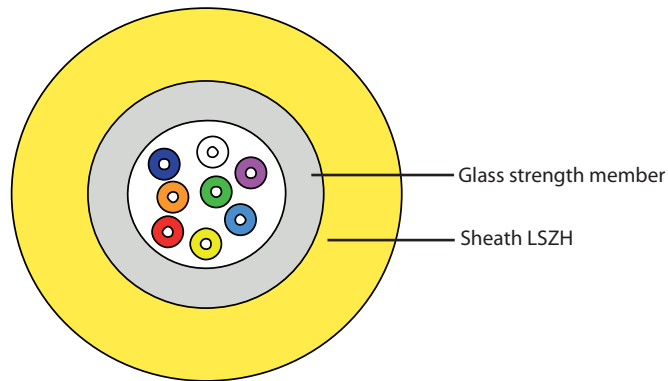


Optic fibre cable OS1/OS2 - 900 µm tight tube indoor/outdoor

- 2 fibres Cat. No(s): 0 322 87
- 4 fibres Cat. No(s): 0 322 89

- 6 fibres Cat. No(s): 0 322 90
- 8 fibres Cat. No(s): 0 322 91

- 16 fibres Cat. No(s): 0 322 93
- 12 fibres Cat. No(s): 0 325 50



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 Red	13 Yellow w/mark every 70 mm
	2 Green	14 White w/mark every 70 mm
	3 Blue	15 Grey w/mark every 70 mm
	4 Yellow	16 Turquoise w/mark every 70 mm
	5 White	17 Orange w/mark every 70 mm
	6 Grey	18 Pink w/mark every 70 mm
	7 Brown	19 Yellow w/mark every 35 mm
	8 Violet	20 White w/mark every 35 mm
	9 Turquoise	21 Grey w/mark every 35 mm
	10 Black	22 Turquoise w/mark every 35 mm
	11 Orange	23 Orange w/mark every 35 mm
	12 Pink	24 Pink 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 = Yellow Ral 1018	

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

Catalogue number	0 322 87	0 322 89	0 322 90	0 322 91	0 322 93	0 325 50
Description	2 fibres OS2 TB In/ Out LSZH	4 fibres OS2 TB In/ Out LSZH	6 fibres OS2 TB In/ Out LSZH	8 fibres OS2 TB In/ Out LSZH	16 fibres OS2 TB In/ Out LSZH	12 fibres OS2 TB In/ Out LSZH
Colour	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018
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 60793-2-50 class B1.3

EN 60793-2-50: class B1.3

ITU Recommendation G.652.D - the other ITU designations A, B and C are also fulfilled. EN 50

173-1:2007, cat. OS2; also OS1 requirements are fulfilled

ISO/IEC 11801:2002 cat. OS1.

ISO/IEC 24702:2006, cat. OS2; also OS1 requirements are fulfilled

IEEE 802.3 - 2002 incl. 802.3ae

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

1310 nm – 1625 nm	≤ 0.39 dB/km
1550 nm	≤ 0.25 dB/km
Inhomogeneity of OTDR trace for any two 1000 meter fibre lengths	Max. 0.1 dB/km

3.3 Bandwidth - IEC 60793-1-41

Group index of refraction at 1310 nm	1.467
Group index of refraction at 1550 nm	1.468
Group index of refraction at 1625 nm	1.468

3.4 Fibre properties according to IEC - IEC 60793-1

Attribute	Measurement method	Units	Limits
Cladding diameter	IEC/EN 60793-1-20	µm	125 ± 0.7
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core (MDF) - cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 0.5
Primary coating diameter - uncoloured	IEC/EN 60793-1-21	µm	242 ± 7
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	≤ 12
Proof stress level	IEC/EN 60793-1-30	GPa	≥ 0.7 (≈1%)
Strip force (peak)	IEC/EN 60793-1-32	N	1.0 ≤ F _{peak.strip} ≤ 8.9
Chromatic dispersion coefficient:	IEC/EN 60793-1-42		
In the interval 1285 nm – 1330 nm		ps/km · nm	≤ 3
At 1550 nm		ps/km · nm	≤ 18
At 1625 nm		ps/km · nm	≤ 22
Zero dispersion wavelength, λ ₀		nm	1311 ± 11
Zero dispersion slope		ps/(nm ² · km)	≤ 0.090
Cut-off wavelength	IEC/EN 60793-1-44	λ _{cc} nm	≤ 1260
Mode field diameter at 1310 nm	IEC/EN 60793-1-45	µm	9 ± 0.4
Mode field diameter at 1550 nm		µm	10.1 ± 0.5
Macrobending loss at : 100 turns on a Ø 50 mm mandrel at 1310 and 1550 nm 100 turns on a Ø 60 mm mandrel at 1625 nm	IEC/EN 60793-1-47	dB	≤ 0.05
Polarisation mode dispersion (PMD) coefficient, cabled	IEC/EN 60793-1-48	ps/√km	≤ 0.5
PMDQ Link Design Value	IEC/EN 60794-3	ps/√km	≤ 0.2