

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

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

Dimensions

Buffer Tube/Subunit Diameter	6.096 mm 0.24 in
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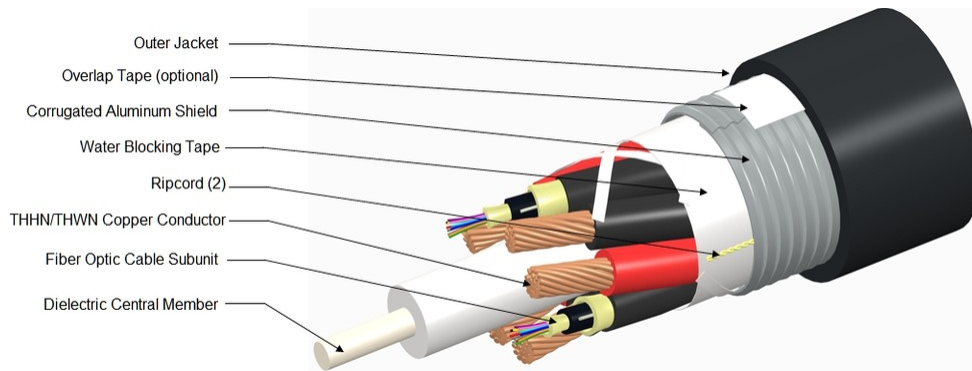
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Diameter Over Jacket	30.48 mm 1.2 in
Alarm Wire Gauge	18 AWG
Conductor Gauge	6 AWG

Electrical Specifications

dc Resistance Note	Maximum value based on a standard condition of 20 °C (68 °F)
dc Resistance, maximum	1.352 ohms/km 0.412 ohms/kft

Representative Image



Material Specifications

Ripcord Material	Para-aramid synthetic fiber
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Mechanical Specifications

Minimum Bend Radius, multiple bends, loaded	609.6 mm 24 in
Minimum Bend Radius, multiple bends, unloaded	304.8 mm 12 in
Minimum Bend Radius, single bend, unloaded	213.36 mm 8.4 in
Tensile Load, long term, maximum	1,067.573 N 240 lbf
Tensile Load, short term, maximum	3,558.576 N 800 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

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 1,443.519 kg/km | 970 lb/kft

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