



Fiber OSP cable, LightScope® ZWP Mini Single Jacket All-Dielectric, 48 fiber Arid Core construction, stranded loose tube, Gel-filled, Singlemode G.652.D and G.657.A1, Meter jacket marking, Black jacket color

## Product Classification

<b>Regional Availability</b>	EMEA
<b>Portfolio</b>	CommScope®
<b>Product Type</b>	Fiber OSP cable
<b>Product Series</b>	O-LN

## General Specifications

<b>Cable Type</b>	Stranded loose tube
<b>Construction Type</b>	Non-armored
<b>Subunit Type</b>	Gel-filled
<b>Filler, quantity</b>	2
<b>Jacket Color</b>	Black
<b>Jacket Marking</b>	Meters
<b>Jacket Marking Method</b>	Inkjet
<b>Jacket Marking Text</b>	COMMSCOPE GB OPTICAL CABLE TYPE OS2 SM 48 FIBER [SERIAL NUMBER] [MM/YYYY] [METRE MARK]
<b>Subunit, quantity</b>	4
<b>Fibers per Subunit, quantity</b>	12
<b>Total Fiber Count</b>	48

## Dimensions

<b>Buffer Tube/Subunit Diameter</b>	2 mm   0.079 in
<b>Diameter Over Jacket</b>	9.5 mm   0.374 in

## Representative Image



## Material Specifications

**Jacket Material** PE

## Mechanical Specifications

<b>Minimum Bend Radius, loaded</b>	143 mm   5.63 in
<b>Minimum Bend Radius, unloaded</b>	95 mm   3.74 in
<b>Tensile Load, long term, maximum</b>	800 N   179.847 lbf
<b>Tensile Load, short term, maximum</b>	2700 N   606.984 lbf
<b>Compression</b>	22 N/mm   125.623 lb/in
<b>Compression Test Method</b>	IEC 60794-1 E3
<b>Flex</b>	25 cycles
<b>Flex Test Method</b>	IEC 60794-1 E6
<b>Impact</b>	2.94 N-m   26.021 in lb
<b>Impact Test Method</b>	IEC 60794-1 E4
<b>Strain</b>	See long and short term tensile loads
<b>Strain Test Method</b>	IEC 60794-1 E1
<b>Twist</b>	10 cycles
<b>Twist Test Method</b>	IEC 60794-1 E7
<b>Vertical Rise, maximum</b>	1142 m   3,746.719 ft

## Optical Specifications

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

## Environmental Specifications

# 860646621/DB | O-048-LN-8W-M12BK/20G

<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-87-640   EN 187105   IEC 60794-1-2
<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>	IEC 60794-1 F5

## Environmental Test Specifications

<b>Cable Freeze</b>	-2 °C   28.4 °F
<b>Cable Freeze Test Method</b>	IEC 60794-1 F15
<b>Drip</b>	70 °C   158 °F
<b>Drip Test Method</b>	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>	IEC 60794-1 E11
<b>Temperature Cycle</b>	-40 °C to +70 °C (-40 °F to +158 °F)
<b>Temperature Cycle Test Method</b>	IEC 60794-1 F1

## Packaging and Weights

<b>Cable weight</b>	72 kg/km   48.382 lb/kft
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## 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

# 860646621/DB | O-048-LN-8W-M12BK/20G

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CS-8W-250-EMEA – LightScope® ZWP Singlemode Fiber  
8W-250um

## \* Footnotes

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



## 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>	±7 µm
<b>Coating/Cladding Concentricity Error, maximum</b>	12 µm
<b>Core/Clad Offset, maximum</b>	0.5 µm
<b>Proof Tensile Stress</b>	100,000 psi (0.69 GPa)

### 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
<b>Coating Strip Force, minimum</b>	1.3 N   0.292 lbf
<b>Dynamic Fatigue Parameter, minimum</b>	20

### Optical Specifications

# CS-8W-250-EMEA | 8W-250um

<b>Cabled Cutoff Wavelength, maximum</b>	1250 nm
<b>Point Defects, maximum</b>	0.05 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>	0.20 dB/km @ 1550 nm   0.23 dB/km @ 1,625 nm   0.344 dB/km @ 1310 nm   0.344 dB/km @ 1380 – 1385 nm
<b>Dispersion, maximum</b>	18 ps(nm-km) at 1550 nm   22 ps(nm-km) at 1625 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
<b>Mode Field Diameter Tolerance</b>	$\pm 0.4 \mu\text{m}$ @ 1310 nm   $\pm 0.5 \mu\text{m}$ @ 1550 nm
<b>Polarization Mode Dispersion Link Design Value, maximum</b>	0.05 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

## \* Footnotes

<b>Temperature Dependence, maximum</b>	Temperature dependence is conducted at -60 °C to +85 °C (-76 °F to +185 °F)
<b>Temperature Humidity Cycling, maximum</b>	Temperature humidity cycling is conducted at -10 °C to +85 °C (+14 °F to +185 °F) up to 95% relative humidity