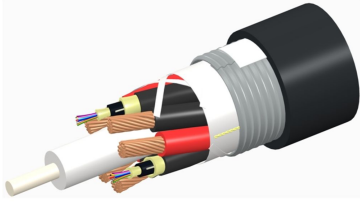


# HFC-12SM-612-SPE

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HELIAX® Hybrid Cable with steel armor

## Product Classification

### Regional Availability

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

### Portfolio

CommScope®

### Product Type

Hybrid cable, copper and fiber

### Product Brand

HELIAX®

## General Specifications

### Application

Remote radio head

### Armor Type

Corrugated steel

### Cable Type

Wireless feeder

### Conductors, quantity

6

### Construction Type

Armored

### Fiber Short Description

RFF – 12AWG

### Inner Shield (Tape) Material

Corrugated steel

### Jacket Color

Black

### Outer Shield (Tape) Material

PE

### Strength Members

Glass reinforced plastic rod

### Subunit, quantity

6

### Fibers per Subunit, quantity

12

### Total Fiber Count

12

### Water Blocking Method

Water blocking tape(s) | Water blocking threads

## Dimensions

### Buffer Tube/Subunit Diameter

3.048 mm | 0.12 in

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**Diameter Over Jacket** 20.574 mm | 0.81 in

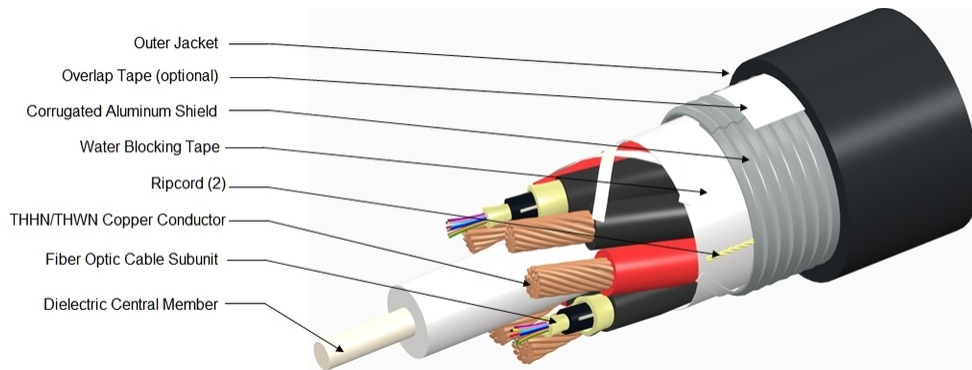
**Conductor Gauge** 12 AWG

## 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** 414.02 mm | 16.3 in

**Minimum Bend Radius, multiple bends, unloaded** 205.74 mm | 8.1 in

**Minimum Bend Radius, single bend, unloaded** 144.78 mm | 5.7 in

**Tensile Load, long term, maximum** 800.68 N | 180 lbf

**Tensile Load, short term, maximum** 2,668.932 N | 600 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** 513.417 kg/km | 345 lb/kft

## Regulatory Compliance/Certifications

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

## 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 Ø mandrel, 1 turn</b>	0.50 dB @ 1,550 nm   1.00 dB @ 1,625 nm
<b>Macrobending, 20 mm Ø mandrel, 1 turn</b>	0.10 dB @ 1,550 nm   0.20 dB @ 1,625 nm
<b>Macrobending, 30 mm Ø 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