

Fiber outdoor drop cable, LightScope® ZWP Self-Supporting Non-Armored Figure-8e, Singlemode G.652.D and G.657.A1, 4 fiber Arid Core construction with 0.109 in messenger, Gel-filled, central loose tube, 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 drop cable
Product Series	M-MN
Government Requirements	Build America Buy America (BABA) compliant*

General Specifications

Cable Type	Central loose tube
Construction Type	Non-armored
Subunit Type	Gel-filled
Jacket Color	Black
Jacket Marking	Feet
Location of Manufacturing	Catawba, North Carolina
Subunit, quantity	1
Fibers per Subunit, quantity	4
Total Fiber Count	4

Dimensions

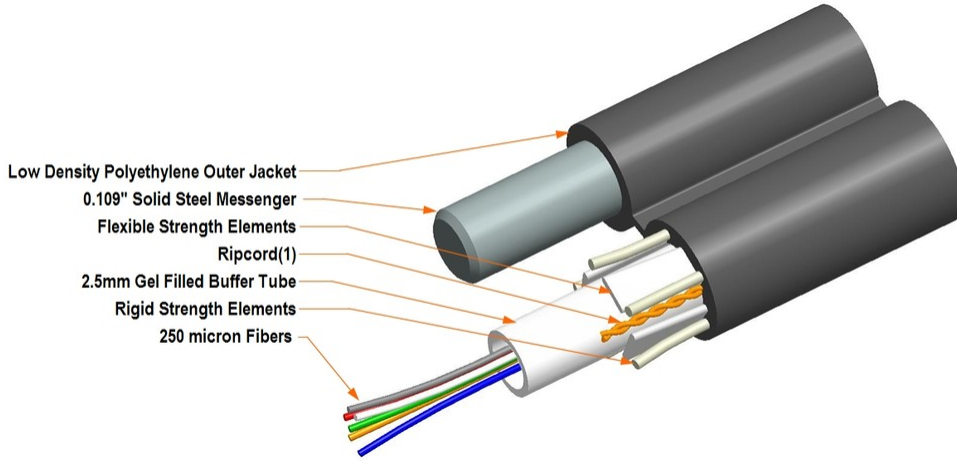
Height Over Jacket	10.7 mm 0.421 in
Buffer Tube/Subunit Diameter	2.5 mm 0.098 in
Diameter Over Jacket	5.1 mm 0.201 in

8108270/DB | M-004-MN-8W-F04NS/109

Diameter Over Messenger Jacket

4.3 mm | 0.169 in

Representative Image



Material Specifications

Jacket Material

PE

Mechanical Specifications

Minimum Bend Radius, loaded

77 mm | 3.031 in

Minimum Bend Radius, unloaded

51 mm | 2.008 in

Tensile Load, long term, maximum

400 N | 89.924 lbf

Tensile Load, short term, maximum

1334 N | 299.895 lbf

Compression

10 N/mm | 57.101 lb/in

Compression Test Method

FOTP-41 | IEC 60794-1 E3

Flex

35 cycles

Flex Test Method

FOTP-104 | IEC 60794-1 E6

Impact

1.47 N-m | 13.011 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

529 m | 1,735.564 ft

Optical Specifications

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

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-110-717

Environmental Space Aerial, self-support

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

Drip 70 °C | 158 °F

Drip Test Method FOTP-81 | IEC 60794-1 E14

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 77 kg/km | 51.742 lb/kft

Regulatory Compliance/Certifications

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

Included Products

8108270/DB | M-004-MN-8W-F04NS/109

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

DB-8W-LT

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