

## HELIAX® 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®

### General Specifications

<b>Application</b>	Remote radio head
<b>Cable Type</b>	Wireless feeder
<b>Conductors, quantity</b>	2
<b>Construction Type</b>	Shielded
<b>Fiber Short Description</b>	RFF – 12AWG
<b>Fiber Type, quantity</b>	4
<b>Fibers per Subunit, quantity</b>	2
<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>	4
<b>Water Blocking Method</b>	Water blocking tape(s)   Water blocking threads

### Dimensions

<b>Buffer Tube/Subunit Diameter</b>	3.048 mm   0.12 in
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# 760217786 | HTC-4SM-212-APV

**Diameter Over Jacket** 14.224 mm | 0.56 in

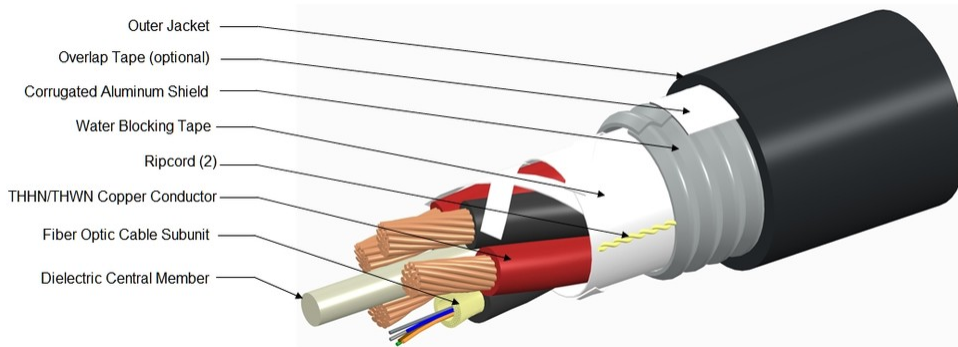
**Conductor Gauge** 12 AWG

## Electrical Specifications

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

**dc Resistance, maximum** 5.413 ohms/km | 1.65 ohms/kft

## Representative Image



## Material Specifications

**Ripcord Material** Para-aramid synthetic fiber

## Mechanical Specifications

**Minimum Bend Radius, multiple bends, loaded** 284.48 mm | 11.2 in

**Minimum Bend Radius, multiple bends, unloaded** 142.24 mm | 5.6 in

**Minimum Bend Radius, single bend, unloaded** 99.06 mm | 3.9 in

**Tensile Load, long term, maximum** 266.893 N | 60 lbf

**Tensile Load, short term, maximum** 889.644 N | 200 lbf

**Compression** 2.25 kg/mm | 126 lb/in

**Compression Test Method** FOTP-41

**Flex** 25 cycles

**Flex Test Method** FOTP-104

**Impact** 2.17 ft lb | 2.942 N-m

**Impact Test Method** FOTP-25

**Twist** 10 cycles

**Twist Test Method** FOTP-85

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## Optical Specifications

**Fiber Type** G.657.A2/B2 | G.657.A2/B2

## 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-87-640 | Telcordia GR-20 | Telcordia GR-409

**Environmental Space** Wireless installation

## Packaging and Weights

**Cable weight** 239.594 kg/km | 161 lb/kft

## 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-8G-MP – Enhanced Low Macrobending, Zero Water Peak, Dispersion-Unshifted Singlemode Fiber (ITU-T G.657.A2, B2)

## \* Footnotes

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

# CS-8G-MP

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Enhanced Low Macrobending, Zero Water Peak, Dispersion-Unshifted Singlemode Fiber (ITU-T G.657.A2, B2)

## 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/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
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## Mechanical Specifications

<b>Macrobending, 15 mm mandrel, 1 turn</b>	0.50 dB @ 1,550 nm   1.00 dB @ 1,625 nm
<b>Macrobending, 20 mm mandrel, 1 turn</b>	0.10 dB @ 1,550 nm   0.20 dB @ 1,625 nm
<b>Macrobending, 30 mm mandrel, 10 turns</b>	0.03 dB @ 1,550 nm   0.10 dB @ 1,625 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>	20

## Optical Specifications

<b>Cabled Cutoff Wavelength, maximum</b>	1260 nm
<b>Point Defects, maximum</b>	0.1 dB

# CS-8G-MP

<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>	1302 nm

## Optical Specifications, Wavelength Specific

<b>Attenuation, maximum</b>	0.40 dB/km @ 1,310 nm   0.40 dB/km @ 1,385 nm   0.40 dB/km @ 1,550 nm   0.50 dB/km @ 1,625 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>	8.6 $\mu\text{m}$ @ 1,310 nm   9.8 $\mu\text{m}$ @ 1,550 nm
<b>Mode Field Diameter Tolerance</b>	$\pm 0.4 \mu\text{m}$ @ 1310 nm   $\pm 0.5 \mu\text{m}$ @ 1550 nm
<b>Polarization Mode Dispersion Link Design Value, maximum</b>	0.06 ps/sqrt(km)
<b>Standards Compliance</b>	ITU-T G.657.A2   ITU-T G.657.B2

## 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



## \* 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