

Fiber indoor/outdoor cable, TeraSPEED®, Single Jacket All-Dielectric, Plenum Rated, Multimode/Singlemode, 48 fiber, Gel-Free, Stranded Loose Tube, PVDF jacket, Black jacket color, Feet cable marking

## Product Classification

### Regional Availability

Asia | Australia/New Zealand | Latin America | Middle East /Africa | North America

### Portfolio

CommScope®

### Product Type

Fiber indoor/outdoor cable

### Product Series

P-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

### Composite Fiber Count

24 + 24

### Total Fiber Count

48

## Dimensions

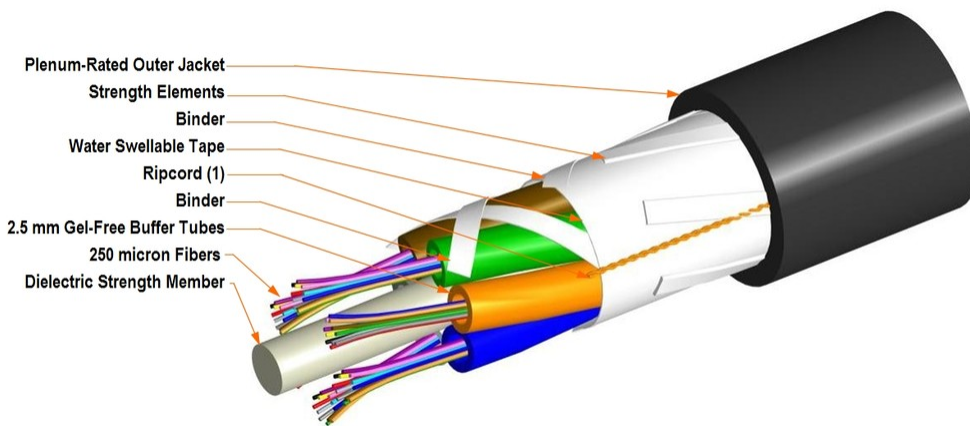
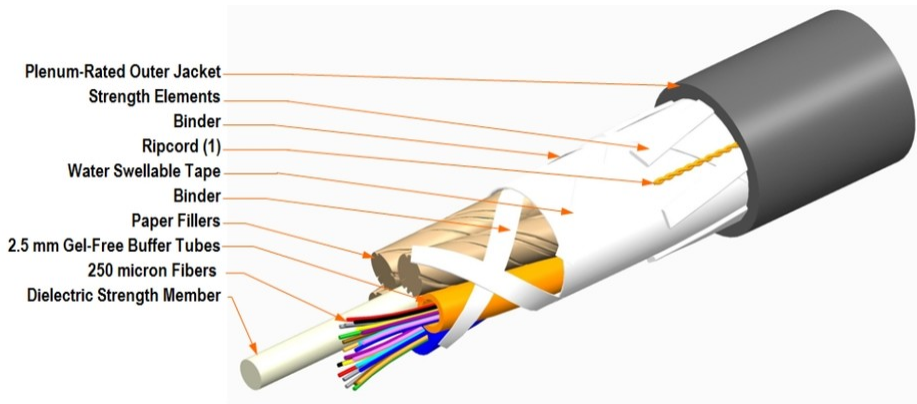
### Buffer Tube/Subunit Diameter

2.5 mm | 0.098 in

### Diameter Over Jacket

9.7 mm | 0.382 in

## Representative Image



## Mechanical Specifications

<b>Minimum Bend Radius, loaded</b>	146 mm   5.748 in
<b>Minimum Bend Radius, unloaded</b>	97 mm   3.819 in
<b>Tensile Load, long term, maximum</b>	800 N   179.847 lbf
<b>Tensile Load, short term, maximum</b>	2700 N   606.984 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

# 760154625 | P-048-LN-CM-F12BK/25D/8W024 /5L024

**Twist Test Method** FOTP-85 | IEC 60794-1 E7

**Vertical Rise, maximum** 880 m | 2,887.139 ft

## Optical Specifications

**Fiber Type** Composite MM/SM | G.652.D and G.657.A1, TeraSPEED® | OM3, LazrSPEED® 300 | OS2 | OS2

## Environmental Specifications

**Installation temperature** -30 °C to +70 °C (-22 °F to +158 °F)

**Operating Temperature** -40 °C to +70 °C (-40 °F to +158 °F)

**Storage Temperature** -40 °C to +75 °C (-40 °F to +167 °F)

**Cable Qualification Standards** ANSI/ICEA S-104-696 | EN 187105 | Telcordia GR-409

**Environmental Space** Plenum

**Flame Test Listing** NEC OFNP (ETL) and c(ETL)

**Flame Test Method** NFPA 130 | NFPA 262

**Jacket UV Resistance** UV stabilized

**Water Penetration** 24 h

**Water Penetration Test Method** FOTP-82 | IEC 60794-1 F5

## Environmental Test Specifications

**Cable Freeze** -2 °C | 28.4 °F

**Cable Freeze Test Method** FOTP-98 | IEC 60794-1 F15

**Heat Age** -40 °C to +85 °C (-40 °F to +185 °F)

**Heat Age Test Method** IEC 60794-1 F9

**Low High Bend** -30 °C to +60 °C (-22 °F to +140 °F)

**Low High Bend Test Method** FOTP-37 | IEC 60794-1 E11

**Temperature Cycle** -40 °C to +70 °C (-40 °F to +158 °F)

**Temperature Cycle Test Method** FOTP-3 | IEC 60794-1 F1

## Packaging and Weights

**Cable weight** 92 kg/km | 61.821 lb/kft

## Regulatory Compliance/Certifications

Agency	Classification
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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="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant



## Included Products

- CS-5L-LT – LazrSPEED® 300 OM3 Bend-Insensitive Multimode Fiber
- CS-8W-LT – TeraSPEED® G652D/G657A1 Singlemode Fiber

## \* Footnotes

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

## LazrSPEED® 300 OM3 Bend-Insensitive Multimode Fiber

### LazrSPEED® 300

#### 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>	±0.8 µm
<b>Cladding Non-Circularity, maximum</b>	1 %
<b>Coating Diameter (Colored)</b>	254 µm
<b>Coating Diameter (Uncolored)</b>	245 µm
<b>Coating Diameter Tolerance (Colored)</b>	±7 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>	±2.5 µm
<b>Core/Clad Offset, maximum</b>	1.5 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>Macrobending, 75 mm Ø mandrel, 100 turns</b>	0.50 dB @ 1,300 nm   0.50 dB @ 850 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

# CS-5L-LT

## Optical Specifications

<b>Numerical Aperture</b>	0.2
<b>Numerical Aperture Tolerance</b>	±0.015
<b>Point Defects, maximum</b>	0.15 dB
<b>Zero Dispersion Slope, maximum</b>	0.105 ps/[km-nm-nm]
<b>Zero Dispersion Wavelength, maximum</b>	1316 nm
<b>Zero Dispersion Wavelength, minimum</b>	1297 nm

## Optical Specifications, Wavelength Specific

<b>1 Gbps Ethernet Distance</b>	1,020 m @ 850 nm   600 m @ 1,300 nm
<b>10 Gbps Ethernet Distance</b>	300 m @ 850 nm
<b>Attenuation, maximum</b>	1.00 dB/km @ 1,300 nm   3.00 dB/km @ 850 nm
<b>Backscatter Coefficient</b>	-68.0 dB @ 850 nm   -75.7 dB @ 1,300 nm
<b>Bandwidth, Laser, minimum</b>	2,000 MHz-km @ 850 nm   500 MHz-km @ 1,300 nm
<b>Bandwidth, OFL, minimum</b>	1,500 MHz-km @ 850 nm   500 MHz-km @ 1,300 nm
<b>Differential Mode Delay</b>	0.70 ps/m @ 850 nm   0.88 ps/m @ 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>	1.479 @ 1,300 nm   1.483 @ 850 nm
<b>Standards Compliance</b>	TIA-492AAAC (OM3)

## Environmental Specifications

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

# CS-5L-LT

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up to 95% relative humidity

## TeraSPEED® G652D/G657A1 Singlemode Fiber

### TeraSPEED®

#### 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>	±0.7 µm
<b>Cladding Non-Circularity, maximum</b>	0.7 %
<b>Coating Diameter (Colored)</b>	249 µm
<b>Coating Diameter (Uncolored)</b>	242 µm
<b>Coating Diameter Tolerance (Colored)</b>	±13 µm
<b>Coating Diameter Tolerance (Uncolored)</b>	±5 µm
<b>Coating/Cladding Concentricity Error, maximum</b>	12 µm
<b>Core Diameter</b>	8.3 µm
<b>Core/Clad Offset, maximum</b>	0.5 µm
<b>Proof Test</b>	689.476 N/mm <sup>2</sup>   100000 psi

#### Dimensions

<b>Fiber Curl, minimum</b>	4 m   13.123 ft
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#### Mechanical Specifications

<b>Macrobending, 20 mm Ø mandrel, 1 turn</b>	0.75 dB @ 1,550 nm   1.50 dB @ 1,625 nm
<b>Macrobending, 30 mm Ø mandrel, 10 turns</b>	0.25 dB @ 1,550 nm   1.00 dB @ 1,625 nm
<b>Macrobending, 60 mm Ø mandrel, 100 turns</b>	0.05 dB @ 1,550 nm   0.05 dB @ 1,625 nm
<b>Coating Strip Force, maximum</b>	8.9 N   2.001 lbf



# CS-8W-LT

<b>Coating Strip Force, minimum</b>	1.3 N   0.292 lbf
<b>Dynamic Fatigue Parameter, minimum</b>	20

## Optical Specifications

<b>Cabled Cutoff Wavelength, maximum</b>	1260 nm
<b>Point Defects, maximum</b>	0.1 dB
<b>Zero Dispersion Slope, maximum</b>	0.092 ps/[km-nm-nm]
<b>Zero Dispersion Wavelength, maximum</b>	1324 nm
<b>Zero Dispersion Wavelength, minimum</b>	1300 nm

## Optical Specifications, Wavelength Specific

<b>Attenuation, maximum</b>	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
<b>Attenuation, typical</b>	0.19 dB/km @ 1,550 nm   0.33 dB/km @ 1,310 nm
<b>Backscatter Coefficient</b>	-79.6 dB @ 1,310 nm   -82.1 dB @ 1,550 nm
<b>Dispersion, maximum</b>	18 ps(nm-km) at 1550 nm   3.5 ps(nm-km) from 1285 nm to 1330 nm at 1310 nm
<b>Index of Refraction</b>	1.467 @ 1,310 nm   1.467 @ 1,385 nm   1.468 @ 1,550 nm
<b>Mode Field Diameter</b>	10.4 $\mu\text{m}$ @ 1,550 nm   9.2 $\mu\text{m}$ @ 1,310 nm   9.6 $\mu\text{m}$ @ 1,385 nm
<b>Mode Field Diameter Tolerance</b>	$\pm 0.4 \mu\text{m}$ @ 1310 nm   $\pm 0.5 \mu\text{m}$ @ 1550 nm   $\pm 0.6 \mu\text{m}$ @ 1385 nm
<b>Polarization Mode Dispersion Link Design Value, maximum</b>	0.04 ps/sqrt(km)
<b>Standards Compliance</b>	IEC 60793-2-10, edition 6, model A1a.4   ITU-T G.652.D   ITU-T G.657.A1   TIA-492CAAB (OS2)

## Environmental Specifications

<b>Heat Aging, maximum</b>	0.05 dB/km @ 85 °C
<b>Temperature Dependence, maximum</b>	0.05 dB/km
<b>Temperature Humidity Cycling, maximum</b>	0.05 dB/km
<b>Water Immersion, maximum</b>	0.05 dB/km @ 23 °C

## Regulatory Compliance/Certifications

Agency	Classification
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# CS-8W-LT

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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