

Optic fibre cable OM3 - 900 µm tight tube indoor/outdoor

- 2 fibres Cat. No(s): 0 324 80

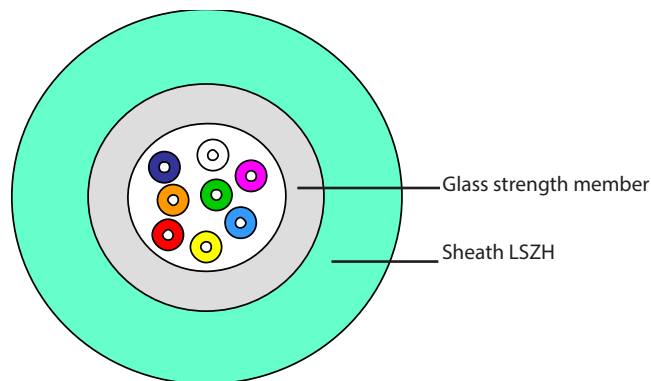
- 16 fibres Cat. No(s): 0 324 87

- 12 fibres Cat. No(s): 0 325 11

- 4 fibres Cat. No(s): 0 324 82

- 6 fibres Cat. No(s): 0 325 10

- 24 fibres Cat. No(s): 0 325 52



1. APPLICATION AND INSTALLATION

This distribution or mini-break-out cable can be used for many indoor applications and limited outdoor applications. The cable features improved tight buffer. Glass yarns provide a degree of rodent protection. Typical cable applications include : LAN and WAN backbones, central office interconnectors, backbones in data centres, and many other. The cable is suited for installation in ducts and on trays. The cable features an UV stabilised, water-blocked, LSZH sheathing, the cable is suited for indoor and outdoor (ducts) runs.

2. CABLE TECHNICAL SPECIFICATIONS

2.1 Standards

EN 187 000
IEC 60794-2
IEC 60794-2-20
ISO 11801 2nd edition
EN 50173-1

2.2 Construction

Fibre	2-24 tightly buffered fibres 900µm ± 50 µm	
	1 Blue	13 Blue w/mark every 70 mm
	2 Orange	14 Orange w/mark every 70 mm
	3 Green	15 Green w/mark every 70 mm
	4 Brown	16 Brown w/mark every 70 mm
	5 Grey	17 Grey w/mark every 70 mm
	6 White	18 White w/mark every 70 mm
	7 Red	19 Red w/mark every 35 mm
	8 Black	20 White w/mark every 35 mm
	9 Yellow	21 Yellow w/mark every 35 mm
	10 Violet	22 Violet w/mark every 35 mm
	11 Pink	23 Pink w/mark every 35 mm
	12 Aqua	24 Turquoise w/mark every 35 mm
Strength member	Glass yarns as strength members and rodent protection	
Water blocking	Swellable tread and tape	
Sheath	Halogen free, flame retardant, UV stabilized Colour= Aqua Ral 6027	

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2.3 Fire rating

IEC 60332-1-2	Single vertical wire test
IEC 60332-3-24	Vertical flame spread of vertically-mounted bunched wires or cables
IEC 60754-1	No halogens
IEC 60754-2	No acid matters
IEC 61034	No dense smoke
EN 50399	Class Dca s2, d2, a1 (cable marking) ; also compliant with class Eca

2.4 Physical properties - IEC 60974-1-2

Permanent tensile strength	E 11	2, 4, 6, 8 and 12 fibres : 500 N 16 fibres : 1000 N 24 fibres : 1500 N
Short term tensile strength (some days)	E 11	2, 4, 6, 8 and 12 fibres : 1000 N 16 fibres : 1400 N 24 fibres : 1600 N
Maximum installation load (a few hours)	-	2, 4, 6, 8 and 12 fibres : 1500 N 16 fibres : 2100 N 24 fibres : 2400 N
Impact	E4	20 J
Crush (compressive strength)	E3	2, 4, 6, 8 and 12 fibres : 2000 N/100 mm 16 and 24 fibres : 1000 N/100 mm
Torsion	E7	5 cycles ± 1 turn
Minimum bending radius of tightly buffered fibres	G1	7.5mm
Temperature range	F1	Operation and installation : -20 °C to + 60 °C Storage : -40 °C to + 70 °C

Fibre count	Heat of combustion		Nominal diameter	Nominal cable weight	Minimum bending radius	
					Long term/short term	
2	660 MJ/Km	0,18 kWh/m	6 mm	32 kg/km	100/50 mm	
4	760 MJ/Km	0,21 kWh/m	6,5 mm	34 kg/km	100/50 mm	
6	845 MJ/Km	0,23 kWh/m	6,5 mm	36 kg/km	100/50 mm	
8	970 MJ/Km	0,29 kWh/m	7,0 mm	39 kg/km	100/50 mm	
12	1180 MJ/Km	0,33 kWh/m	7,5 mm	43 kg/km	130/75 mm	
16	1400 MJ/Km	0,39 kWh/m	8,0 mm	52 kg/km	130/75 mm	
24	1700 MJ/Km	0,47 kWh/m	8,5 mm	63 kg/km	230/115 mm	

2.5 Marking and packaging

Marking of the cable :

- Legrand
- Part number
- Description
- Euroclass : Dca s2, d2, a1
- Date code
- Batch number
- Measurement (remaining length in meters)

Catalogue number	0 324 80	0 324 82	0 324 87	0 325 10	0 325 11	0 325 52
Description	2 fibres OM3 TB In/ Out LSZH	4 fibres OM3 TB In/ Out LSZH	16 fibres OM3 TB In/ Out LSZH	6 fibres OM3 TB In/ Out LSZH	12 fibres OM3 TB In/ Out LSZH	24 fibres OM3 TB In/ Out LSZH
Colour	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027
Puck (m)	2000	2000	2000	2000	2000	2000
Packaging	Reel	Reel	Reel	Reel	Reel	Reel

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3. FIBRES TECHNICAL SPECIFICATIONS

3.1 Standards and Norms

IEC 60793-2-10 category A1a.2;
EN 60793-2-10: type A1a.2
ITU Recommendation G.651
TIA/EIA-492 AAAC

EN 50 173:2002 category OM3
ISO/IEC 11801:2002 category OM3.
IEEE 802.3-2002 incl. amendment 802.3ae - 2002.

3.2 Attenuation (of cable with fibres) - IEC 60793-1-40

Maximum value of cable at 850 nm	≤ 3.0 dB/km
Maximum value of cable at 1300 nm	≤ 1.0 dB/km
Maximum value of fibre (for reference only) at 850 nm	≤ 2.5 dB/km
Maximum value of fibre (for reference only) at 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

3.3 Bandwidth - IEC 60793-1-41

OFL value at 850 nm	≥ 1500 MHz·km
OFL value at 1300 nm	≥ 500 MHz·km
Effective Modal Bandwidth (EMB) Effective Modal Bandwidth I assured by means of differential mode delay (DMD) measurement as specified in IEC 60793-1-49	≥ 2000 MHz·km
Group index of refraction at 850 nm	1.482
Group index of refraction at 1300 nm	1.477

3.4 Fibre properties according to IEC - IEC 60793-1

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 ± 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 - uncoloured	IEC/EN 60793-1-21	µm	242 ± 5
Primary coating diameter - coloured	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 (≈1%)
Typical average strip force	IEC/EN 60793-1-32	N	1.7
Strip force (peak)	IEC/EN 60793-1-32	N	1.3 ≤ F _{peak.strip} ≤ 8.9
Numerical aperture	IEC/EN 60793-1-43	N	0.200 ± 0.015