



Fiber indoor cable, Low Smoke Zero Halogen Distribution, 48 fiber multi-unit, Multimode OM4, Meters jacket marking, Aqua jacket color

Product Classification

Regional Availability	Asia Australia/New Zealand
Portfolio	CommScope®
Product Type	Fiber indoor cable
Product Series	N-DS

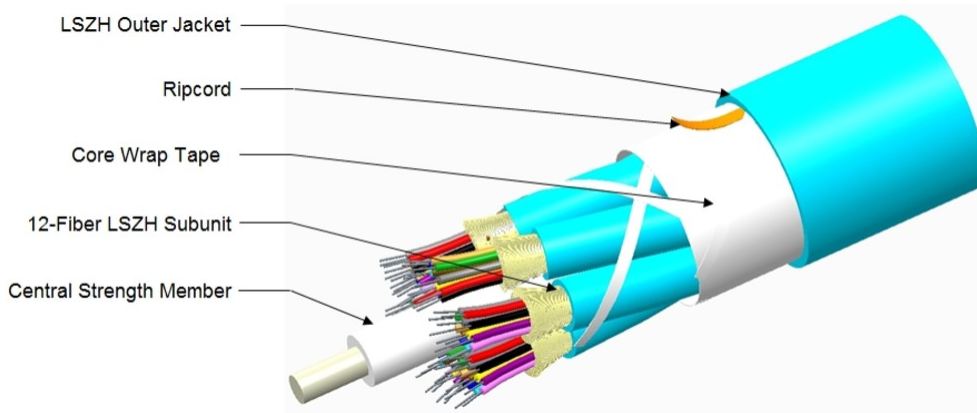
General Specifications

Cable Type	Distribution
Construction Type	Non-armored
Subunit Type	Gel-free
Jacket Color	Aqua
Jacket Marking	Meters
Subunit, quantity	4
Fibers per Subunit, quantity	12
Total Fiber Count	48

Dimensions

Buffer Tube/Subunit Diameter	6 mm 0.236 in
Diameter Over Jacket	17.9 mm 0.705 in

Representative Image



Mechanical Specifications

Minimum Bend Radius, loaded	358 mm 14.094 in
Minimum Bend Radius, unloaded	179 mm 7.047 in
Tensile Load, long term, maximum	396 N 89.024 lbf
Tensile Load, short term, maximum	1320 N 296.748 lbf
Compression	10 N/mm 57.101 lb/in
Compression Test Method	IEC 60794-1-21 E3
Strain	See long and short term tensile loads
Strain Test Method	IEC 60794-1-21 E1
Twist	10 cycles

Optical Specifications

Fiber Type	OM4
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Optical Specifications, Wavelength Specific

Attenuation, maximum	1.00 dB/km @ 1,300 nm 3.00 dB/km @ 850 nm
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Environmental Specifications

Installation temperature	-10 °C to +60 °C (+14 °F to +140 °F)
Operating Temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Storage Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Environmental Space	Low Smoke Zero Halogen (LSZH)
Flame Test Listing	NEC OFNR (UL)
Flame Test Method	IEC 60332-3 UL 1666 UL 1685

Environmental Test Specifications

Temperature Cycle Test Method IEC 60794-1-22 F1

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-5X-TB-3.0/1.0/093 – OM4 Bend-Insensitive Multimode Fiber

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable

CS-5X-TB-3.0/1.0/093

OM4 Bend-Insensitive Multimode Fiber

Product Classification

Portfolio	CommScope®
Product Type	Optical fiber

General Specifications

Cladding Diameter	125 µm
Cladding Diameter Tolerance	±1.0 µm
Cladding Non-Circularity, maximum	1 %
Coating Diameter (Colored)	245 µm
Coating Diameter Tolerance (Colored)	±10 µm
Coating/Cladding Concentricity Error, maximum	12 µm
Core Diameter	50 µm
Core Diameter Tolerance	±2.5 µm
Core/Clad Offset, maximum	1.5 µm
Proof Test	689.476 N/mm ² 100000 psi
Tight Buffer Diameter	900 µm
Tight Buffer Diameter Tolerance	±40 µm

Mechanical Specifications

Macrobending, 15 mm Ø mandrel, 2 turns	0.20 dB @ 850 nm 0.50 dB @ 1,300 nm
Macrobending, 30 mm Ø mandrel, 2 turns	0.10 dB @ 850 nm 0.30 dB @ 1,300 nm
Macrobending, 75 mm Ø mandrel, 100 turns	0.50 dB @ 1,300 nm 0.50 dB @ 850 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	18

Optical Specifications

Numerical Aperture	0.2
Numerical Aperture Tolerance	±0.015
Point Defects, maximum	0.15 dB

CS-5X-TB-3.0/1.0/093

Optical Specifications, Wavelength Specific

1 Gbps Ethernet Distance	1,110 m @ 850 nm 600 m @ 1,300 nm
10 Gbps Ethernet Distance	550 m @ 850 nm
Attenuation, maximum	1.00 dB/km @ 1,300 nm 3.00 dB/km @ 850 nm
Backscatter Coefficient	-68.0 dB @ 850 nm -75.7 dB @ 1,300 nm
Bandwidth, Laser, minimum	4,700 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm
Bandwidth, OFL, minimum	3,500 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm
Differential Mode Delay	0.70 ps/m @ 850 nm 0.88 ps/m @ 1,300 nm
Differential Mode Delay Note	Superior to TIA-492AAAC and IEC 60793-2-10 at 850 nm
Index of Refraction	1.477 @ 1,300 nm 1.482 @ 850 nm
Standards Compliance	IEC 60793-2-10, type A1a.3a IEC 60793-2-10, type A1a.3b TIA-492AAAD (OM4)

Environmental Specifications

Heat Aging, maximum	0.20 dB/km @ 85 °C
Temperature Dependence, maximum	0.1 dB/km
Temperature Humidity Cycling, maximum	0.2 dB/km
Water Immersion, maximum	0.20 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