

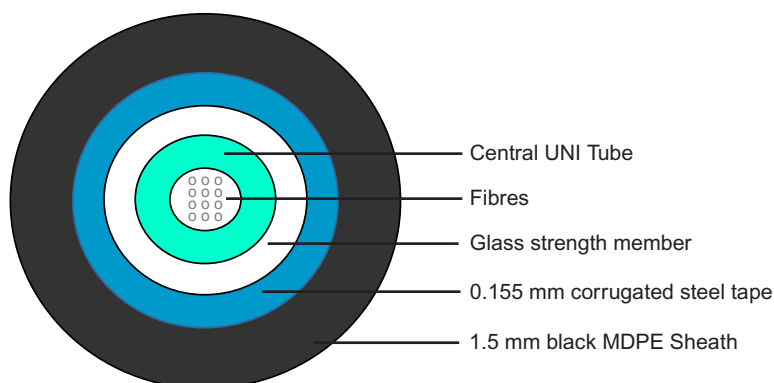
Optic fibre cable OM 2 - loose tube outdoor/corrugated steel tape

- 6 fibres

Cat. No(s): 325 05

- 12 fibres

Cat. No(s): 325 07



1. USE

- LAN backbones
- Outdoor direct burial
- Tunnels
- Conduits

2. GENERAL

This specification covers an optical cable with 2 - 24 optical fibres of UNI tube construction. The cable is armoured thus making it suitable for installation outdoors in harsh environments. The armouring does also make the cable rodent proof.

This fibre is a graded-index multimode fibre suitable for transmission speeds of up to 10 Gb/s. It has a 50 µm core diameter and a 125 µm cladding diameter. The fibre is designed for use at 850 and/or 1 300 nm.

This fibre fulfils all requirements for an OM 2 fibre.

3. CABLE TECHNICAL SPECIFICATIONS

3.1 Standards

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

3.2 Construction

Loose tube	ø2.8 mm jelly filled loose tube with 2-16 fibres; ø3.5 mm loose tube with 24 fibres
Strength member	E-Glass yarns
Armouring	0.15 mm corrugated steel tape
Sheath	1.5 mm black MDPE sheath, IEC 60811, IEC 60708

3.3 Physical properties - IEC 60794-1

Nominal outer diameter	-	8.5 mm
Nominal weight	-	75 kg/km
Tensile strength (dynamic)	E1	1000 N
Tensile strength (permanent)	E1	500 N
Compressive strength (crush)	E3	2000 N
Impact	E4	10 Nm
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 100 mm
Min. Bending radius, unloaded	E11	R = 55 mm
Min. Bending radius, loaded	-	R = 110 mm
Temperature range	F1	Storage and installation: - 40°C to + 70°C
		Operation: - 40°C to + 70°C.
The max. attenuation variation in the operational temperature range is:		For M6 and M5 fibres: 0.5 dB/km
		For SM fibres: 0.2 dB/km.

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4. FIBRES TECHNICAL SPECIFICATIONS

4.1 Standards and Norms

IEC 60793-2-10 category A1a

EN 60793-2-10: type A1a

ITU Recommendation G.651

TIA/EIA-492 AAAB

EN 50 173:2002 category OM2

ISO/IEC 11801:2002 category OM2.

IEEE 802.3-2002. with amendment 802.3ae - 2002.

ANSI/TIA/EIA-568.B.3 - 2000

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

Maximum at 850 nm	≤ 2.7 dB/km
Maximum at 1300 nm	≤ 0.8 dB/km
Typical value at 850 nm	≤ 2.5 dB/km
Typical value at 1300 nm	≤ 0.6 dB/km
Inhomogeneity of OTDR trace for any two 1000 meter fibre lengths	Max. 0.2 dB/km

4.3 Bandwidth - IEC 60793-1-41

850 nm	600 MHz•km
1300 nm	1200 MHz•km
Group index of refraction at 850 nm	1.482
Group index of refraction at 1300 nm	1.477

4.4 Fibre properties according to IEC - IEC 60793-1

Attribute	Measurement method	Units	Limits
Core diameter	IEC/EN 60793-1-20	μm	50 ± 2.5
Cladding diameter	IEC/EN 60793-1-20	μm	125 ± 1
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 1.0
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 ± 0.7
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	≤ 10
Proof stress level	IEC/EN 60793-1-30	GPa	≥ 0.7 ($\approx 1\%$)
Typical average stripforce	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		0.200 ± 0.015