

HELIAX® LazrSPEED® Hybrid Cable, UL Type TC-OF-ER

## Product Classification

|                              |   |
|------------------------------|---|
| <b>Regional Availability</b> | Asia   Australia/New Zealand   EMEA   Latin America   North America |
| <b>Portfolio</b>             | CommScope®  |
| <b>Product Type</b>          | Hybrid cable, copper and fiber                                      |
| <b>Product Brand</b>         | HELIAX®   LazrSPEED®  |

## General Specifications

|                                     |   |
|-------------------------------------|---|
| <b>Application</b>                  | Remote radio head                               |
| <b>Cable Type</b>                   | Wireless feeder                                 |
| <b>Conductors, quantity</b>         | 12  |
| <b>Construction Type</b>            | Shielded  |
| <b>Fiber Short Description</b>      | RFF – 6AWG                                      |
| <b>Fiber Type, quantity</b>         | 24  |
| <b>Fibers per Subunit, quantity</b> | 12  |
| <b>Inner Shield (Tape) Material</b> | Corrugated aluminum                             |
| <b>Jacket Color</b>                 | Black   |
| <b>Outer Shield (Tape) Material</b> | PVC   |
| <b>Strength Members</b>             | Glass reinforced plastic rod                    |
| <b>Subunit, quantity</b>            | 2   |
| <b>Total Fiber Count</b>            | 24  |
| <b>Water Blocking Method</b>        | Water blocking tape(s)   Water blocking threads |

## Dimensions

|                                     |                    |
|-------------------------------------|--------------------|
| <b>Buffer Tube/Subunit Diameter</b> | 0.24 in   6.096 mm |
|-------------------------------------|--------------------|

# 760202911 | HTC-24MM-1206-APV

**Diameter Over Jacket** 1.42 in | 36.068 mm

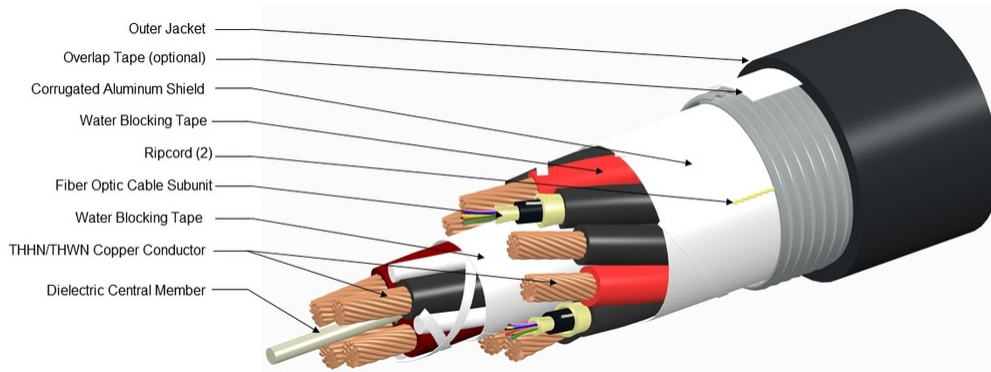
**Conductor Gauge** 6 AWG

## Electrical Specifications

**dc Resistance Note** Maximum value based on a standard condition of 20 °C (68 °F)

**dc Resistance, maximum** 0.412 ohms/kft | 1.352 ohms/km

## Representative Image



## Material Specifications

**Ripcord Material** Para-aramid synthetic fiber

## Mechanical Specifications

**Minimum Bend Radius, multiple bends, loaded** 28.4 in | 721.36 mm

**Minimum Bend Radius, multiple bends, unloaded** 14.2 in | 360.68 mm

**Minimum Bend Radius, single bend, unloaded** 9.9 in | 251.46 mm

**Tensile Load, long term, maximum** 450 lbf | 2,001.699 N

**Tensile Load, short term, maximum** 1500 lbf | 6,672.33 N

**Compression** 250 lb/in | 4.465 kg/mm

**Compression Test Method** FOTP-41

**Flex Test Method** FOTP-104

**Impact** 4.34 ft lb | 5.884 N-m

**Impact Test Method** FOTP-25

**Twist** 10 cycles

**Twist Test Method** FOTP-85

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## Optical Specifications

**Fiber Type** OM2+, LazrSPEED® 150 | OM2+, LazrSPEED® 150

## Environmental Specifications

**Installation temperature** -30 °C to +70 °C (-22 °F to +158 °F)

**Operating Temperature** -40 °C to +80 °C (-40 °F to +176 °F)

**Storage Temperature** -40 °C to +80 °C (-40 °F to +176 °F)

**Cable Qualification Standards** ANSI/ICEA S-104-696 | ANSI/ICEA S-87-640 | Telcordia GR-20 | Telcordia GR-409 | UL 1277

**Environmental Space** Wireless installation

## Packaging and Weights

**Cable weight** 1590 lb/kft | 2,366.181 kg/km

## Regulatory Compliance/Certifications

| Agency     | Classification   |
|------------|--|
| CHINA-ROHS | Below maximum concentration value  |
| REACH-SVHC | Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a> |
| ROHS       | Compliant  |



## Included Products

CS-5M-MP – LazrSPEED® 150 OM2+ Bend-Insensitive Multimode Fiber

## \* Footnotes

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

# CS-5M-MP

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## LazrSPEED® 150 OM2+ Bend-Insensitive Multimode Fiber

### LazrSPEED® 150

#### 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 |

#### Mechanical Specifications

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

# CS-5M-MP

## 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>  | 600 m @ 1,300 nm   800 m @ 850 nm           |
| <b>10 Gbps Ethernet Distance</b> | 150 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> | 500 MHz-km @ 1,300 nm   950 MHz-km @ 850 nm |
| <b>Bandwidth, OFL, minimum</b>   | 500 MHz-km @ 1,300 nm   700 MHz-km @ 850 nm |
| <b>Differential Mode Delay</b>   | 0.70 ps/m @ 850 nm   0.88 ps/m @ 1,300 nm   |
| <b>Index of Refraction</b>       | 1.479 @ 1,300 nm   1.483 @ 850 nm           |
| <b>Standards Compliance</b>      | TIA-492AAAB (OM2+)                          |

## 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) |
|--|---|

# CS-5M-MP

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**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