



Fiber Indoor/Outdoor cable, TeraSPEED®, Single Jacket All-Dielectric, Riser Rated, 12 fiber, Gel-Free, Stranded Loose Tube, Singlemode + Multimode OM1, Feet jacket marking, Black jacket color

## Product Classification

|                              |  |
|------------------------------|--|
| <b>Regional Availability</b> | Asia   Australia/New Zealand   Latin America   Middle East /Africa   North America |
| <b>Portfolio</b>             | CommScope®   |
| <b>Product Type</b>          | Fiber indoor/outdoor cable   |
| <b>Product Series</b>        | R-LN   |

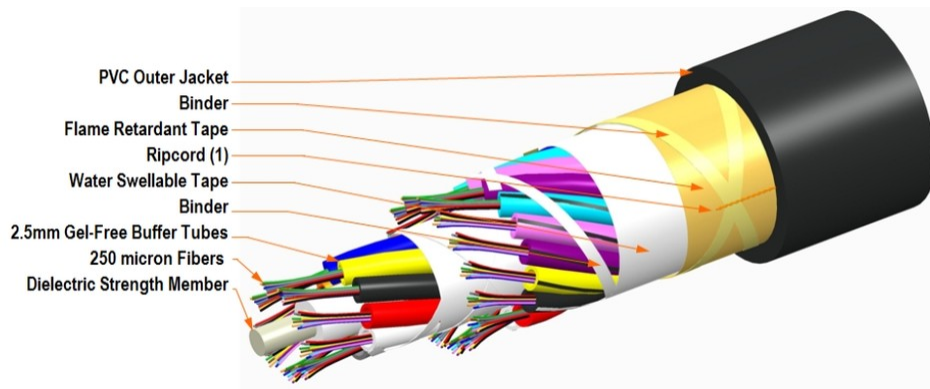
## General Specifications

|                                     |                     |
|-------------------------------------|---------------------|
| <b>Cable Type</b>                   | Stranded loose tube |
| <b>Construction Type</b>            | Non-armored         |
| <b>Subunit Type</b>                 | Gel-free            |
| <b>Filler, quantity</b>             | 3                   |
| <b>Jacket Color</b>                 | Black               |
| <b>Jacket Marking</b>               | Feet                |
| <b>Subunit, quantity</b>            | 2                   |
| <b>Fibers per Subunit, quantity</b> | 6                   |
| <b>Composite Fiber Count</b>        | 6 + 6               |
| <b>Total Fiber Count</b>            | 12                  |

## Dimensions

|                                     |                    |
|-------------------------------------|--------------------|
| <b>Buffer Tube/Subunit Diameter</b> | 2.5 mm   0.098 in  |
| <b>Diameter Over Jacket</b>         | 11.5 mm   0.453 in |

## Representative Image



## Mechanical Specifications

|  |                                       |
|--|---------------------------------------|
| <b>Minimum Bend Radius, loaded</b>       | 173 mm   6.811 in                     |
| <b>Minimum Bend Radius, unloaded</b>     | 115 mm   4.528 in                     |
| <b>Tensile Load, long term, maximum</b>  | 800 N   179.847 lbf                   |
| <b>Tensile Load, short term, maximum</b> | 2700 N   606.984 lbf                  |
| <b>Compression</b>                       | 22 N/mm   125.623 lb/in               |
| <b>Compression Test Method</b>           | FOTP-41   IEC 60794-1 E3              |
| <b>Flex</b>                              | 25 cycles                             |
| <b>Flex Test Method</b>                  | FOTP-104   IEC 60794-1 E6             |
| <b>Impact</b>                            | 2.94 N-m   26.021 in lb               |
| <b>Impact Test Method</b>                | FOTP-25   IEC 60794-1 E4              |
| <b>Strain</b>                            | See long and short term tensile loads |
| <b>Strain Test Method</b>                | FOTP-33   IEC 60794-1 E1              |
| <b>Twist</b>                             | 10 cycles                             |
| <b>Twist Test Method</b>                 | FOTP-85   IEC 60794-1 E7              |
| <b>Vertical Rise, maximum</b>            | 692 m   2,270.341 ft                  |

## Optical Specifications

|                   |  |
|-------------------|--|
| <b>Fiber Type</b> | Composite MM/SM   G.652.D and G.657.A1, TeraSPEED®   OM1, OptiSPEED®   OS2   OS2 |
|-------------------|--|

## Environmental Specifications

|                                 |                                      |
|---------------------------------|--------------------------------------|
| <b>Installation temperature</b> | -10 °C to +60 °C (+14 °F to +140 °F) |
| <b>Operating Temperature</b>    | -40 °C to +70 °C (-40 °F to +158 °F) |

# 760086504 | R-012-LN-CM-F06BK/25D/8W006 /6F006

|                                      |  |
|--------------------------------------|--|
| <b>Storage Temperature</b>           | -40 °C to +75 °C (-40 °F to +167 °F)               |
| <b>Cable Qualification Standards</b> | ANSI/ICEA S-104-696   EN 187105   Telcordia GR-409 |
| <b>Environmental Space</b>           | Riser  |
| <b>Flame Test Listing</b>            | NEC OFNR (ETL) and c(ETL)                          |
| <b>Flame Test Method</b>             | UL 1666  |
| <b>Jacket UV Resistance</b>          | UV stabilized                                      |
| <b>Water Penetration</b>             | 24 h   |
| <b>Water Penetration Test Method</b> | FOTP-82   IEC 60794-1 F5                           |

## Environmental Test Specifications

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

## Packaging and Weights

|                     |                           |
|---------------------|---------------------------|
| <b>Cable weight</b> | 118 kg/km   79.292 lb/kft |
|---------------------|---------------------------|

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |



## Included Products

- CS-6F-LT – OptiSPEED® OM1 Multimode Fiber
- CS-8W-IOLT – TeraSPEED® OS2 Singlemode Fiber

## \* Footnotes

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

# OptiSPEED®

## Product Classification

|                     |               |
|---------------------|---------------|
| <b>Portfolio</b>    | CommScope®    |
| <b>Product Type</b> | Optical fiber |

## General Specifications

|  |  |
|--|--|
| <b>Cladding Diameter</b>                             | 125 µm                                 |
| <b>Cladding Diameter Tolerance</b>                   | ±1.0 µm                                |
| <b>Cladding Non-Circularity, maximum</b>             | 1 %                                    |
| <b>Coating Diameter (Colored)</b>                    | 254 µm                                 |
| <b>Coating Diameter (Uncolored)</b>                  | 245 µm                                 |
| <b>Coating Diameter Tolerance (Colored)</b>          | ±7 µm                                  |
| <b>Coating Diameter Tolerance (Uncolored)</b>        | ±10 µm                                 |
| <b>Coating/Cladding Concentricity Error, maximum</b> | 12 µm                                  |
| <b>Core Diameter</b>                                 | 62.5 µm                                |
| <b>Core Diameter Tolerance</b>                       | ±2.5 µm                                |
| <b>Core/Clad Offset, maximum</b>                     | 1 µm                                   |
| <b>Proof Test</b>                                    | 689.476 N/mm <sup>2</sup>   100000 psi |

## Mechanical Specifications

|   |                                       |
|---|---------------------------------------|
| <b>Macrobending, 75 mm Ø mandrel, 100 turns</b> | 0.50 dB @ 1,300 nm   0.50 dB @ 850 nm |
| <b>Coating Strip Force, maximum</b>             | 8.9 N   2.001 lbf                     |
| <b>Coating Strip Force, minimum</b>             | 1.3 N   0.292 lbf                     |
| <b>Dynamic Fatigue Parameter, minimum</b>       | 18                                    |

## Optical Specifications

# CS-6F-LT

|  |                     |
|--|---------------------|
| <b>Numerical Aperture</b>                  | 0.275               |
| <b>Numerical Aperture Tolerance</b>        | ±0.015              |
| <b>Point Defects, maximum</b>              | 0.15 dB             |
| <b>Zero Dispersion Slope, maximum</b>      | 0.097 ps/[km-nm-nm] |
| <b>Zero Dispersion Wavelength, maximum</b> | 1365 nm             |
| <b>Zero Dispersion Wavelength, minimum</b> | 1320 nm             |

## Optical Specifications, Wavelength Specific

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

## Environmental Specifications

|  |                    |
|--|--------------------|
| <b>Heat Aging, maximum</b>                   | 0.20 dB/km @ 85 °C |
| <b>Temperature Dependence, maximum</b>       | 0.1 dB/km          |
| <b>Temperature Humidity Cycling, maximum</b> | 0.2 dB/km          |
| <b>Water Immersion, maximum</b>              | 0.20 dB/km @ 23 °C |

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |



### \* Footnotes

|  |   |
|--|---|
| <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 |

# TeraSPEED®

## Product Classification

|                     |               |
|---------------------|---------------|
| <b>Portfolio</b>    | CommScope®    |
| <b>Product Type</b> | Optical fiber |

## General Specifications

|  |  |
|--|--|
| <b>Cladding Diameter</b>                             | 125 µm                                 |
| <b>Cladding Diameter Tolerance</b>                   | ±0.7 µm                                |
| <b>Cladding Non-Circularity, maximum</b>             | 0.7 %                                  |
| <b>Coating Diameter (Colored)</b>                    | 249 µm                                 |
| <b>Coating Diameter (Uncolored)</b>                  | 242 µm                                 |
| <b>Coating Diameter Tolerance (Colored)</b>          | ±13 µm                                 |
| <b>Coating Diameter Tolerance (Uncolored)</b>        | ±5 µm                                  |
| <b>Coating/Cladding Concentricity Error, maximum</b> | 12 µm                                  |
| <b>Core Diameter</b>                                 | 8.3 µm                                 |
| <b>Core/Clad Offset, maximum</b>                     | 0.5 µm                                 |
| <b>Proof Test</b>                                    | 689.476 N/mm <sup>2</sup>   100000 psi |

## Dimensions

|                            |                 |
|----------------------------|-----------------|
| <b>Fiber Curl, minimum</b> | 4 m   13.123 ft |
|----------------------------|-----------------|

## Mechanical Specifications

|   |   |
|---|---|
| <b>Macrobending, 20 mm Ø mandrel, 1 turn</b>    | 0.75 dB @ 1,550 nm   1.50 dB @ 1,625 nm |
| <b>Macrobending, 30 mm Ø mandrel, 10 turns</b>  | 0.25 dB @ 1,550 nm   1.00 dB @ 1,625 nm |
| <b>Macrobending, 60 mm Ø mandrel, 100 turns</b> | 0.05 dB @ 1,550 nm   0.05 dB @ 1,625 nm |
| <b>Coating Strip Force, maximum</b>             | 8.9 N   2.001 lbf                       |

# CS-8W-IOLT

|   |                   |
|---|-------------------|
| <b>Coating Strip Force, minimum</b>       | 1.3 N   0.292 lbf |
| <b>Dynamic Fatigue Parameter, minimum</b> | 20                |

## Optical Specifications

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

## Optical Specifications, Wavelength Specific

|  |   |
|--|---|
| <b>Attenuation, maximum</b>                                    | 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 |
| <b>Attenuation, typical</b>                                    | 0.19 dB/km @ 1,550 nm   0.33 dB/km @ 1,310 nm   |
| <b>Backscatter Coefficient</b>                                 | -79.6 dB @ 1,310 nm   -82.1 dB @ 1,550 nm   |
| <b>Dispersion, maximum</b>                                     | 18 ps(nm-km) at 1550 nm   3.5 ps(nm-km) from 1285 nm to 1330 nm at 1310 nm  |
| <b>Index of Refraction</b>                                     | 1.467 @ 1,310 nm   1.467 @ 1,385 nm   1.468 @ 1,550 nm  |
| <b>Mode Field Diameter</b>                                     | 10.4 $\mu\text{m}$ @ 1,550 nm   9.2 $\mu\text{m}$ @ 1,310 nm   9.6 $\mu\text{m}$ @ 1,385 nm                           |
| <b>Mode Field Diameter Tolerance</b>                           | $\pm 0.4 \mu\text{m}$ @ 1310 nm   $\pm 0.5 \mu\text{m}$ @ 1550 nm   $\pm 0.6 \mu\text{m}$ @ 1385 nm                   |
| <b>Polarization Mode Dispersion Link Design Value, maximum</b> | 0.04 ps/sqrt(km)  |
| <b>Standards Compliance</b>                                    | ITU-T G.652.D   ITU-T G.657.A1   TIA-492CAAB (OS2)  |

## Environmental Specifications

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

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

# CS-8W-IOLT

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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