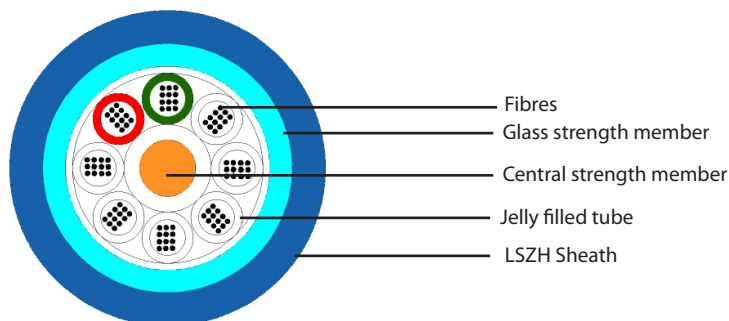


Optic fibre cable OM3 - Stranded loose tube 48-96 fibres indoor/outdoor LSZH

- 48 fibres Cat. No(s): 0 324 89

- 72 fibres Cat. No(s): 0 324 90

- 96 fibres Cat. No(s): 0 324 91



1. APPLICATION AND INSTALLATION

Universal indoor/outdoor cable for LAN, MAN and WAN backbones. Ideal for mixed indoor and limited outdoor installation. It is equally suited for installation in ducts and on trays. Rodent protection, effective in many cases.

2. CABLE TECHNICAL SPECIFICATIONS

2.1 Standards

ISO 11801 2nd edition, IEC 60794-2, EN 50 173-1

2.2 Construction

Central strength member	Ø 2,5 mm FRP rod
Loose tube	Ø 2,3 mm jelly filled loose tubes, with 12 fibres each, up to 12 tubes
Water blocking	The core is water blocked using swellable tape and tread
Wrapping	Polyester nonwoven
Reinforcement	Layer of glass fibre yarns as reinforcement and rodent protection
Ripcord	Polyester ripcord for easy slitting of the sheath
Sheath	1,5 mm sheath, halogen free, flame retardant, IEC 50290-2-27, UV stabilised OM2 : Orange ; OM3 and OM4 : Aqua ; SM : Yellow

2.3 Flame resistance

LSHF (FRNC)

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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2.5 Physical properties

Property	IECN 60794-1-2 Method	Limits		
Fibre count	-	48	72	96
Nominal diameter (mm)	-	12,2	12,2	14,8
Nominal weight (kg/km)	-	155	160	210
Short term Tensile strength (some days) (N)	E1	5000 (fibre strain < 0,5%)		
Tensile strength (permanent) (N)	E1	> 2500 (fibre strain < 0,25%)		
Crush (compressive strength) (N/100 mm)	E3	2000		
Impact (J)	E4	15		
Torsion	E7	5 cycles $\pm$ 1 turn		
Kink	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) - short term	E11	122	122	148
Min. Bending radius (mm) - permanent	-	244	244	296
Temperature range	F1	Installation - 40°C to 70°C Operation - 40°C to 70°C Storage - 40°C to 70°C		
Water penetration	F5	No water on free end		

2.6 Marking and packaging

Marking of the cable :

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

Catalogue number	0 324 89	0 324 90	0 324 91
Description	48 fibres OM3 In/Out LSZH	72 fibres OM3 In/Out LSZH	96 fibres OM3 In/Out LSZH
Colour	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027
Puck (m)	1000	1000	1000
Packaging	Reel	Reel	Reel

3. FIBRES TECHNICAL SPECIFICATIONS

3.1 General and application

This fibre is a laser-optimised, bend-insensitive graded-index multimode OM3 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 OM3 specification.

The fibre supports 1000 m link length for a 1000BASE-SX system and 300 m for 10GBASE-SX, as well as 550 m for a 1000BASE-LX system.

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

3.2 Standards and normes

IEC 60793-2-10 : type A1a.2

EN 60793-2-10 : type A1a.2

TIA/EIA-492 AAAC

EN 50173 : 2002, Category OM3

ISO/IEC 11801 : 2002 category OM3

IEEE 802.3 - 2002 incl. 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	≥ 1500 MHz.km
Overfilled (OFL) modal bandwidth at 1300 nm	≥ 500 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)	≥ 2000 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
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	≥ 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