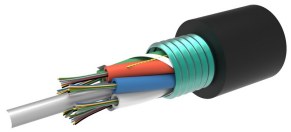
# 8107297/DB | D-012-LA-8W-F12NS



Fiber OSP cable, LightScope ZWP® Single Jacket/Single Armor, Gel-Free, Stranded Loose Tube, 12 fibers, Singlemode G.652.D and G.657.A1, Feet jacket marking, Black jacket color

- Corrugated steel tape armor is strong yet flexible, providing additional crush and rodent protection
- *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-LA |
| **Government Funding** | Build America Buy America (BABA) compliant* |

## General Specifications

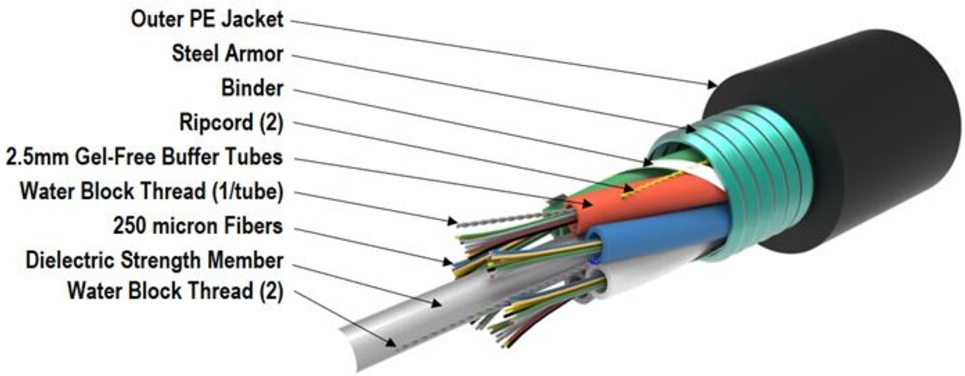
| | |
|---|---|
| **Armor Type** | Corrugated steel |
| **Cable Type** | Stranded loose tube |
| **Construction Type** | Armored |
| **Subunit Type** | Gel-free |
| **Filler, quantity** | 4 |
| **Jacket Color** | Black |
| **Jacket Marking** | Feet |
| **Subunit, quantity** | 1 |
| **Fibers per Subunit, quantity** | 12 |
| **Total Fiber Count** | 12 |

## Dimensions

| | |
|---|---|
| **Buffer Tube/Subunit Diameter** | 2.5 mm \| 0.098 in |
| **Diameter Over Jacket** | 11.5 mm \| 0.453 in |

# 8107297/DB | D-012-LA-8W-F12NS

## Representative Image




## Material Specifications

| | |
|---|---|
| **Jacket Material** | PE |

## Mechanical Specifications

| | |
|---|---|
| **Minimum Bend Radius, loaded** | 173 mm \| 6.811 in |
| **Minimum Bend Radius, unloaded** | 115 mm \| 4.528 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** | 4.41 N-m \| 39.032 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** | 740 m \| 2,427.822 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-87-640 \| EN 187105 |
| **Environmental Space** | Aerial, lashed \| Buried |
| **Jacket UV Resistance** | UV stabilized |
| **Water Penentration** | 24 h |
| **Water Penetration Qualification Method** | ANSI/ICEA S-87-640 \| ANSI/ICEA S-87-640 |
| **Water Penentration 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** | 110 kg/km \| 73.917 lb/kft |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| 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 www.commscope.com/ProductCompliance |
| 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

| | |
|---|---|
| **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/mm² \| 100000 psi |

## Dimensions

| | |
|---|---|
| **Fiber Curl, minimum** | 4 m \| 13.123 ft |

## 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 |

| | |
|---|---|
| **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** | ±0.4 µm @ 1310 nm \| ±0.5 µm @ 1550 nm \| ±0.6 µm @ 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 |

## * 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 |