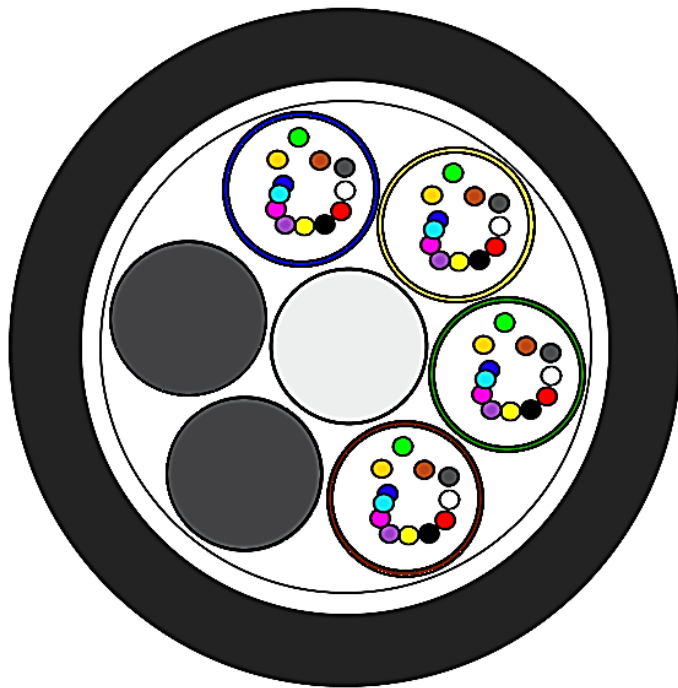


Indoor/outdoor optical cable – Multi loose tube LSZH, UV Resistant 24-96 Single mode and Multimode fibers



Design

- All Dielectric Cable
- PBTP Gel-filled Loose Tube
- Buffer Tubes
- Ripcord
- Low smoke/zero halogen (LSZH) UV-R

Features

- Fiber reinforced polymer Central element
- Water blocking tape
- Glass yarn
- Individual colored tubes
- UV Resistant up to 10 years
- Meets the requirements of IEC 60332-1-2
- Meets CPR Euro Class CPR according to 305/2011: Eca

Version illustrated is the 48 Fiber Cable

IDENTIFICATION

Standard colour-code of Fiber:

1	Natural	2	Red	3	Green	4	Yellow	5	Brown	6	Blue
7	Violet	8	Orange	9	Grey	10	White	11	Pink	12	Black

Outer sheath: <i>(standard colours)</i>	Indoor/Outdoor cable, LSZH UV Resistant up to 10 years - Outer sheath nominal thickness 1,8 mm - External nominal Ø 11 mm (Containing 24-96 Fibers)
Loose Tube:	PBTP Jacket filled with jelly - External nominal Ø 1,9 (Containing up to 12 Fibers per tube)
County of origin	Italy



MECHANICAL TESTS

Tests according to **IEC 60794**

	Requirement	Value
Tensile performance: IEC 60794-1-2-E1	- Tensile performance - Max pulling Force (N)	2500 N ($\Delta\alpha$ reversible) 2500 N ($\Delta\alpha$ reversible)
Crush Performance: IEC 60794-1-21-E3 IEC 60794-1-21-E4	Max Crush (N/dm) Impact (J)	2000N/100mm ($\Delta\alpha$ reversible) 15 J ($\Delta\alpha$ reversible)
Bending Performance: IEC 60794-1-21-E11	- Static - Dynamic	Bend radius: 10 x Diameter Bend radius: 15 x Diameter
Temperatures: IEC 60794-1-22-F1	Operation Installation Storage/Shipping	-40 to +70°C -5 to +50°C -40 to +70°C

SHIPPING INFORMATION

Cable Length (kg/Km)	12-72 Fibers	72-96 Fibers
	70	80

MULTI MODE FIBER PROPERTIES

Product Specifications	OM1 62.5 μm Graded-Index (OM1)	50/125 μm OM2	50/125 μm OM3	50/125 OM4
Physical Characteristics				
Core diameter	62.5 \pm 2.5 μm	50 \pm 2.5 μm	50 \pm 2.5 μm	50 \pm 2.5 μm
Cladding diameter	125 \pm 1 μm	125 \pm 1 μm	125 \pm 1 μm	125 \pm 1 μm
Core non-circularity	\leq 5 %	\leq 5 %	\leq 5 %	\leq 5 %
Cladding non-circularity	\leq 0.7 %	\leq 0,7 %	\leq 0,7 %	\leq 0,7 %
Core/cladding concentricity error	\leq 1 μm	\leq 1 μm	\leq 1 μm	\leq 1 μm
Coating Diameter	242 \pm 5 μm	242 \pm 5 μm	242 \pm 5 μm	242 \pm 5 μm
Tensile Proof Test	\geq 0.7 GPa	\geq 0.7 GPa	\geq 0.7 GPa	\geq 0.7 GPa
Optical Characteristics				
Attenuation @ 850 nm @ 1300 nm	\leq 3.5 dB/km \leq 1.00 dB/km	\leq 2.8 dB/km \leq 0.8 dB/km	\leq 2.8 dB/km \leq 0.8 dB/km	\leq 2.8 dB/km \leq 0.8 dB/km
Overfilled Bandwidth @ 850 nm @ 1300 nm	\geq 200 MHz-km \geq 500 MHz-km	\geq 500 MHz-km \geq 500 MHz-km	\geq 1500 MHz-km \geq 500 MHz-km	\geq 3500 MHz-km \geq 500 MHz-km
Laser Bandwidth/EMB 10GBASE-SR 1000GBASE-Sx 40GBASE-SR4/100GBASE-SR10	33m 274m	83m 600m	300m 1000m 140 m	550m 1100m 170m
Numerical Aperture	0.275 \pm 0.015	0.200 \pm 0.015	0.200 \pm 0.015	0.200 \pm 0.015



SINGLE MODE FIBER PROPERTIES

Product Specifications															
Physical Characteristics	SM-LWP – ITU-T G.652.D	SM- ITU-T G.657.A1													
Cladding diameter	125.0 ± 0.7 μm	125.0 ± 0.7 μm													
Cladding Non-Circularity	≤ 0.7 %	≤ 0.7 %													
Core/Cladding Concentricity Error	≤ 0.5 μm	≤ 0.5 μm													
Coating Diameter (Uncolored)	242 ± 7 μm	242 ± 7 μm													
Coating/Cladding Concentricity Error	≤ 12 μm	≤ 12 μm													
Tensile Proof Test	≥ 0.7 GPa	≥ 0.7 GPa													
Optical Characteristics															
Attenuation	Maximum														
@ 1310 nm	≤ 0.36 dB/km	≤ 0.36 dB/km													
@ 1385 nm	≤ 0.36 dB/km	≤ 0.36 dB/km													
@ 1550 nm	≤ 0.25 dB/km	≤ 0.25 dB/km													
@ 1625 nm	≤ 0.28 dB/km	≤ 0.28 dB/km													
<p>Macrobending Attenuation:</p> <p>The maximum attenuation with bending does not exceed the specified values under the following deployment conditions:</p> <table border="1"> <thead> <tr> <th>Deployment Condition</th> <th>Wavelength</th> <th>Induced Attenuation</th> </tr> </thead> <tbody> <tr> <td rowspan="2">1 turn on a 10 mm radius mandrel</td> <td>1550 nm</td> <td>≤ 0.75 dB</td> </tr> <tr> <td>1625 nm</td> <td>≤ 1.5 dB</td> </tr> <tr> <td rowspan="2">10 turns on a 15 mm radius mandrel</td> <td>1550 nm</td> <td>≤ 0.25 dB</td> </tr> <tr> <td>1625 nm</td> <td>≤ 1.0 dB</td> </tr> </tbody> </table>			Deployment Condition	Wavelength	Induced Attenuation	1 turn on a 10 mm radius mandrel	1550 nm	≤ 0.75 dB	1625 nm	≤ 1.5 dB	10 turns on a 15 mm radius mandrel	1550 nm	≤ 0.25 dB	1625 nm	≤ 1.0 dB
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Chromatic Dispersion															
Zero Dispersion Wavelength (λ ₀)	1300 - 1324 nm	1300 - 1324 nm													
Zero Dispersion Slope (S ₀)	≤ 0.090 ps/nm ² -km	≤ 0.090 ps/nm ² -km													