

Single Jacket All-Dielectric, Gel-Free, Indoor Stranded Microsheath Tube Cable

Product Classification

Regional Availability	Asia Australia/New Zealand EMEA Latin America
Portfolio	CommScope®
Product Type	Fiber indoor cable
Product Series	L-LN

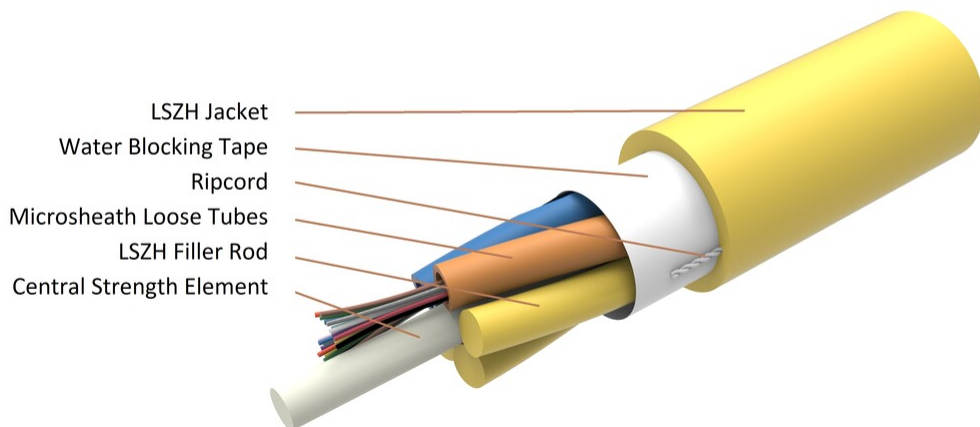
General Specifications

Cable Type	Stranded microsheath tube
Construction Type	Non-armored
Subunit Type	Gel-free
Jacket Color	Yellow
Jacket Marking	Custom printing
Jacket Marking Method	Inkjet
Jacket Marking Text	COMMSCOPE GB OPTICAL CABLE 810010178/DB 24 X G657A1 EN50575 CLASS C ULSZH [Serial number] [metre mark]
Subunit, quantity	8
Fibers per Subunit, quantity	12
Total Fiber Count	96

Dimensions

Buffer Tube/Subunit Diameter	1.5 mm 0.059 in
Diameter Over Jacket	8.7 mm 0.343 in

Representative Image



Material Specifications

Inner Jacket Material

Low Smoke Zero Halogen (LSZH)

Mechanical Specifications

Minimum Bend Radius, unloaded

130 mm | 5.118 in

Tensile Load, long term, maximum

150 N | 33.721 lbf

Tensile Load, short term, maximum

700 N | 157.366 lbf

Compression

10 N/mm | 57.101 lb/in

Compression Test Method

IEC 60794-1 E3

Impact

2 N-m | 17.701 in lb

Impact Test Method

IEC 60794-1 E4

Strain

See long and short term tensile loads

Strain Test Method

IEC 60794-1 E1

Twist

5 cycles

Twist Test Method

IEC 60794-1 E7

Optical Specifications

Fiber Type

G.652.D and G.657.A1

Environmental Specifications

810010181/DB | L-096-LN-8W-M12YL/15D/B

Installation temperature	0 °C to +50 °C (+32 °F to +122 °F)
Operating Temperature	-10 °C to +60 °C (+14 °F to +140 °F)
Storage Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Cable Qualification Standards	IEC 60794-1-2
EN50575 CPR Cable EuroClass Fire Performance	B2ca
EN50575 CPR Cable EuroClass Smoke Rating	s1a
EN50575 CPR Cable EuroClass Droplets Rating	d0
EN50575 CPR Cable EuroClass Acidity Rating	a1
Environmental Space	Low Smoke Zero Halogen (LSZH)

Environmental Test Specifications

Temperature Cycle	-10 °C to +60 °C (+14 °F to +140 °F)
Temperature Cycle Test Method	IEC 60794-1 F1

Packaging and Weights

Cable weight	82 kg/km 55.101 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ROHS	Compliant
UK-ROHS	Compliant



Included Products

CS-8W-250-EMEA – LightScope® ZWP Singlemode Fiber
8W-250um

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable



LightScope® ZWP Singlemode Fiber

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)	±7 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, 20 mm Ø mandrel, 1 turn	0.75 dB @ 1,550 nm 1.50 dB @ 1,625 nm
Macrobending, 30 mm Ø mandrel, 10 turns	0.25 dB @ 1,550 nm 1.00 dB @ 1,625 nm
Macrobending, 60 mm Ø mandrel, 100 turns	0.05 dB @ 1,550 nm 0.05 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

CS-8W-250-EMEA | 8W-250um

Cabled Cutoff Wavelength, maximum	1250 nm
Point Defects, maximum	0.05 dB
Zero Dispersion Slope, maximum	0.092 ps/[km-nm-nm]
Zero Dispersion Wavelength, maximum	1324 nm
Zero Dispersion Wavelength, minimum	1300 nm

Optical Specifications, Wavelength Specific

Attenuation, maximum	0.20 dB/km @ 1550 nm 0.23 dB/km @ 1,625 nm 0.344 dB/km @ 1310 nm 0.344 dB/km @ 1380 – 1385 nm
Dispersion, maximum	18 ps(nm-km) at 1550 nm 22 ps(nm-km) at 1625 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	10.4 μ m @ 1,550 nm 9.2 μ m @ 1,310 nm
Mode Field Diameter Tolerance	\pm 0.4 μ m @ 1310 nm \pm 0.5 μ m @ 1550 nm
Polarization Mode Dispersion Link Design Value, maximum	0.05 ps/sqrt(km)
Standards Compliance	ITU-T G.652.D ITU-T G.657.A1

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

* 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