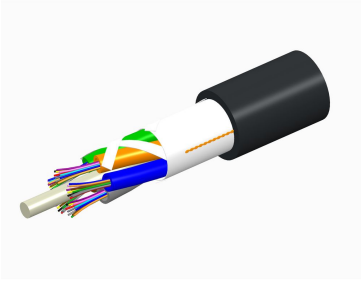
8107363/DB | D-096-LN-8W-F12NS



LightScope ZWP® Single Jacket All-Dielectric, Gel-Free, Outdoor Stranded Loose Tube Cable

Product Classification

Regional Availability	Asia | Australia/New Zealand | EMEA | Latin America | North America
Portfolio	CommScope®
Product Type	Fiber OSP cable

General Specifications

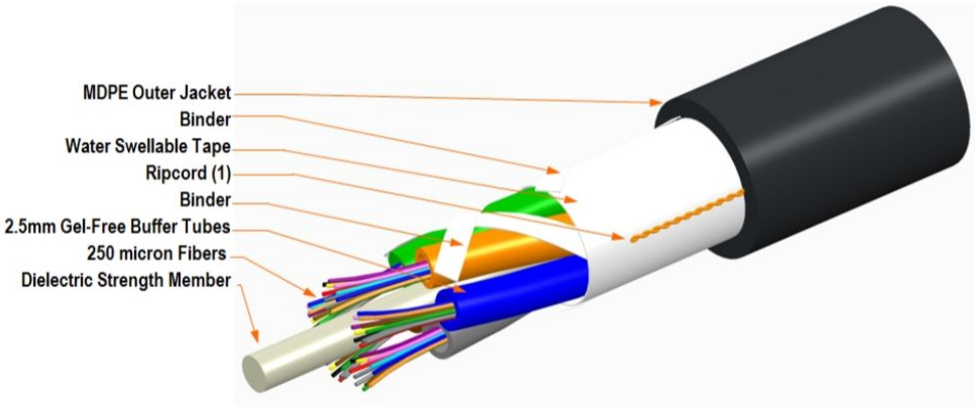
Cable Type	Stranded loose tube
Construction Type	Non-armored
Fiber Type, quantity	96
Fibers per Subunit, quantity	12
Filler, quantity	2
Jacket Color	Black
Subunit Type	Gel-free
Subunit, quantity	8
Total Fiber Count	96

Dimensions

Buffer Tube/Subunit Diameter	2.5 mm | 0.098 in
Diameter Over Jacket	12 mm | 0.472 in

Representative Image

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 17, 2020



Material Specifications

Jacket Material	PE

Mechanical Specifications

Minimum Bend Radius, loaded	459.7 mm | 18.098 in
Minimum Bend Radius, unloaded	120 mm | 4.724 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 | 3.853 lb/in
Compression Test Method	FOTP-41 | IEC 60794-1 E3
Flex	35 cycles
Flex Test Method	FOTP-104 | IEC 60794-1 E6

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 17, 2020

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	904 m | 2,965.879 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 | Telcordia GR-20
Environmental Space	Aerial, lashed | Buried
Jacket UV Resistance	UV stabilized
Water Penentration	24 h
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	90 kg/km | 650.971 lb/kft

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 17, 2020

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

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 17, 2020

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)	253 µm
Coating Diameter (Uncolored)	240 µm
Coating Diameter Tolerance (Colored)	±7 µm
Coating Diameter Tolerance (Uncolored)	±5 µm
Coating/Cladding Concentricity Error, maximum	12 µm
Core/Clad Offset, maximum	0.5 µm
Proof Test	100000 psi | 689.476 N/mm^2

Dimensions

Fiber Curl, minimum	4 m | 13.123 ft

Mechanical Specifications

Macrobending, 20 mm mandrel, 1 turn	0.75 dB @ 1,550 nm | 1.50 dB @ 1,625 nm
Macrobending, 30 mm mandrel, 10 turns	0.25 dB @ 1,550 nm | 1.00 dB @ 1,625 nm
Macrobending, 50 mm mandrel, 100 turns	0.03 dB @ 1,550 nm | 0.03 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

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 15, 2020

DB-8W-LT

Optical Specifications

Cabled Cutoff Wavelength, maximum	1260 nm
Point Defects, maximum	0.1 dB
Zero Dispersion Slope, maximum	0.09 ps/[km-nm-nm]
Zero Dispersion Wavelength, maximum	1322 nm
Zero Dispersion Wavelength, minimum	1302 nm

Optical Specifications, Wavelength Specific

Attenuation, maximum	0.22 dB/km @ 1,550 nm | 0.23 dB/km @ 1,575 nm | 0.25 dB/km @ 1,490 nm | 0.25 dB/km @ 1,625 nm | 0.31 dB/km @ 1,385 nm | 0.34 dB/km @ 1,310 nm | 0.35 dB/km @ 1,650 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 | 1.468 @ 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	±0.3 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 | TIA-492CAAB (OS2)

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

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 15, 2020

* 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

©2020 CommScope, Inc. All rights reserved. All trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope. All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: January 15, 2020