

**Optic fibre cable OM4 - loose tube indoor/outdoor**

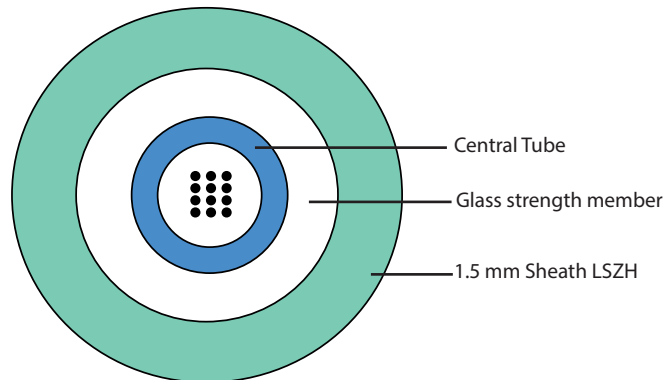
- 4 fibres Cat. No(s): 0325 43

- 12 fibres Cat. No(s): 0325 45

- 8 fibres Cat. No(s): 0325 44

- 2 fibres Cat. No(s): 0329 25

- 24 fibres Cat. No(s): 0329 31



**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 = Aqua Ral 6027	

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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 $\leq$ 0.6%)
Permanent tensile strength	E1	1000 N (fibre strain $\leq$ 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 $\pm$ 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 43	0 325 44	0 325 45	0 329 25	0 329 31
Description	4 fibres OM4 LT In/Out LSZH	8 fibres OM4 LT In/Out LSZH	12 fibres OM4 LT In/Out LSZH	2 fibres OM4 LT In/Out LSZH	24 fibres OM4 LT In/Out LSZH
Colour	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027	Aqua Ral 6027
Puck (m)	2000	2000	2000	2000	2000
Packaging	Reel	Reel	Reel	Reel	Reel

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### 3. FIBRES TECHNICAL SPECIFICATIONS

#### 3.1 Standards and Norms

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 category OM4  
ISO/IEC 11801:2002 Amendment 2 category OM4  
IEEE 802.3-2002 incl. amendment 802.3ae - 2002.

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

Maximum attenuation value of cable at 850 nm	$\leq 3.0$ dB/km
Maximum attenuation value of cable at 1300 nm	$\leq 1.0$ dB/km
Attenuation limit according to IEC 60793-2-10 at 850 nm	$\leq 2.5$ dB/km
Attenuation limit according to IEC 60793-2-10 at 1300 nm	$\leq 0.7$ dB/km
Attenuation difference between 1380 nm and 1300 nm	$\leq 3$ dB/km
Point discontinuity at 850 nm and 1300 nm	Max. 0.1 dB/km
Fibre bending loss R = 7.5 mm 850/1300 nm	$\leq 0.2$ dB / $\leq 0.5$ dB
Fibre bending loss R = 15 mm 850/1300 nm	$\leq 0.1$ dB / $\leq 0.3$ dB

#### 3.3 Bandwidth - IEC 60793-1-41

OFL value at 850 nm	$\geq 3500$ MHz·km
OFL value at 1300 nm	$\geq 500$ 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)	$\geq 4700$ 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	$\mu\text{m}$	$50 \pm 2.5$
Cladding diameter	IEC/EN 60793-1-20	$\mu\text{m}$	$125.0 \pm 1.0$
Cladding non-circularity	IEC/EN 60793-1-20	%	$\leq 0.7$
Core non-circularity	IEC/EN 60793-1-20	%	$\leq 5$
Core-cladding concentricity error	IEC/EN 60793-1-20	$\mu\text{m}$	$\leq 1$
Primary coating diameter - uncoloured	IEC/EN 60793-1-21	$\mu\text{m}$	$242 \pm 7$
Primary coating diameter - coloured	IEC/EN 60793-1-21	$\mu\text{m}$	$250 \pm 15$
Primary coating non-circularity	IEC/EN 60793-1-21	%	$\leq 5$
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	$\mu\text{m}$	$\leq 10$
Proof stress level	IEC/EN 60793-1-30	GPa	$\geq 0.7$ ( $\approx 1\%$ )
Typical average strip force	IEC/EN 60793-1-32	N	$1 \leq F_{\text{av.strip}} \leq 3$
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	$0.200 \pm 0.015$