

Fiber indoor/outdoor cable, TeraSPEED®, Single Jacket All-Dielectric, Low Smoke Zero Halogen (LSZH), 48 fiber, Multimode/Singlemode, Gel-Free, Stranded Loose Tube, Black jacket color, Feet cable marking, Eca flame rating

Product Classification

Regional Availability

Asia | Australia/New Zealand | EMEA | Latin America | North America

Portfolio

CommScope®

Product Type

Fiber indoor/outdoor cable

Product Series

Z-LN

General Specifications

Cable Type

Stranded loose tube

Construction Type

Non-armored

Subunit Type

Gel-free

Filler, quantity

1

Jacket Color

Black

Jacket Marking

Feet

Subunit, quantity

4

Fibers per Subunit, quantity

12

Composite Fiber Count

24 + 24

Total Fiber Count

48

Dimensions

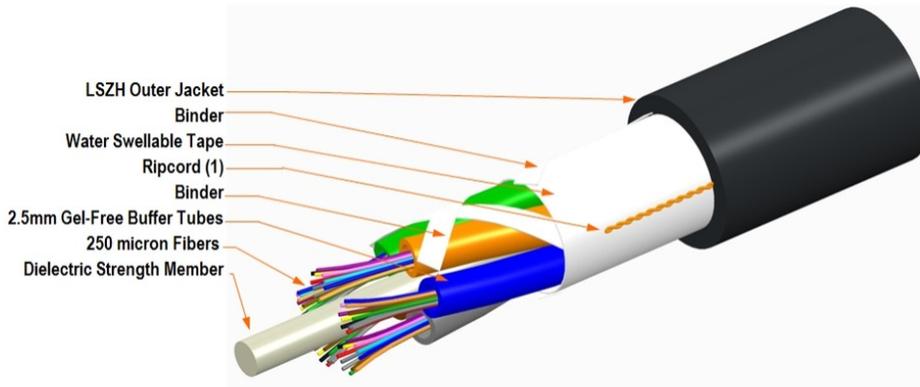
Buffer Tube/Subunit Diameter

2.5 mm | 0.098 in

Diameter Over Jacket

11.7 mm | 0.461 in

Representative Image



Mechanical Specifications

| | |
|--|---------------------------------------|
| Minimum Bend Radius, loaded | 175 mm 6.89 in |
| Minimum Bend Radius, unloaded | 117 mm 4.606 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 | 3 N-m 26.552 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 | 654 m 2,145.669 ft |

Optical Specifications

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|-------------------|--|
| Fiber Type | Composite MM/SM G.652.D and G.657.A1, TeraSPEED® OM5, LazrSPEED® OS2 OS2 |
|-------------------|--|

Environmental Specifications

| | |
|---------------------------------|--------------------------------------|
| Installation temperature | -30 °C to +60 °C (-22 °F to +140 °F) |
| Operating Temperature | -40 °C to +70 °C (-40 °F to +158 °F) |

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| | |
|---|--|
| Storage Temperature | -40 °C to +75 °C (-40 °F to +167 °F) |
| Cable Qualification Standards | ANSI/ICEA S-104-696 EN 187105 Telcordia GR-20 Telcordia GR-409 |
| EN50575 CPR Cable EuroClass Fire Performance | Eca |
| Environmental Space | Aerial, lashed Buried Low Smoke Zero Halogen (LSZH) |
| Flame Test Listing | NEC OFN-ST1 (ETL) and c(ETL) |
| Flame Test Method | IEC 60332-3 IEC 60754-2 IEC 61034-2 IEEE 1202 UL 1685 |
| 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 |
| Drip | 70 °C 158 °F |
| Drip Test Method | FOTP-81 IEC 60794-1 E14 |
| 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 | 125 kg/km 83.996 lb/kft |
|---------------------|---------------------------|

Included Products

- CS-5G-LT - LazrSPEED® OM5 WideBand Multimode Fiber
- CS-8W-IOLT - TeraSPEED® OS2 Singlemode Fiber

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable

LazrSPEED® OM5 WideBand Multimode Fiber

LazrSPEED® 550

Product Classification

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

General Specifications

| | |
|--|------------------------|
| Cladding Diameter | 125 µm |
| Cladding Diameter Tolerance | ±5 µm |
| Cladding Non-Circularity, maximum | 0.7 % |
| Coating Diameter (Colored) | 254 µm |
| Coating Diameter (Uncolored) | 242 µm |
| Coating Diameter Tolerance (Colored) | ±7 µm |
| Coating Diameter Tolerance (Uncolored) | ±5 µm |
| Coating/Cladding Concentricity Error, maximum | 12 µm |
| Core Diameter | 50 µm |
| Core Diameter Tolerance | ±2.5 µm |
| Core/Clad Offset, maximum | 1 µm |
| Proof Tensile Stress | 100,000 psi (0.69 GPa) |

Mechanical Specifications

| | |
|---|---------------------------------------|
| Macrobending, 15 mm Ø mandrel, 2 turns | 0.20 dB @ 850 nm 0.50 dB @ 1,300 nm |
| Macrobending, 30 mm Ø mandrel, 2 turns | 0.10 dB @ 850 nm 0.30 dB @ 1,300 nm |
| Macrobending, 75 mm Ø mandrel, 100 turns | 0.50 dB @ 1,300 nm 0.50 dB @ 850 nm |
| Coating Strip Force, maximum | 4.5 N 1.012 lbf |
| Coating Strip Force, minimum | 0.9 N 0.202 lbf |
| Dynamic Fatigue Parameter, minimum | 18 |

Optical Specifications

| | |
|---------------------------|-----|
| Numerical Aperture | 0.2 |
|---------------------------|-----|

CS-5G-LT

| | |
|---|--|
| Numerical Aperture Tolerance | ±0.010 |
| Point Defects, maximum | 0.15 dB |
| Zero Dispersion Slope, maximum (OM5) | -412/(840(1-(λ0/840)^4)) ps/[km-nm-nm] |
| Zero Dispersion Wavelength, maximum | 1328 nm |
| Zero Dispersion Wavelength, minimum | 1297 nm |

Optical Specifications, Wavelength Specific

| | |
|----------------------------------|--|
| 1 Gbps Ethernet Distance | 1,110 m @ 850 nm 600 m @ 1,300 nm |
| 10 Gbps Ethernet Distance | 550 m @ 850 nm |
| Attenuation, maximum | 1.00 dB/km @ 1,300 nm 2.20 dB/km @ 953 nm 3.00 dB/km @ 850 nm |
| Bandwidth, Laser, minimum | 2,600 MHz-km @ 953 nm 4,700 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm |
| Bandwidth, OFL, minimum | 1,950 MHz-km @ 953 nm 3,500 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm |
| Index of Refraction | 1.478 @ 1,300 nm 1.483 @ 850 nm |
| Standards Compliance | ANSI/TIA-492AAAF (OM5) ANSI/TIA-568.3 (OM5) IEC 60793-2-10, A1 (OM5) ISO/IEC 11801-1 cabled optical fiber performance category OM5 |

Environmental Specifications

| | |
|--|--------------------|
| Heat Aging, maximum | 0.10 dB/km @ 85 °C |
| Temperature Dependence, maximum | 0.1 dB/km |
| Temperature Humidity Cycling, maximum | 0.1 dB/km |
| Water Immersion, maximum | 0.10 dB/km @ 23 °C |

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| ISO 9001:2015 | 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 |

TeraSPEED®

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 |

CS-8W-IOLT

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 | $\pm 0.4 \mu\text{m}$ @ 1310 nm $\pm 0.5 \mu\text{m}$ @ 1550 nm $\pm 0.6 \mu\text{m}$ @ 1385 nm |
| Polarization Mode Dispersion Link Design Value, maximum | 0.04 ps/sqrt(km) |
| Standards Compliance | 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-IOLT

| | |
|--|---|
| 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 |