



Fiber OSP cable, LightScope ZWP® Single Jacket All-Dielectric, 144 fiber, Gel-Free, Stranded Loose Tube, Singlemode G.652.D and G.657.A1, Feet jacket marking, Black jacket color

- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability	Asia Australia/New Zealand EMEA Latin America North America
Portfolio	CommScope®
Product Type	Fiber OSP cable
Product Series	D-LN
Government Funding	Build America Buy America (BABA) compliant*

General Specifications

Cable Type	Stranded loose tube
Construction Type	Non-armored
Subunit Type	Gel-free
Jacket Color	Black
Jacket Marking	Feet
Subunit, quantity	12
Fibers per Subunit, quantity	12
Total Fiber Count	144

Dimensions

Buffer Tube/Subunit Diameter	2.5 mm 0.098 in
Diameter Over Jacket	15.7 mm 0.618 in

Representative Image



Material Specifications

Jacket Material PE

Mechanical Specifications

Minimum Bend Radius, loaded 236 mm | 9.291 in
Minimum Bend Radius, unloaded 157 mm | 6.181 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 5.15 N-m | 45.581 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 533 m | 1,748.688 ft

Optical Specifications

Fiber Type G.652.D and G.657.A1 | G.652.D and G.657.A1

8107365/DB | D-144-LN-8W-F12NS

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-87-640 EN 187105
Environmental Space	Aerial, lashed Buried
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	153 kg/km 102.811 lb/kft
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Regulatory Compliance/Certifications

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

Included Products

DB-8W-LT – LightScope ZWP® Singlemode Fiber

* Footnotes

Operating Temperature Specification applicable to non-terminated bulk fiber cable

DB-8W-LT

LightScope ZWP® 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 Test	689.476 N/mm ² 100000 psi

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

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Coating Strip Force, minimum	1.3 N 0.292 lbf
Dynamic Fatigue Parameter, minimum	20

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	$\pm 0.4 \mu\text{m}$ @ 1310 nm $\pm 0.5 \mu\text{m}$ @ 1550 nm $\pm 0.6 \mu\text{m}$ @ 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

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

DB-8W-LT

* 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