

TeraSPEED® Riser Distribution Cable, 48 fiber multi-unit with 12 fiber subunits

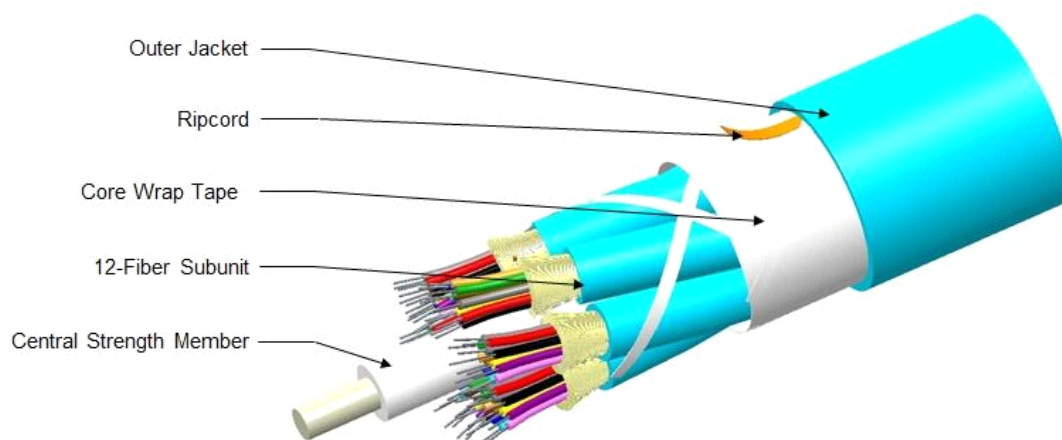
Product Classification

Portfolio	CommScope®
Product Type	Fiber indoor cable
Regional Availability	Asia Australia/New Zealand EMEA Latin America North America

Standards And Qualifications

Cable Qualification Standards	ANSI/ICEA S-83-596 Telcordia GR-409
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Representative Image



General Specifications

Cable Type	Distribution
Construction Type	Non-armored
Subunit Type	Gel-free

Construction Materials

Fiber Type Solution	Composite MM/SM G.652.D and G.657.A1 , TeraSPEED® OM3, LazrSPEED® 300
Total Fiber Count	48
Fiber Type	G.652.D and G.657.A1, TeraSPEED®
Fiber Type, quantity	24

Fibers per Subunit, quantity	12
Jacket Color	Aqua
Second Fiber Type	OM3, LazrSPEED® 300
Second Fiber Type, quantity	24

Dimensions

Buffer Tube/Subunit Diameter	5.95 mm 0.23 in
Cable Weight	142.0 lb/kft 212.0 kg/km
Diameter Over Jacket	15.92 mm 0.63 in
Subunit, quantity	4

Physical Specifications

Minimum Bend Radius, loaded	23.9 cm 9.4 in
Minimum Bend Radius, unloaded	15.9 cm 6.3 in
Tensile Load, long term, maximum	90 lbf 400 N
Tensile Load, short term, maximum	300 lbf 1335 N
Vertical Rise, maximum	192.0 m 629.9 ft

Flame Test Specifications

Flame Test Listing	NEC OFNR (ETL) and c(ETL)
Flame Test Method	UL 1666

Environmental Specifications

Environmental Space	Riser
Installation Temperature	-20 °C to +70 °C (-4 °F to +158 °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)

Mechanical Test Specifications

Compression	10 N/mm 57 lb/in
Compression Test Method	FOTP-41 IEC 60794-1 E3
Flex	100 cycles
Flex Test Method	FOTP-104 IEC 60794-1 E6
Impact	4.34 ft lb 5.88 N-m
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

Environmental Test Specifications

Heat Age	-20 °C to +85 °C (-4 °F to +185 °F)
Heat Age Test Method	IEC 60794-1 F9
Low High Bend	-20 °C to +70 °C (-4 °F to +158 °F)
Low High Bend Test Method	FOTP-37 IEC 60794-1 E11
Temperature Cycle	-20 °C to +70 °C (-4 °F to +158 °F)
Temperature Cycle Test Method	FOTP-3 IEC 60794-1 F1

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



Included Products

- CS-5L-TB (Product Component—not orderable) — LazrSPEED® 300 OM3 Bend-Insensitive Multimode Fiber
- CS-8W-TB (Product Component—not orderable) — TeraSPEED® Singlemode Fiber

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable

LazrSPEED® 300 OM3 Bend-Insensitive Multimode Fiber

LazrSPEED® 300

Product Classification

Portfolio	CommScope®
Product Type	Optical fiber

Optical Specifications, Wavelength Specific

Standards Compliance	TIA-492AAAC (OM3)
Attenuation, maximum	1.00 dB/km @ 1,300 nm 3.00 dB/km @ 850 nm
Differential Mode Delay Note	Superior to TIA-492AAAC and IEC 60793-2-10 at 850 nm
Index of Refraction	1.479 @ 1,300 nm 1.483 @ 850 nm
1 Gbps Ethernet Distance	1,020 m @ 850 nm 600 m @ 1,300 nm
10 Gbps Ethernet Distance	300 m @ 850 nm
Bandwidth, Laser, minimum	2,000 MHz-km @ 850 nm 500 MHz-km @ 1,300 nm
Bandwidth, OFL, minimum	1,500 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
Backscatter Coefficient	-68.0 dB @ 850 nm -75.7 dB @ 1,300 nm

Physical Specifications

Cladding Diameter	125.0 µm
Cladding Diameter Tolerance	±0.8 µm
Cladding Non-Circularity, maximum	1.0 %
Coating Diameter (Colored)	254 µm
Coating Diameter (Uncolored)	245 µm
Coating Diameter Tolerance (Colored)	±7 µm
Coating Diameter Tolerance (Uncolored)	±10 µm
Tight Buffer Diameter	900 µm
Tight Buffer Diameter Tolerance	±40 µm
Coating/Cladding Concentricity Error, maximum	12 µm
Core Diameter	50.0 µm
Core Diameter Tolerance	±2.5 µm
Core/Clad Offset, maximum	1.5 µm

Optical Specifications, General

Numerical Aperture	0.200
Numerical Aperture Tolerance	±0.015
Point Defects, maximum	0.15 dB

Zero Dispersion Slope, maximum	0.105 ps/[km-nm-nm]
Zero Dispersion Wavelength, maximum	1316 nm
Zero Dispersion Wavelength, minimum	1297 nm

Mechanical Specifications

Coating Strip Force, maximum	8.9 N 2.0 lbf
Coating Strip Force, minimum	1.3 N 0.3 lbf
Dynamic Fatigue Parameter, minimum	18
Macrobanding, 15 mm mandrel, 2 turns	0.20 dB @ 850 nm 0.50 dB @ 1,300 nm
Macrobanding, 30 mm mandrel, 2 turns	0.10 dB @ 850 nm 0.30 dB @ 1,300 nm
Proof Test	689.48 N/mm ² 100000.00 psi

Environmental Specifications

Heat Aging, maximum	0.20 dB/km @ 85 °C
Temperature Dependence, maximum	0.10 dB/km
Temperature Humidity Cycling, maximum	0.20 dB/km
Water Immersion, maximum	0.20 dB/km @ 23 °C

Regulatory Compliance/Certifications

Agency	Classification
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

TeraSPEED®

TeraSPEED® Singlemode Fiber

Product Classification

Portfolio	CommScope®
Product Type	Optical fiber

Optical Specifications, Wavelength Specific

Standards Compliance	ITU-T G.652.D ITU-T G.657.A1
Attenuation, maximum	0.50 dB/km @ 1,310 nm 0.50 dB/km @ 1,385 nm 0.50 dB/km @ 1,490 nm 0.50 dB/km @ 1,550 nm 0.50 dB/km @ 1,575 nm 0.70 dB/km @ 1,270 nm
Dispersion, maximum	18 ps/(nm-km) at 1550 nm 3.5 ps/(nm-km) from 1285 nm to 1330 nm at 1310 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	±0.3 μm @ 1310 nm ±0.5 μm @ 1550 nm ±0.6 μm @ 1385 nm
Index of Refraction	1.467 @ 1,310 nm 1.468 @ 1,385 nm 1.468 @ 1,550 nm
Polarization Mode Dispersion Link Design Value, maximum	0.04 ps/sqrt(km)
Backscatter Coefficient	-79.6 dB @ 1,310 nm -82.1 dB @ 1,550 nm

Physical Specifications

Cladding Diameter	125.0 μm
Cladding Diameter Tolerance	±0.7 μm
Cladding Non-Circularity, maximum	0.7 %
Coating Diameter (Colored)	253 μm
Coating Diameter (Uncolored)	240 μm
Coating Diameter Tolerance (Colored)	±7 μm
Coating Diameter Tolerance (Uncolored)	±5 μm
Tight Buffer Diameter	900 μm
Tight Buffer Diameter Tolerance	±40 μm
Coating/Cladding Concentricity Error, maximum	12 μm
Core/Clad Offset, maximum	0.5 μm

Optical Specifications, General

Cabled Cutoff Wavelength, maximum	1260 nm
Point Defects, maximum	0.10 dB
Zero Dispersion Slope, maximum	0.090 ps/[km-nm-nm]
Zero Dispersion Wavelength, maximum	1322 nm

Zero Dispersion Wavelength, minimum 1302 nm

Mechanical Specifications

Coating Strip Force, maximum	8.9 N 2.0 lbf
Coating Strip Force, minimum	1.3 N 0.3 lbf
Dynamic Fatigue Parameter, minimum	20
Fiber Curl, minimum	4.0 m 13.1 ft
Macrobending, 20 mm mandrel, 1 turn	0.75 dB @ 1,550 nm 1.50 dB @ 1,625 nm
Macrobending, 30 mm mandrel, 10 turns	0.25 dB @ 1,550 nm 1.00 dB @ 1,625 nm
Macrobending, 50 mm mandrel, 100 turns	0.03 dB @ 1,550 nm 0.03 dB @ 1,625 nm
Proof Test	689.48 N/mm ² 100000.00 psi

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

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* Footnotes

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