



Fiber indoor/outdoor cable, TeraSPEED®, Single Jacket All-Dielectric, Low Smoke Zero Halogen (LSZH), 48 fiber, Singlemode G.652.D and G.657.A1, Gel-Free, Stranded Loose Tube, Black jacket color, Feet cable marking, Eca flame rating

## Product Classification

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

## General Specifications

Cable Type	Stranded loose tube
Construction Type	Non-armored
Subunit Type	Gel-free
Filler, quantity	1
Jacket Color	Black
Jacket Marking	Feet
Subunit, quantity	4
Fibers per Subunit, quantity	12
Total Fiber Count	48

## Dimensions

Buffer Tube/Subunit Diameter	2.5 mm   0.098 in
Diameter Over Jacket	11.7 mm   0.461 in

## Representative Image



## Mechanical Specifications

Minimum Bend Radius, loaded	175 mm   6.89 in
Minimum Bend Radius, unloaded	117 mm   4.606 in
Tensile Load, long term, maximum	800 N   179.847 lbf
Tensile Load, short term, maximum	2700 N   606.984 lbf
Compression	22 N/mm   125.623 lb/in
Compression Test Method	FOTP-41   IEC 60794-1 E3
Flex	25 cycles
Flex Test Method	FOTP-104   IEC 60794-1 E6
Impact	3 N-m   26.552 in lb
Impact Test Method	FOTP-25   IEC 60794-1 E4
Strain	See long and short term tensile loads
Strain Test Method	FOTP-33   IEC 60794-1 E1
Twist	10 cycles
Twist Test Method	FOTP-85   IEC 60794-1 E7
Vertical Rise, maximum	654 m   2,145.669 ft

## Optical Specifications

Fiber Type	G.652.D and G.657.A1, TeraSPEED®   OS2   OS2
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## Environmental Specifications

Installation temperature	-30 °C to +60 °C (-22 °F to +140 °F)
Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)

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<b>Storage Temperature</b>	-40 °C to +75 °C (-40 °F to +167 °F)
<b>Cable Qualification Standards</b>	ANSI/ICEA S-104-696   EN 187105   Telcordia GR-20   Telcordia GR-409
<b>EN50575 CPR Cable EuroClass Fire Performance</b>	Eca
<b>Environmental Space</b>	Aerial, lashed   Buried   Low Smoke Zero Halogen (LSZH)
<b>Flame Test Listing</b>	NEC OFN-ST1 (ETL) and c(ETL)
<b>Flame Test Method</b>	IEC 60332-3   IEC 60754-2   IEC 61034-2   IEEE 1202   UL 1685
<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>Cable Freeze</b>	-2 °C   28.4 °F
<b>Cable Freeze Test Method</b>	FOTP-98   IEC 60794-1 F15
<b>Drip</b>	70 °C   158 °F
<b>Drip Test Method</b>	FOTP-81   IEC 60794-1 E14
<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>	125 kg/km   83.996 lb/kft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="https://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant



## Included Products

CS-8W-IOLT - TeraSPEED® OS2 Singlemode Fiber

## \* Footnotes

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

TeraSPEED®

TeraSPEED® OS2 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)	±5 µm
Coating/Cladding Concentricity Error, maximum	12 µm
Core Diameter	8.3 µm
Core/Clad Offset, maximum	0.5 µm
Proof Tensile Stress	100,000 psi (0.69 GPa)

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

# CS-8W-IOLT

## Optical Specifications

Cabled Cutoff Wavelength, maximum	1260 nm
Point Defects, maximum	0.1 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	0.22 dB/km @ 1,550 nm   0.25 dB/km @ 1,490 nm   0.25 dB/km @ 1,625 nm   0.36 dB/km @ 1,310 nm   0.36 dB/km @ 1,385 nm
Attenuation, typical	0.19 dB/km @ 1,550 nm   0.33 dB/km @ 1,310 nm
Backscatter Coefficient	-79.6 dB @ 1,310 nm   -82.1 dB @ 1,550 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	10.4 μm @ 1,550 nm   9.2 μm @ 1,310 nm   9.6 μm @ 1,385 nm
Mode Field Diameter Tolerance	±0.4 μm @ 1310 nm   ±0.5 μm @ 1550 nm   ±0.6 μm @ 1385 nm
Polarization Mode Dispersion Link Design Value, maximum	0.04 ps/sqrt(km)
Standards Compliance	ITU-T G.652.D   ITU-T G.657.A1   TIA-492CAAB (OS2)

## 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

# CS-8W-IOLT

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<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