

# N-048-DS-5L-FMU

Fiber indoor cable, LazrSPEED® Low Smoke Zero Halogen Riser Distribution, 48 fiber multi-unit with 12 fiber subunits, Gel-free, Multimode OM3, Feet jacket marking, Cca flame rating

## Product Classification

|                              |   |
|------------------------------|---|
| <b>Regional Availability</b> | Asia   Australia/New Zealand   EMEA   Latin America   North America |
| <b>Portfolio</b>             | CommScope®  |
| <b>Product Type</b>          | Fiber indoor cable  |
| <b>Product Series</b>        | N-DS  |

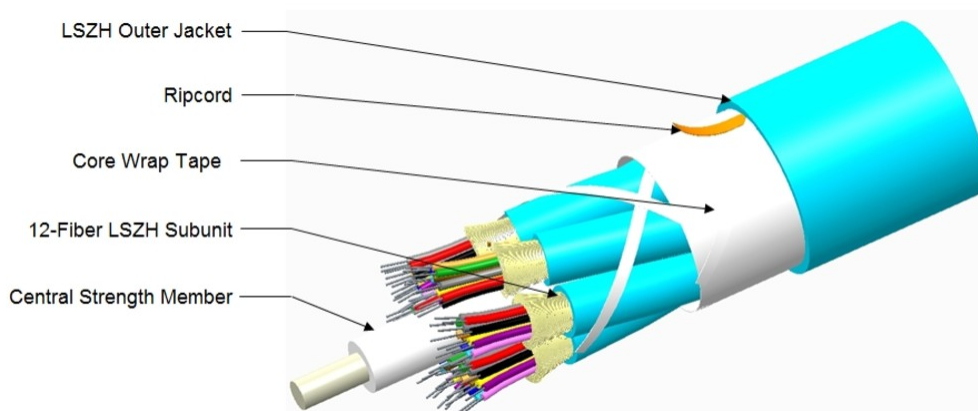
## General Specifications

|                                     |              |
|-------------------------------------|--------------|
| <b>Cable Type</b>                   | Distribution |
| <b>Construction Type</b>            | Non-armored  |
| <b>Subunit Type</b>                 | Gel-free     |
| <b>Jacket Marking</b>               | Feet         |
| <b>Subunit, quantity</b>            | 4            |
| <b>Fibers per Subunit, quantity</b> | 12           |
| <b>Total Fiber Count</b>            | 48           |

## Dimensions

|                                     |                     |
|-------------------------------------|---------------------|
| <b>Buffer Tube/Subunit Diameter</b> | 6.07 mm   0.239 in  |
| <b>Diameter Over Jacket</b>         | 16.19 mm   0.637 in |

## Representative Image



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## Mechanical Specifications

|  |                                       |
|--|---------------------------------------|
| <b>Minimum Bend Radius, loaded</b>       | 243 mm   9.567 in                     |
| <b>Minimum Bend Radius, unloaded</b>     | 162 mm   6.378 in                     |
| <b>Tensile Load, long term, maximum</b>  | 400 N   89.924 lbf                    |
| <b>Tensile Load, short term, maximum</b> | 1335 N   300.12 lbf                   |
| <b>Compression</b>                       | 10 N/mm   57.101 lb/in                |
| <b>Compression Test Method</b>           | FOTP-41   IEC 60794-1 E3              |
| <b>Flex</b>                              | 100 cycles                            |
| <b>Flex Test Method</b>                  | FOTP-104   IEC 60794-1 E6             |
| <b>Impact</b>                            | 5.88 N-m   52.042 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>            | 183 m   600.394 ft                    |

## Optical Specifications

|                   |   |
|-------------------|---|
| <b>Fiber Type</b> | OM3, LazrSPEED® 300   OM3, LazrSPEED® 300 |
|-------------------|---|

## Environmental Specifications

|   |   |
|---|---|
| <b>Installation temperature</b>                     | -10 °C to +60 °C (+14 °F to +140 °F)                        |
| <b>Operating Temperature</b>                        | -20 °C to +70 °C (-4 °F to +158 °F)                         |
| <b>Storage Temperature</b>                          | -40 °C to +70 °C (-40 °F to +158 °F)                        |
| <b>Cable Qualification Standards</b>                | ANSI/ICEA S-83-596   Telcordia GR-409                       |
| <b>EN50575 CPR Cable EuroClass Fire Performance</b> | Cca   |
| <b>EN50575 CPR Cable EuroClass Smoke Rating</b>     | s1b   |
| <b>EN50575 CPR Cable EuroClass Droplets Rating</b>  | d1  |
| <b>EN50575 CPR Cable EuroClass Acidity Rating</b>   | a1  |
| <b>Environmental Space</b>                          | Low Smoke Zero Halogen (LSZH)   Riser                       |
| <b>Flame Test Listing</b>                           | NEC OFNR-ST1 (ETL) and c(ETL)                               |
| <b>Flame Test Method</b>                            | IEC 60332-3   IEC 60754-2   IEC 61034-2   UL 1666   UL 1685 |

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## Environmental Test Specifications

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Heat Age</b>                      | -20 °C to +85 °C (-4 °F to +185 °F)  |
| <b>Heat Age Test Method</b>          | IEC 60794-1 F9                       |
| <b>Low High Bend</b>                 | -10 °C to +60 °C (+14 °F to +140 °F) |
| <b>Low High Bend Test Method</b>     | FOTP-37   IEC 60794-1 E11            |
| <b>Temperature Cycle</b>             | -20 °C to +70 °C (-4 °F to +158 °F)  |
| <b>Temperature Cycle Test Method</b> | FOTP-3   IEC 60794-1 F1              |

## Packaging and Weights

|                     |                            |
|---------------------|----------------------------|
| <b>Cable weight</b> | 224 kg/km   150.521 lb/kft |
|---------------------|----------------------------|

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| CENELEC       | EN 50575 compliant, Declaration of Performance (DoP) available                 |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |



## Included Products

|          |   |
|----------|---|
| CS-5L-TB | - LazrSPEED® 300 OM3 Bend-Insensitive Multimode Fiber |
|----------|---|

## \* Footnotes

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

## LazrSPEED® 300 OM3 Bend-Insensitive Multimode Fiber

### LazrSPEED® 300

#### 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>                   | ±0.8 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>                                 | 50 µm                                  |
| <b>Core Diameter Tolerance</b>                       | ±2.5 µm                                |
| <b>Core/Clad Offset, maximum</b>                     | 1.5 µm                                 |
| <b>Proof Test</b>                                    | 689.476 N/mm <sup>2</sup>   100000 psi |
| <b>Tight Buffer Diameter</b>                         | 900 µm                                 |
| <b>Tight Buffer Diameter Tolerance</b>               | ±40 µm                                 |

#### Mechanical Specifications

|   |                                       |
|---|---------------------------------------|
| <b>Macrobending, 15 mm Ø mandrel, 2 turns</b>   | 0.20 dB @ 850 nm   0.50 dB @ 1,300 nm |
| <b>Macrobending, 30 mm Ø mandrel, 2 turns</b>   | 0.10 dB @ 850 nm   0.30 dB @ 1,300 nm |
| <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                     |

# CS-5L-TB

|   |                   |
|---|-------------------|
| <b>Coating Strip Force, minimum</b>       | 1.3 N   0.292 lbf |
| <b>Dynamic Fatigue Parameter, minimum</b> | 18                |

## Optical Specifications

|  |                     |
|--|---------------------|
| <b>Numerical Aperture</b>                  | 0.2                 |
| <b>Numerical Aperture Tolerance</b>        | ±0.015              |
| <b>Point Defects, maximum</b>              | 0.15 dB             |
| <b>Zero Dispersion Slope, maximum</b>      | 0.105 ps/[km-nm-nm] |
| <b>Zero Dispersion Wavelength, maximum</b> | 1316 nm             |
| <b>Zero Dispersion Wavelength, minimum</b> | 1297 nm             |

## Optical Specifications, Wavelength Specific

|                                     |  |
|-------------------------------------|--|
| <b>1 Gbps Ethernet Distance</b>     | 1,020 m @ 850 nm   600 m @ 1,300 nm                  |
| <b>10 Gbps Ethernet Distance</b>    | 300 m @ 850 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, Laser, minimum</b>    | 2,000 MHz-km @ 850 nm   500 MHz-km @ 1,300 nm        |
| <b>Bandwidth, OFL, minimum</b>      | 1,500 MHz-km @ 850 nm   500 MHz-km @ 1,300 nm        |
| <b>Differential Mode Delay</b>      | 0.70 ps/m @ 850 nm   0.88 ps/m @ 1,300 nm            |
| <b>Differential Mode Delay Note</b> | Superior to TIA-492AAAC and IEC 60793-2-10 at 850 nm |
| <b>Index of Refraction</b>          | 1.479 @ 1,300 nm   1.483 @ 850 nm                    |
| <b>Standards Compliance</b>         | TIA-492AAAC (OM3)                                    |

## 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

# CS-5L-TB

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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 |