



Fiber indoor/outdoor Cable, LSZH Riser All-Dielectric Central Tube Ribbon, Multimode OM4 bend insensitive, 48-fiber, feet jacket marking, black jacket color

## Product Classification

<b>Regional Availability</b>	Asia   Australia/New Zealand   EMEA   Latin America   North America
<b>Portfolio</b>	CommScope®
<b>Product Type</b>	Fiber indoor/outdoor cable
<b>Product Series</b>	Z-CN

## General Specifications

<b>Cable Type</b>	Ribbon central tube
<b>Construction Type</b>	Non-armored
<b>Subunit Type</b>	Gel-free
<b>Fibers per Ribbon, quantity</b>	12
<b>Jacket Color</b>	Black
<b>Jacket Marking</b>	Feet
<b>Total Fiber Count</b>	48

## Dimensions

<b>Buffer Tube/Subunit Diameter</b>	6 mm   0.236 in
<b>Diameter Over Jacket</b>	13 mm   0.512 in

## Representative Image



## Mechanical Specifications

<b>Minimum Bend Radius, loaded</b>	259.1 mm   10.201 in
<b>Minimum Bend Radius, unloaded</b>	129.5 mm   5.098 in
<b>Tensile Load, long term, maximum</b>	800 N   179.847 lbf
<b>Tensile Load, short term, maximum</b>	2670 N   600.24 lbf
<b>Compression</b>	22 N/mm   125.623 lb/in
<b>Compression Test Method</b>	FOTP-41   IEC 60794-1 E3
<b>Flex</b>	25 cycles
<b>Flex Test Method</b>	FOTP-104   IEC 60794-1 E6
<b>Impact</b>	2.94 N-m   26.021 in lb
<b>Impact Test Method</b>	FOTP-25   IEC 60794-1 E4
<b>Strain</b>	See long and short term tensile loads
<b>Strain Test Method</b>	FOTP-33   IEC 60794-1 E1
<b>Twist</b>	10 cycles
<b>Twist Test Method</b>	FOTP-85   IEC 60794-1 E7

## Optical Specifications

<b>Fiber Type</b>	OM4, bend insensitive   OM4, bend insensitive
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## Environmental Specifications

<b>Installation temperature</b>	-30 °C to +60 °C (-22 °F to +140 °F)
<b>Operating Temperature</b>	-40 °C to +70 °C (-40 °F to +158 °F)
<b>Storage Temperature</b>	-40 °C to +75 °C (-40 °F to +167 °F)

# 760211664 | Z-048-CN-RB-F12NS/5X/99F

<b>Cable Qualification Standards</b>	ANSI/ICEA S-104-696   Telcordia GR-20   Telcordia GR-409
<b>Environmental Space</b>	Aerial, lashed   Buried   Low Smoke Zero Halogen (LSZH)   Riser
<b>Flame Test Listing</b>	NEC OFNR (UL) and c(UL)
<b>Flame Test Method</b>	UL 1666
<b>Jacket UV Resistance</b>	UV stabilized
<b>Water Penetration</b>	24 h
<b>Water Penetration Test Method</b>	FOTP-82   IEC 60794-1 F5

## Environmental Test Specifications

<b>Heat Age</b>	-40 °C to +85 °C (-40 °F to +185 °F)
<b>Heat Age Test Method</b>	IEC 60794-1 F9
<b>Low High Bend</b>	-30 °C to +60 °C (-22 °F to +140 °F)
<b>Low High Bend Test Method</b>	FOTP-37   IEC 60794-1 E11
<b>Temperature Cycle</b>	-40 °C to +70 °C (-40 °F to +158 °F)
<b>Temperature Cycle Test Method</b>	FOTP-3   IEC 60794-1 F1

## Packaging and Weights

<b>Cable weight</b>	193 kg/km   129.69 lb/kft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

## Included Products

CS-5X-RB	– 50µm OM4 Bend-Insensitive Multimode Fiber
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## \* Footnotes

**Operating Temperature** Specification applicable to non-terminated bulk fiber cable

# CS-5X-RB

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## 50µm OM4 Bend-Insensitive Multimode Fiber

### Product Classification

<b>Portfolio</b>	CommScope®
<b>Product Type</b>	Optical fiber

### General Specifications

<b>Cladding Diameter</b>	125 µm
<b>Cladding Diameter Tolerance</b>	±1.0 µm
<b>Cladding Non-Circularity, maximum</b>	1 %
<b>Coating Diameter (Colored)</b>	250 µm
<b>Coating Diameter (Uncolored)</b>	245 µm
<b>Coating Diameter Tolerance (Colored)</b>	±15 µm
<b>Coating Diameter Tolerance (Uncolored)</b>	±10 µm
<b>Coating/Cladding Concentricity Error, maximum</b>	12 µm
<b>Core Diameter</b>	50 µm
<b>Core Diameter Tolerance</b>	±3 µm
<b>Core/Clad Offset, maximum</b>	1 µm
<b>Proof Test</b>	689.476 N/mm <sup>2</sup>   100000 psi

### Mechanical Specifications

<b>Macrobending, 15 mm Ø mandrel, 2 turns</b>	0.20 dB @ 850 nm   0.50 dB @ 1,300 nm
<b>Macrobending, 30 mm Ø mandrel, 2 turns</b>	0.10 dB @ 850 nm   0.30 dB @ 1,300 nm
<b>Coating Strip Force, maximum</b>	8.9 N   2.001 lbf
<b>Coating Strip Force, minimum</b>	1.3 N   0.292 lbf
<b>Dynamic Fatigue Parameter, minimum</b>	18

### Optical Specifications

<b>Numerical Aperture</b>	0.2
<b>Numerical Aperture Tolerance</b>	±0.015
<b>Point Defects, maximum</b>	0.2 dB
<b>Zero Dispersion Slope, maximum</b>	0.105 ps/[km-nm-nm]
<b>Zero Dispersion Wavelength, maximum</b>	1340 nm

# CS-5X-RB

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**Zero Dispersion Wavelength, minimum** 1295 nm

## Optical Specifications, Wavelength Specific

<b>1 Gbps Ethernet Distance</b>	1,000 m @ 850 nm   550 m @ 1,300 nm
<b>10 Gbps Ethernet Distance</b>	550 m @ 850 nm
<b>Attenuation, maximum</b>	1.50 dB/km @ 1,300 nm   3.50 dB/km @ 850 nm
<b>Backscatter Coefficient</b>	-68.0 dB @ 850 nm   -75.7 dB @ 1,300 nm
<b>Bandwidth, Laser, minimum</b>	4,700 MHz-km @ 850 nm   500 MHz-km @ 1,300 nm
<b>Bandwidth, OFL, minimum</b>	3,500 MHz-km @ 850 nm   500 MHz-km @ 1,300 nm
<b>Differential Mode Delay Note</b>	Superior to TIA-492AAAC and IEC 60793-2-10 at 850 nm
<b>Index of Refraction</b>	1.478 @ 1,300 nm   1.482 @ 850 nm
<b>Standards Compliance</b>	TIA-492AAAD (OM4)

## Environmental Specifications

<b>Heat Aging, maximum</b>	0.10 dB/km @ 85 °C
<b>Temperature Dependence, maximum</b>	0.1 dB/km
<b>Temperature Humidity Cycling, maximum</b>	0.1 dB/km
<b>Water Immersion, maximum</b>	0.10 dB/km @ 23 °C

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

## \* Footnotes

<b>Temperature Dependence, maximum</b>	Temperature dependence is conducted at -60 °C to +85 °C (-76 °F to +185 °F)
<b>Temperature Humidity Cycling, maximum</b>	Temperature humidity cycling is conducted at -10 °C to +85 °C (+14 °F to +185 °F) up to 95% relative humidity