

## Optic fibre cable OS1/OS2 - loose tube indoor/outdoor

- 2 fibres Cat. No(s): 0 322 86

- 16 fibres Cat. No(s): 0 322 92

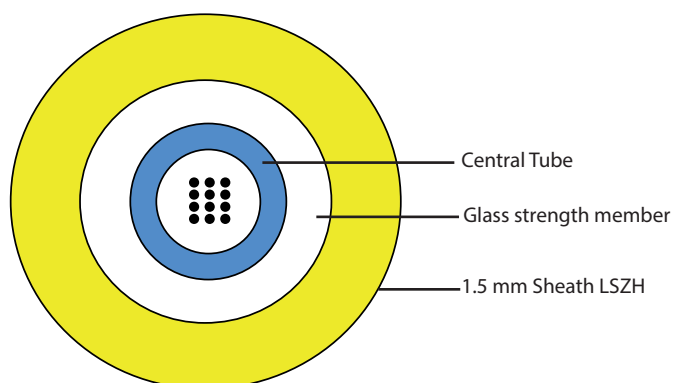
- 8 fibres Cat. No(s): 0 325 03

- 4 fibres Cat. No(s): 0 325 02

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

- 12 fibres Cat. No(s): 0 325 14

- 24 fibres Cat. No(s): 0 325 51



### 1. APPLICATION AND INSTALLATION

This cable can be used for LAN and WAN backbones, telecom access lines, fibre to business and fibre to the building drop connections : as well as fibre to the home drop and access connections.

With its LSOH sheathing this cable is ideal for mixed indoor and limited outdoor installation.

It is equally suited for installation in ducts and on trays. This cable features a high tensile strength and a degree of rodent protection, effective in many cases.

### 2. CABLE TECHNICAL SPECIFICATIONS

#### 2.1 Standards

ISO 11801 2nd edition  
EN 50173-1:2002  
IEC 60794-1

#### 2.2 Construction

Loose tube	Ø 2.8 mm jelly filled loose tube with 2-24 fibres	
Fibre colour code	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	Waterblocked E-Glass fibre elements	
Sheath	1,5 mm sheath, UV stabilised, IEC 50290-2-27 Colour = Yellow Ral 1018	

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### 2.3 Fire rating

IEC 60332-1-2	Single vertical wire test
IEC 60332-3-24	Bunched vertical wires test
IEC 60754-1	No halogens
IEC 60754-2	No acid matters
IEC 61034-2	No dense smoke
EN50399	Class Dca s2, d2, a1 (cable marking) ; also compliant with class Eca

### 2.4 Heat of combustion

2- 24 fibres	1100 MJ/km	0,31 kWh/m
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### 2.5 Physical properties- IEC 60794-1

Nominal outer diameter	-	2-24 fibres : 7,3 mm
Nominal weight	-	2-24 fibres : 55 kg/km
Maximum installation tensile strength	E1	3000 N (fibre strain ≤ 0.6%)
Permanent tensile strength	E1	1000 N (fibre strain ≤ 0.2%)
Compressive strength (crush)	E3	3500 N/100 mm
Impact	E4	20 Nm (no attenuation change, no broken cable elements)
Torsion	E7	5 cycles ± 1 turn
Kink	E10	The cables do not form a kink when a loop is drawn together to a diameter of 200 mm

Min. Bending radius, unloaded	E11	R = 73 mm
Min. Bending radius, loaded	-	R = 146 mm
Temperature range	F1	Storage : - 40°C to + 60°C (short term up to + 70°C)
		Installation : -15°C to + 40°C
		Operation : - 30°C to 70°C
Water penetration	F5B	No water on free end

### 2.6 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	0 325 02	0 325 12	0 325 03	0 325 14	0 325 51	0 322 86	0 322 92
Description	4 fibres OS2 LT In/Out LSZH	6 fibres OS2 LT In/Out LSZH	8 fibres OS2 LT In/Out LSZH	12 fibres OS2 LT In/Out LSZH	24 fibres OS2 LT In/Out LSZH	2 fibres OS2 LT In/Out LSZH	16 fibres OS2 LT In/ Out LSZH
Colour	Yellow Ral 1018	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	2000
Packaging	Reel	Reel	Reel	Reel	Reel	Reel	Reel

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### 3. FIBRES TECHNICAL SPECIFICATIONS

#### 3.1 Standards and Norms

IEC 60793-2-50 category B.1.3

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
Local discontinuity at 1310 nm and 1550 nm	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	242 ± 7
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	1.2 ≤ F <sub>peak.strip</sub> ≤ 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 <sub>0</sub>		nm	1311 ± 11
Zero dispersion slope		ps/(nm <sup>2</sup> · km)	≤ 0.090
Cut-off wavelength	IEC/EN 60793-1-44	λ <sub>cc</sub> 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