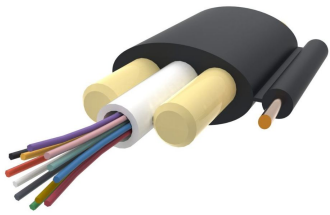


# 810009343/DB | O-024-DF-HY-F24NS/30G /8W024/1X24AWG



LightScope® ZWP Fiber + Tone Wire Outdoor Drop Cable, 1–24 fiber  
Arid Core construction, central loose tube

- \*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>            | Hybrid cable, fiber and tone-wire                                   |
| <b>Product Brand</b>           | LightScope® ZWP   |
| <b>Government Requirements</b> | Build America Buy America (BABA) compliant*                         |

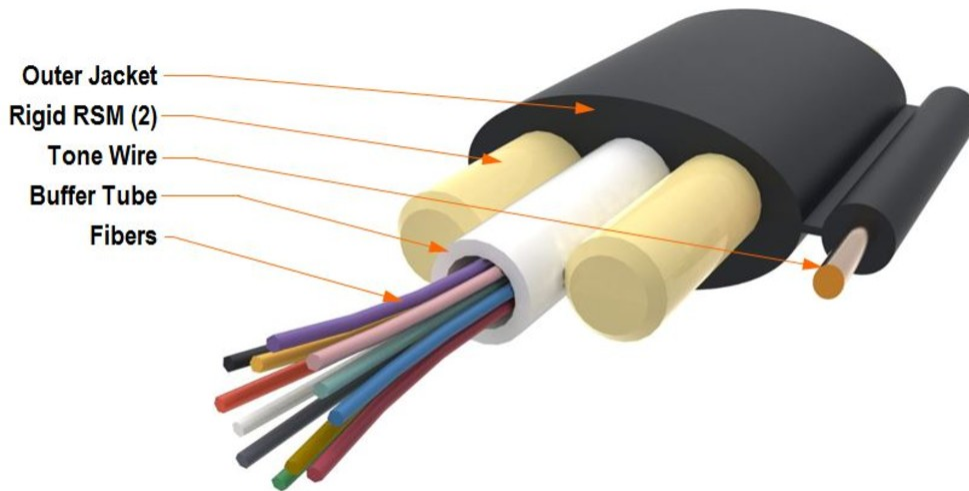
## General Specifications

|                                     |                         |
|-------------------------------------|-------------------------|
| <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>Location of Manufacturing</b>    | Catawba, North Carolina |
| <b>Subunit, quantity</b>            | 1                       |
| <b>Fibers per Subunit, quantity</b> | 24                      |
| <b>Tone Wire, quantity</b>          | 1                       |
| <b>Total Fiber Count</b>            | 24                      |

## Dimensions

|                                       |                    |
|---------------------------------------|--------------------|
| <b>Height Over Jacket</b>             | 4.572 mm   0.18 in |
| <b>Buffer Tube/Subunit Diameter</b>   | 3.048 mm   0.12 in |
| <b>Diameter Over Jacket</b>           | 9.906 mm   0.39 in |
| <b>Diameter Over Messenger Jacket</b> | 2.032 mm   0.08 in |
| <b>Tone Wire Gauge</b>                | 24 AWG             |

## Representative Image



## Mechanical Specifications

|  |                                       |
|--|---------------------------------------|
| <b>Minimum Bend Radius, loaded</b>       | 86.36 mm   3.4 in                     |
| <b>Minimum Bend Radius, unloaded</b>     | 63.5 mm   2.5 in                      |
| <b>Tensile Load, long term, maximum</b>  | 400.34 N   90 lbf                     |
| <b>Tensile Load, short term, maximum</b> | 1,334.466 N   300 lbf                 |
| <b>Compression</b>                       | 1.018 kg/mm   57 lb/in                |
| <b>Compression Test Method</b>           | FOTP-41   IEC 60794-1 E3              |
| <b>Flex</b>                              | 35 cycles                             |
| <b>Flex Test Method</b>                  | FOTP-104   IEC 60794-1 E6             |
| <b>Impact</b>                            | 2.17 ft lb   2.942 N-m                |
| <b>Impact Test Method</b>                | FOTP-25   IEC 60794-1 E4              |
| <b>Strain</b>                            | See long and short term tensile loads |
| <b>Strain Test Method</b>                | FOTP-33   IEC 60794-1 E1              |
| <b>Twist</b>                             | 10 cycles                             |
| <b>Twist Test Method</b>                 | FOTP-85   IEC 60794-1 E7              |
| <b>Vertical Rise, maximum</b>            | 889.102 m   2917 ft                   |

## Optical Specifications

|                   |   |
|-------------------|---|
| <b>Fiber Type</b> | G.652.D and G.657.A1   G.652.D and G.657.A1 |
|-------------------|---|

# 810009343/DB | O-024-DF-HY-F24NS/30G /8W024/1X24AWG

---

## Environmental Specifications

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Installation temperature</b>      | -30 °C to +70 °C (-22 °F to +158 °F) |
| <b>Operating Temperature</b>         | -40 °C to +70 °C (-40 °F to +158 °F) |
| <b>Storage Temperature</b>           | -40 °C to +75 °C (-40 °F to +167 °F) |
| <b>Cable Qualification Standards</b> | ANSI/ICEA S-110-717                  |
| <b>Environmental Space</b>           | Aerial, lashed   Buried              |
| <b>Jacket UV Resistance</b>          | UV stabilized                        |
| <b>Water Penetration</b>             | 24 h                                 |
| <b>Water Penetration Test Method</b> | FOTP-82   IEC 60794-1 F5             |

## Environmental Test Specifications

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Cable Freeze</b>                  | -2 °C   28.4 °F                      |
| <b>Cable Freeze Test Method</b>      | FOTP-98   IEC 60794-1 F15            |
| <b>Drip</b>                          | 70 °C   158 °F                       |
| <b>Drip Test Method</b>              | FOTP-81   IEC 60794-1 E14            |
| <b>Heat Age</b>                      | -40 °C to +85 °C (-40 °F to +185 °F) |
| <b>Heat Age Test Method</b>          | IEC 60794-1 F9                       |
| <b>Low High Bend</b>                 | -30 °C to +60 °C (-22 °F to +140 °F) |
| <b>Low High Bend Test Method</b>     | FOTP-37   IEC 60794-1 E11            |
| <b>Temperature Cycle</b>             | -40 °C to +70 °C (-40 °F to +158 °F) |
| <b>Temperature Cycle Test Method</b> | FOTP-3   IEC 60794-1 F1              |

## Packaging and Weights

|                     |                              |
|---------------------|------------------------------|
| <b>Cable weight</b> | 40.399 kg/km   27.147 lb/kft |
|---------------------|------------------------------|

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| CHINA-ROHS    | Below maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system   |
| REACH-SVHC    | Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a> |
| ROHS          | Compliant  |
| UK-ROHS       | Compliant  |



## 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

|                     |               |
|---------------------|---------------|
| <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 |
|----------------------------|-----------------|

### 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                       |

# DB-8W-LT

|   |                   |
|---|-------------------|
| <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

---

## \* 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