



Fiber Indoor/Outdoor cable, LazrSPEED®, Single Jacket All-Dielectric, Riser Rated, 48 fiber, Gel-Free, Stranded Loose Tube, Multimode OM4, Feet jacket marking, Black jacket color

Product Classification

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

General Specifications

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|-------------------------------------|---------------------|
| 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 |
| Total Fiber Count | 48 |

Dimensions

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

Representative Image



Mechanical Specifications

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|--|---------------------------------------|
| Minimum Bend Radius, loaded | 173 mm 6.811 in |
| Minimum Bend Radius, unloaded | 115 mm 4.528 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 | 2.94 N-m 26.021 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 | 692 m 2,270.341 ft |

Optical Specifications

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|-------------------|---|
| Fiber Type | OM4, LazrSPEED® 550 OM4, LazrSPEED® 550 |
|-------------------|---|

Environmental Specifications

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|---------------------------------|--------------------------------------|
| Installation temperature | -10 °C to +60 °C (+14 °F to +140 °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) |

760228247 | R-048-LN-5K-F12BK/25D

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|--------------------------------------|--|
| Cable Qualification Standards | ANSI/ICEA S-104-696 EN 187105 Telcordia GR-409 |
| Environmental Space | Riser |
| Flame Test Listing | NEC OFNR (ETL) and c(ETL) |
| Flame Test Method | UL 1666 |
| Jacket UV Resistance | UV stabilized |
| Water Penetration | 24 h |
| Water Penetration Test Method | FOTP-82 IEC 60794-1 F5 |

Environmental Test Specifications

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

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|---------------------|---------------------------|
| Cable weight | 118 kg/km 79.292 lb/kft |
|---------------------|---------------------------|

Regulatory Compliance/Certifications

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

Included Products

| | |
|----------|---|
| CS-5K-LT | - LazrSPEED® 550 OM4 Bend-Insensitive Multimode Fiber |
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* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable

LazrSPEED® 550

Product Classification

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

General Specifications

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|--|------------------------|
| Cladding Diameter | 125 µm |
| Cladding Diameter Tolerance | ±5 µm |
| Cladding Non-Circularity, maximum | 1 % |
| Coating Diameter (Colored) | 254 µm |
| Coating Diameter (Uncolored) | 245 µm |
| Coating Diameter Tolerance (Colored) | ±7 µm |
| Coating Diameter Tolerance (Uncolored) | ±10 µm |
| Coating/Cladding Concentricity Error, maximum | 12 µm |
| Core Diameter | 50 µm |
| Core Diameter Tolerance | ±2.5 µm |
| Core/Clad Offset, maximum | 1.5 µm |
| Proof Tensile Stress | 100,000 psi (0.69 GPa) |

Mechanical Specifications

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|---|---------------------------------------|
| 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 | 8.9 N 2.001 lbf |
| Coating Strip Force, minimum | 1.3 N 0.292 lbf |
| Dynamic Fatigue Parameter, minimum | 18 |

Optical Specifications

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

CS-5K-LT

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|--|---------------------|
| Numerical Aperture Tolerance | ±0.015 |
| Point Defects, maximum | 0.15 dB |
| Zero Dispersion Slope, maximum | 0.105 ps/[km-nm-nm] |
| Zero Dispersion Wavelength, maximum | 1316 nm |
| Zero Dispersion Wavelength, minimum | 1297 nm |

Optical Specifications, Wavelength Specific

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|-------------------------------------|---|
| 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 3.00 dB/km @ 850 nm |
| Backscatter Coefficient | -68.0 dB @ 850 nm -75.7 dB @ 1,300 nm |
| Bandwidth, Laser, minimum | 4,700 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm |
| Bandwidth, OFL, minimum | 3,500 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm |
| Differential Mode Delay | 0.70 ps/m @ 850 nm |
| Differential Mode Delay Note | Superior to ANSI/TIA TIA-492AAAF and IEC 60793-2-10 at 850 nm |
| Index of Refraction | 1.479 @ 1,300 nm 1.483 @ 850 nm |
| Standards Compliance | ANSI/TIA-492AAAF (OM4) IEC 60793-2-10, A1 (OM4) |

Environmental Specifications

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