environmental Test Specifications

|                               |                                      |
|-------------------------------|--------------------------------------|
| Cable Freeze                  | -2 °C   28.4 °F                      |
| Cable Freeze Test Method      | FOTP-98   IEC 60794-1 F15            |
| Heat Age                      | -40 °C to +85 °C (-40 °F to +185 °F) |
| Heat Age Test Method          | IEC 60794-1 F9                       |
| Low High Bend                 | -30 °C to +60 °C (-22 °F to +140 °F) |
| Low High Bend Test Method     | FOTP-37   IEC 60794-1 E11            |
| Temperature Cycle             | -40 °C to +70 °C (-40 °F to +158 °F) |
| Temperature Cycle Test Method | FOTP-3   IEC 60794-1 F1              |

## Packaging and Weights

|              |                          |
|--------------|--------------------------|
| Cable weight | 63 kg/km   42.334 lb/kft |
|--------------|--------------------------|

## Regulatory Compliance/Certifications

| Agency        | Classification   |
|---------------|--|
| CHINA-ROHS    | Below maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system   |
| REACH-SVHC    | Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a> |
| ROHS          | Compliant  |
| UK-ROHS       | Compliant  |



## Included Products

CS-8W-LT

- TeraSPEED® G652D/G657A1 Singlemode Fiber

## \* Footnotes

**Operating Temperature** Specification applicable to non-terminated bulk fiber cable

TeraSPEED®

TeraSPEED® G652D/G657A1 Singlemode Fiber

Product Classification

|              |               |
|--------------|---------------|
| Portfolio    | CommScope®    |
| Product Type | Optical fiber |

General Specifications

|   |                        |
|---|------------------------|
| Cladding Diameter                             | 125 µm                 |
| Cladding Diameter Tolerance                   | ±0.7 µm                |
| Cladding Non-Circularity, maximum             | 0.7 %                  |
| Coating Diameter (Colored)                    | 249 µm                 |
| Coating Diameter (Uncolored)                  | 242 µm                 |
| Coating Diameter Tolerance (Colored)          | ±13 µm                 |
| Coating Diameter Tolerance (Uncolored)        | ±5 µm                  |
| Coating/Cladding Concentricity Error, maximum | 12 µm                  |
| Core Diameter                                 | 8.3 µm                 |
| Core/Clad Offset, maximum                     | 0.5 µm                 |
| Proof Tensile Stress                          | 100,000 psi (0.69 GPa) |

Dimensions

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

Mechanical Specifications

|  |   |
|--|---|
| Macrobending, 20 mm Ø mandrel, 1 turn    | 0.75 dB @ 1,550 nm   1.50 dB @ 1,625 nm |
| Macrobending, 30 mm Ø mandrel, 10 turns  | 0.25 dB @ 1,550 nm   1.00 dB @ 1,625 nm |
| Macrobending, 60 mm Ø 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                                      |

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## 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                                    | 0.22 dB/km @ 1,550 nm   0.25 dB/km @ 1,490 nm   0.25 dB/km @ 1,625 nm   0.36 dB/km @ 1,310 nm   0.36 dB/km @ 1,385 nm |
| Attenuation, typical                                    | 0.19 dB/km @ 1,550 nm   0.33 dB/km @ 1,310 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)  |
| Standards Compliance                                    | IEC 60793-2-10, edition 6, model A1a.4   ITU-T G.652.D   ITU-T G.657.A1   TIA-492CAAB (OS2)                           |

## 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   |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

## \* Footnotes

# CS-8W-LT

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