Fibre optic cable

LTMC

Article number: 74834 10-07-2017

Description

144x SM G.657.A1 (6x24)

The Loose Tube Mini Cable (LTMC) is a non-metallic, longitudinal water-protected fibre optic cable, with reduced outer diameter and low bend radius, no waterpeak G.657.A1 fibres, suitable for Access or FTTx applications. Installation: blowing into miniducts.

Trading information

Product group	Fibre optic cable
Series	Fibre optic cable Single mode
Type	LTMC
Net. Weight	50 kg/km
Sheath marking	ACE - TKF LTMC 144x SM G.657.A1 (6x24) A-DQ(ZN)2Y 74834 {Batch} {Year} {Length}

Trade lengths

Reel à 1	(74834 / 8713182094669)

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Construction characteristics

Cable type	LTMC
Fibre type	Single mode 9/125
Optical fibre standard	ITU-T G.657.A1
Number of fibres	144
Number of fibres per tube	24
Number of cores	6
Type of tube	Loose tube, gel filled
Cable metal free	Yes
Number of layers	1 Layer
Strip method	1 Rip cord
Strain relief	Yes
Type of strain relief	FRP
Material outer sheath	HDPE
Colour outer sheath	Black
Outer sheath thickness	0.5 mm
Outer diameter approx.	7.9 mm

Properties

Application	Outside
Blowable	Yes

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Technical characteristics

Standardization	EN IEC 60794-5-10
Test procedures	IEC 60794-1-2
Longitudinal water blocking	Yes
Longitudinal watertight construction	Super Absorbing Polymer
Installation temperature	-15 / 50 °C
Transportation and storage temperature	-40 / 70 °C
Operational temperature range Ta1 - Tb1	-40 / 70 °C
Max. attenuation increase during Ta1 - Tb1	0.05 dB
UV resistant	Yes
UV-protection	ISO 4892/2

Mechanical characteristics

Tensile load short term (Tm)	1500 N
Max. fiber strain at Tm	0.5 %
Tensile load long term (Tl)	500 N
Min. bending radius after installation	120 mm
Min. bending radius during installation	160 mm
Crush resistance acc. meth.E3A	1200 N/dm
Impact strength	2 J
Torsion resistance	360 °/m
Kink resistance	210 mm

Optical characteristics

Max. attenuation @ 1310 nm	0.35 dB/km
Max. attenuation @ 1550 nm	0.22 dB/km
Max. attenuation @ 1625 nm	0.25 dB/km

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Other properties

Halogen free (acc. EN 60754-1/2)	Yes

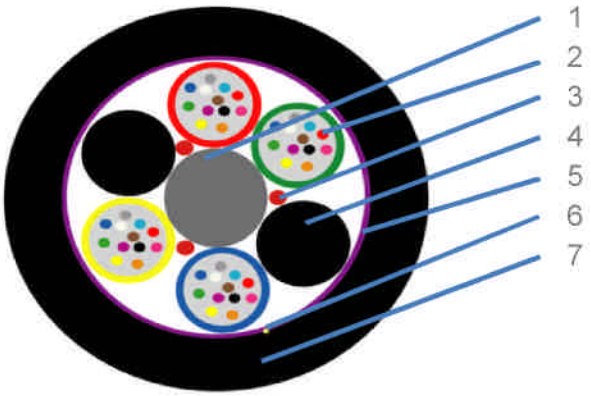
Product Information

Cable construction and colour code

LTMC

Version: PM-M11J15

FO mini-cable with stranded mini loose tubes



Description:

1	Centre element FRP optional with over sheath
2	Loose tube with optical fibres (12 or 24 fibres per tube)
3	Water blocking layer
4	Filler (only for constructions with 5 tubes or less (< 60 fibres)
5	Cross-binder
6	Ripcord
7	Outer sheath (PE)

Standard Colours:

Fibres				Tubes	
Group 1		Group 2		Layer	
1	Red	13	Red +t	1	Red
2	Green	14	Green +t	2	Green
3	Blue	15	Blue +t	3	Blue
4	Yellow	16	Yellow +t	4	Yellow
5	White	17	White +t	5	White
6	Grey	18	Grey +t	6	Grey
7	Brown	19	Brown +t	7	Brown
8	Violet	20	Violet +t	8	Violet
9	Turquoise	21	Turquoise +t	9	Orange
10	Black	22	Natural	10	Black
11	Orange	23	Orange +t	11	Pink
12	Pink	24	Pink +t	12	Turquoise

note +t: indicates a black tracer

Fibre:	Product Characteristics - Optical fibres
type of fibre	Hydrogen passivated, dispersion unshifted, matched cladding. Bending loss insensitive singlemode fibre 9/125µm. Fully compatible with G.652.D fibre. Optical and geometrical properties exceed ITU¬ recommendations G.652.D and G.657.A1
Standard	IEC-60793-2-50, B6-a1
Standard	ITU-T G.657.A1

Characteristics:	Properties	Unit
Mode field diameter; 1310nm	9.0 ± 0.3	µm
Mode field diameter; 1550nm	10.2 ± 0.4	µm
Core non-circularity	max. 6	%
Core/Cladding concentricity error	max. 0.4	µm
Cladding diameter	125.0 ± 0.5	µm
Cladding non-circularity	max. 0.6	%
Coating diameter	242 ± 5	µm
Coating/Cladding concentricity error	max. 8	µm
Temperature sensitivity; -60°C to +85°C	max. 0.05	dB/km
Bending sensitivity - 10 turns around Ø30mm - 1550nm	max. 0.1	dB
Bending sensitivity - 10 turns around Ø30mm - 1625nm	max.0.3	dB
Bending sensitivity - 1 turn around Ø20mm - 1550nm	max.0.75	dB
Bending sensitivity - 1 turn around Ø20mm - 1625nm	max.1.5	dB
Proof test level	min. 0.69	Gpa
Fibre curl	min. 4	m
Cable cut-off wavelength	max. 1260	nm
Zero-dispersion wavelength	1300 - 1324	nm
Zero-dispersion slope	max. 0.090	ps/nm².km
Chromatic dispersion; 1285nm - 1330 nm	max. |3.2|	ps/nm.km
Chromatic dispersion; 1550nm	max. 17	ps/nm.km
Chromatic dispersion; 1625nm	max. 21	ps/nm.km
Polarisation mode dispersion; maximum individual fibre	max. 0.1	ps/√km
PMDq	max. 0.06	ps/√km
Max. attenuation at 1383nm (α_{1383}) [note a]	<max. α_{1310}	
Effective Group Core Refractive Index; 1310 nm	1.4671	-
Effective Group Core Refractive Index; 1550 nm	1.4675	-
Effective Group Core Refractive Index; 1625 nm	1.4680	-

note a: after hydrogen ageing