

TeraSPEED® Plenum Distribution Cable, 4 fiber single-unit

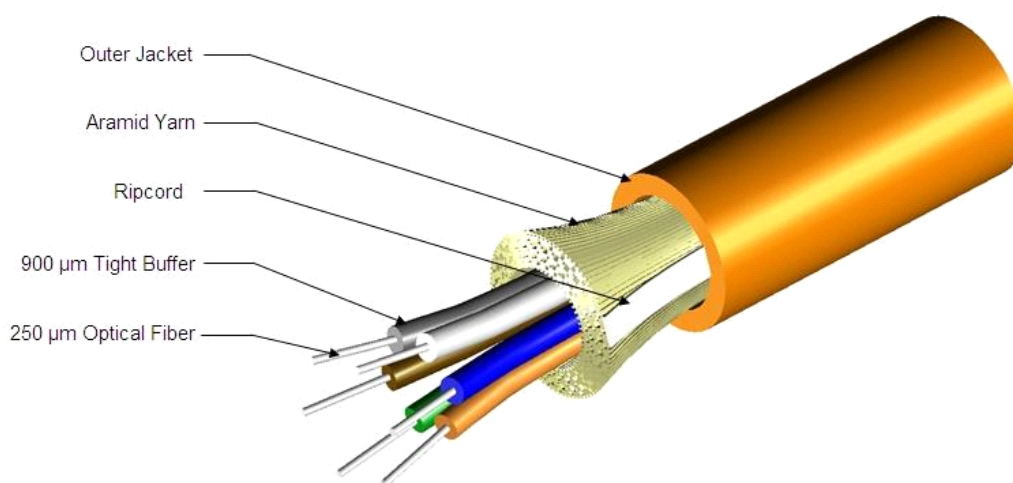
Product Classification

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	4

Fiber Type	G.652.D and G.657.A1, TeraSPEED®
Fiber Type, quantity	2
Jacket Color	Aqua
Second Fiber Type	OM3, LazrSPEED® 300
Second Fiber Type, quantity	2

Dimensions

Cable Weight	12.1 lb/kft 18.0 kg/km
Diameter Over Jacket	4.25 mm 0.17 in

Physical Specifications

Minimum Bend Radius, loaded	6.4 cm 2.5 in
Minimum Bend Radius, unloaded	4.3 cm 1.7 in
Tensile Load, long term, maximum	45 lbf 200 N
Tensile Load, short term, maximum	150 lbf 667 N
Vertical Rise, maximum	500.0 m 1640.4 ft

Flame Test Specifications

Flame Test Listing	NEC OFNP (ETL) and c(ETL)
Flame Test Method	NFPA 262

Environmental Specifications

Environmental Space	Plenum
Installation Temperature	0 °C to +70 °C (+32 °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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