

HELIAX® Hybrid Cable, UL Type TC-OF

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	12
Construction Type	Shielded
Fiber Type, quantity	48
Fibers per Subunit, quantity	12
Inner Shield (Tape) Material	Corrugated aluminum
Jacket Color	Black
Strength Members	Glass reinforced plastic rod
Subunit, quantity	4
Total Fiber Count	48

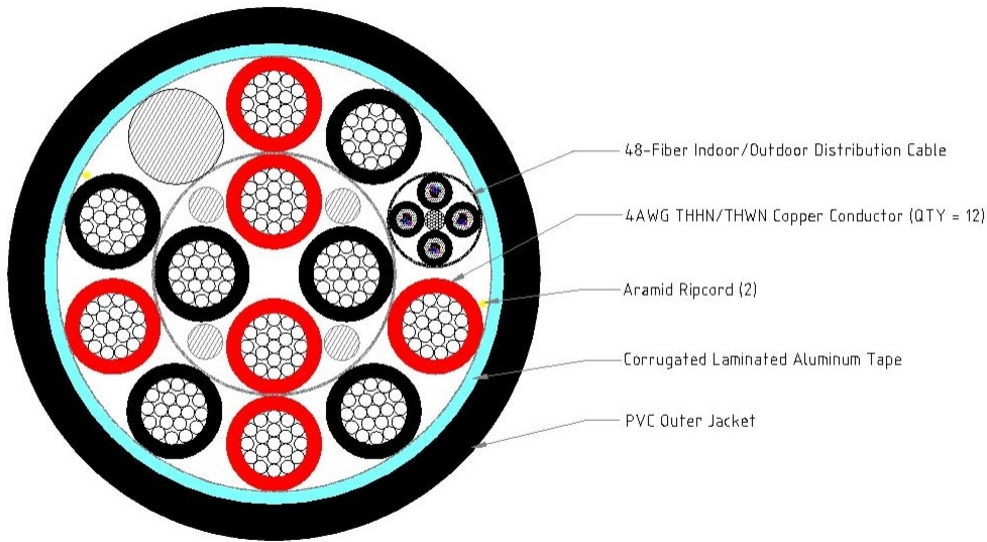
Dimensions

Buffer Tube/Subunit Diameter	2.489 mm 0.098 in
Diameter Over Jacket	44.704 mm 1.76 in
Conductor Gauge	4 AWG

Electrical Specifications

dc Resistance Note	Maximum value based on a standard condition of 20 °C (68 °F)
dc Resistance, maximum	0.85 ohms/km 0.259 ohms/kft
Safety Voltage Rating	600 V

Representative Image



Material Specifications

Jacket Material	PVC
Ripcord Material	Para-aramid synthetic fiber

Mechanical Specifications

Minimum Bend Radius, multiple bends, loaded	721.36 mm 28.4 in
Minimum Bend Radius, multiple bends, unloaded	360.68 mm 14.2 in
Minimum Bend Radius, single bend, unloaded	251.46 mm 9.9 in
Tensile Load, long term, maximum	2,001.699 N 450 lbf
Tensile Load, short term, maximum	6,672.33 N 1500 lbf
Compression	4.465 kg/mm 250 lb/in
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

Optical Specifications

Fiber Type	G.657.A2/B2 G.657.A2/B2
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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	3,576.058 kg/km 2403 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