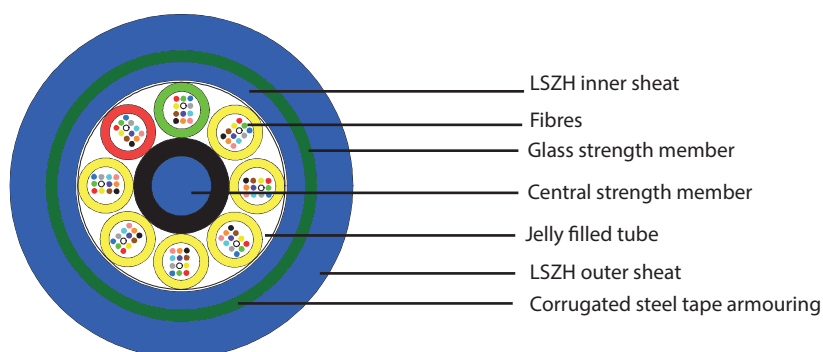


Optic fibre cable OM4 loose tube 48 fibres indoor/outdoor LSZH corrugated steel tape, rodent proof

- 48 fibres Cat. No(s): 0 329 38



1. APPLICATION AND INSTALLATION

The intended installation environment is in tunnels and subways, where fire retardance is required. The steel armour make the cable rodent proof.

2. CABLE TECHNICAL SPECIFICATIONS

2.1 Standards

ISO 11801 2nd edition, IEC 60794-3, IEC 60794-3-10, IEC 60794-3-12, EN 50 173-1, EN 187000

2.2 Construction

Central strength member	Ø 2,5 mm FRP rod	
Fibre colour code	1 Red	7 Brown
	2 Green	8 Violet
	3 Blue	9 Turquoise
	4 Yellow	10 Black
	5 White	11 Orange
	6 Grey	12 Pink
Loose tube	Ø 2,3 mm jelly filled loose tubes, with 12 fibres each	
Water blocking	The core is wrapped with swellable tape	
Ripcord	1	
Inner sheath	EN 50290-2-27:2000 - LSZH	
Armouring	0.155 mm corrugated steel tape	
Outer Sheath	1.5 mm EN 50290-2-27:2000 - LSZH OM2 : Orange ; OM3 and OM4 : Aqua ; SM : Yellow	

2.3 Flame resistance

IEC 60332-1-2 ; IEC 60754-1 ; IEC 60754-2 ; IEC 61034 ; IEC 60332-3-24 ; EN 50399 Class Dca s2, d2, a1; Class Eca

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2.4 Physical properties

Property	IEC 60794-1-2 Method	Limits			
Fibre count	-	24-72	96	144	216
Nominal diameter (mm)	-	14.5	14.5	19.5	19.5
Nominal weight (kg/km)	-	265	255	425	445
Short term Tensile strength (some days) (N)	E1	1800N (Fibre strain < 0.5%)			
Tensile strength (permanent) (N)	E1	1200N (Fibre strain < 0.25%)			
Crush (compressive strength) (N/100 mm)	E3	3000N			
Impact (J)	E4	20Nm			
Torsion	E6	30 reversed bends ; R = 300 mm			
Kink	E7	5 cycles $\pm$ 1 turn			
Fibre count	E10	The cables do not form a kink when a loop is drawn together to a diameter 12 times the cable nominal diameter			
Min. Bending radius (mm)	E11	290			
Temperature range	F1	Installation - 30°C to 60°C Operation - 60°C to 70°C (attenuation variation <0.05dB) Storage - 60°C to 60°C			
Water penetration	F5B	No water on free end (core only)			

2.5 Marking and packaging

Marking of the cable :

- Legrand
- Part number
- Description
- Date code
- Batch number
- Measurement (remaining length in meters)

Catalogue number	0 329 38
Description	48 fibres OS2 In/Out LSZH
Colour	Aqua Ral 6027
Puck (m)	1000
Packaging	Reel

3. FIBRES TECHNICAL SPECIFICATIONS

3.1 General and application

This fibre is a laser-optimised, bend-insensitive graded-index multimode OM4 fibre suitable for transmission speeds of 10 Gb/s or higher. It has a 50 μ m core diameter and a 125 μ m cladding diameter. The fibre is optimised for maximum transmission properties at 850 nm ; but is also well suited for 1300 nm systems. This fibre is fully compliant to the OM4 specification.

The fibre supports 1100 m link length for a 1000BASE-SX system and 550 m for 10GBASE-SX, as well as 550m for a 1000BASE-LX system.

In data centres this fibre supports coming 40G/100G systems.

The outstanding bending performance of this fibre supports future compact cable management.

3.2 Standards and normes

IEC 60793-2-10 : type A1a.3 (In development)

EN 60793-2-10 : type A1a.3 (In development)

TIA/EIA-492 AAAD

EN 50173-1 : 2007, Amendment AB categorie OM4

ISO/IEC 11801 : 2002, Amendment 2 category OM4

IEEE 802.3 - 2002, Amendment 802.3ae - 2002

3.3 Cables attenuation IEC 60793-1-40

Maximum attenuation value of cable at 850 nm	≤ 3.0 dB/km
Maximum attenuation value of cable at 1300 nm	≤ 1.0 dB/km
Attenuation limit according to IEC 60793-2-10, 850 nm	≤ 2.5 dB/km
Attenuation limit according to IEC 60793-2-10, 1300 nm	≤ 0.8 dB/km
Inhomogeneity of OTDR trace for any two 1000 meter fibre lengths	Max. 0.1 dB/km
Fibre bending loss R=7.5 mm 850/1300 nm	≤ 0.2 dB / ≤ 0.5 dB
Fibre bending loss R=15 mm 850/1300 nm	≤ 0.1 dB / ≤ 0.3 dB

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3.4 Bandwidth IEC 60793-1-41

Overfilled (OFL) modal bandwidth at 850 nm	$\geq 3500 \text{ MHz.km}$
Overfilled (OFL) modal bandwidth at 1300 nm	$\geq 500 \text{ MHz.km}$
Effective Modal Bandwidth (EMB) at 850 nm (Assured by means of differential mode delay (DMD) measurement as specified in IEC 60793-1-49)	$\geq 4700 \text{ MHz.km}$

3.5 Group Index of Refraction IEC 60793-1-22

Group index of refraction at 850 nm	1.482
Group index of refraction at 1300 nm	1.477

3.6 Other properties

Attribute	Measurement method	Units	Limits
Core diameter	IEC/EN 60793-1-20	μm	50 ± 2.0
Cladding diameter	IEC/EN 60793-1-20	μm	125.0 ± 1.0
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core non-circularity	IEC/EN 60793-1-20	%	≤ 5
Core-cladding concentricity error	IEC/EN 60793-1-20	μm	≤ 1.5
Primary coating diameter - uncolored	IEC/EN 60793-1-21	μm	242 ± 5.0
Primary coating diameter - colored	IEC/EN 60793-1-21	μm	250 ± 15
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 5
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	μm	≤ 6
Proof stress level	IEC/EN 60793-1-30	Gpa	$\geq 0.7 (\approx 1\%)$
Typical average strip force	IEC/EN 60793-1-32	N	1.7
Strip force (peak)	IEC/EN 60793-1-32	N	$1.3 \leq F_{\text{peak strip}} \leq 8.9$
Numerical aperture	IEC/EN 60793-1-43	N	0.200 ± 0.015