

HELIAX® Hybrid Cable with aluminum 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

Cable Type

Wireless feeder

Conductors, quantity

4

Construction Type

Shielded

Fiber Short Description

RFF – 12AWG

Fiber Type, quantity

144

Fibers per Subunit, quantity

12

Inner Shield (Tape) Material

Corrugated aluminum

Jacket Color

Black

Outer Shield (Tape) Material

PE

Strength Members

Glass reinforced plastic rod

Subunit, quantity

12

Total Fiber Count

144

Water Blocking Method

Water blocking tape(s) | Water blocking threads

Dimensions

Buffer Tube/Subunit Diameter

2.54 mm | 0.1 in

760245739 | HTC-144SM-DT-412-218-APVA

Diameter Over Jacket 22.352 mm | 0.88 in

Conductor Gauge 12 AWG

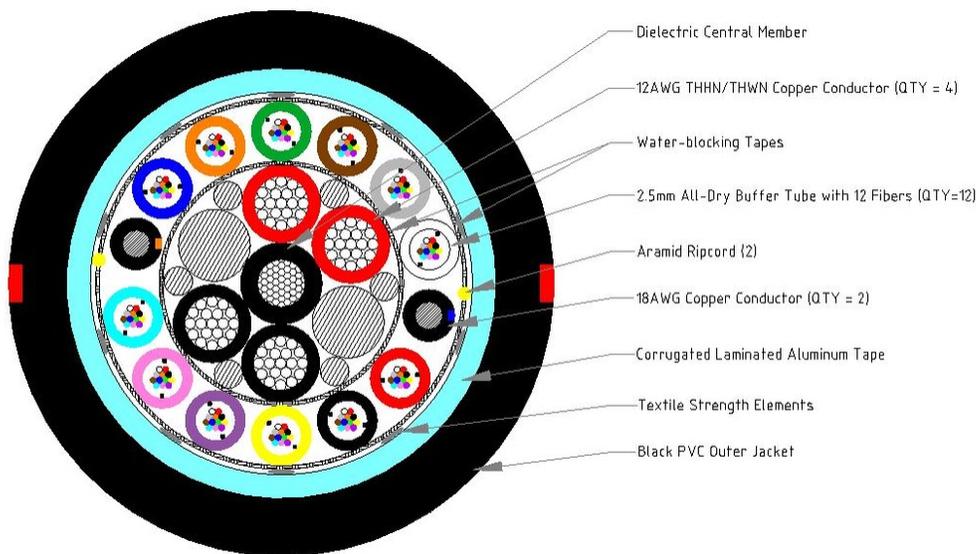
Electrical Specifications

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

Electrical Safety Standard UL 1277, Type TC-ER-OF

Representative Image



Material Specifications

Ripcord Material Para-aramid synthetic fiber

Mechanical Specifications

Minimum Bend Radius, multiple bends, loaded 436.88 mm | 17.2 in

Minimum Bend Radius, multiple bends, unloaded 261.62 mm | 10.3 in

Minimum Bend Radius, single bend, unloaded 152.4 mm | 6 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

760245739 | HTC-144SM-DT-412-218-APVA

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

Optical Specifications

Fiber Type	G.652.D and G.657.A1
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Environmental Specifications

Installation temperature	-30 °C to +70 °C (-22 °F to +158 °F)
Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Storage Temperature	-40 °C to +80 °C (-40 °F to +176 °F)
Cable Qualification Standards	ANSI/ICEA S-87-640 Telcordia GR-20 UL 1277
Environmental Space	Wireless installation
Jacket UV Resistance	UV stabilized

Packaging and Weights

Cable weight	568.479 kg/km 382 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant



Included Products

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

Operating Temperature Specification applicable to non-terminated bulk fiber cable

CS-8G-MP

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

Product Classification

Portfolio	CommScope®
Product Type	Optical fiber

General Specifications

Cladding Diameter	125 µm
Cladding Diameter Tolerance	±0.7 µm
Cladding Non-Circularity, maximum	0.7 %
Coating Diameter (Colored)	249 µm
Coating Diameter (Uncolored)	242 µm
Coating Diameter Tolerance (Colored)	±13 µm
Coating Diameter Tolerance (Uncolored)	±5 µm
Coating/Cladding Concentricity Error, maximum	12 µm
Core/Clad Offset, maximum	0.5 µm
Proof Test	689.476 N/mm ² 100000 psi

Dimensions

Fiber Curl, minimum	4 m 13.123 ft
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Mechanical Specifications

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

Optical Specifications

Cabled Cutoff Wavelength, maximum	1260 nm
Point Defects, maximum	0.1 dB

CS-8G-MP

Zero Dispersion Slope, maximum	0.092 ps/[km-nm-nm]
Zero Dispersion Wavelength, maximum	1324 nm
Zero Dispersion Wavelength, minimum	1302 nm

Optical Specifications, Wavelength Specific

Attenuation, maximum	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
Dispersion, maximum	18 ps(nm-km) at 1550 nm 3.5 ps(nm-km) from 1285 nm to 1330 nm at 1310 nm
Index of Refraction	1.467 @ 1,310 nm 1.467 @ 1,385 nm 1.468 @ 1,550 nm
Mode Field Diameter	8.6 μm @ 1,310 nm 9.8 μm @ 1,550 nm
Mode Field Diameter Tolerance	$\pm 0.4 \mu\text{m}$ @ 1310 nm $\pm 0.5 \mu\text{m}$ @ 1550 nm
Polarization Mode Dispersion Link Design Value, maximum	0.06 ps/sqrt(km)
Standards Compliance	ITU-T G.657.A2 ITU-T G.657.B2

Environmental Specifications

Heat Aging, maximum	0.05 dB/km @ 85 °C
Temperature Dependence, maximum	0.05 dB/km
Temperature Humidity Cycling, maximum	0.05 dB/km
Water Immersion, maximum	0.05 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