

Fiber outdoor drop cable, LightScope® ZWP Self-Supporting All-Dielectric, Singlemode G.652.D and G.657.A1, 4 fiber Arid Core construction, Gel-filled, central loose tube, Feet jacket marking, Black jacket color, 5000 ft

- \*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

<b>Regional Availability</b>	Asia   Australia/New Zealand   EMEA   Latin America   North America
<b>Portfolio</b>	CommScope®
<b>Product Type</b>	Fiber drop cable
<b>Product Series</b>	O-DF
<b>Government Requirements</b>	Build America Buy America (BABA) compliant*

## General Specifications

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

## Dimensions

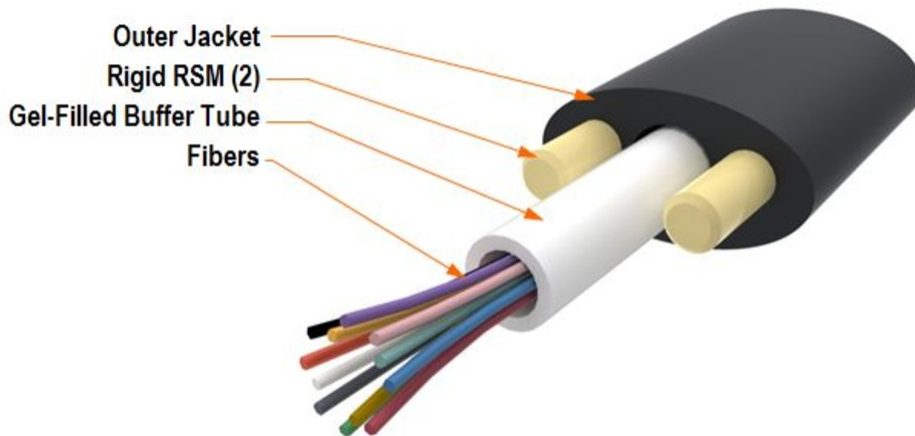
<b>Height Over Jacket</b>	4.5 mm   0.177 in
<b>Cable Length</b>	1,524 m   5000 ft
<b>Buffer Tube/Subunit Diameter</b>	3 mm   0.118 in

# 810010248/50 | 0-004-DF-8W-F04NS (5000')

**Diameter Over Jacket**

7.9 mm | 0.311 in

Representative Image



## Material Specifications

**Jacket Material**

PE

## Mechanical Specifications

**Minimum Bend Radius, loaded**

86 mm | 3.386 in

**Minimum Bend Radius, unloaded**

81 mm | 3.189 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**

2.94 N-m | 26.021 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

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**Vertical Rise, maximum** 1047 m | 3,435.039 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 | 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

**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** 39 kg/km | 26.207 lb/kft

## Included Products

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

\* Footnotes

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

# DB-8W-LT

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## LightScope® ZWP Singlemode Fiber



### 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

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<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>	ITU-T G.652.D   ITU-T G.657.A1

## 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

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

# DB-8W-LT

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## \* 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