



## Fibre optic cable

## LTC RP

Article number: 74569

18-01-2019

## Description

144x SM G.657.A1 (12x12)

The Loose Tube Cable Rodent-Protected (LTC RP) is a robust, non-metallic, loose tube outdoor duct cable, rodent protected, longitudinal water-protected, with high pulling force.

Installation: by blowing or pulling, into conduits or on cable trays.



## Trading information

Product group	Fibre optic cable
Series	Fibre optic cable Single mode
Type	LTC RP
Net. Weight	184 kg/km
Sheath marking	ACE - TKF LTC RP 144x SM G.657.A1 (12x12) A-DQ(ZN)B2Y 74569 {Batch} {Year} {Length}

## Trade lengths

(74569 / 8713182100872)

## Construction characteristics

Number of fibres	144
Type of tube	Loose tube, gel filled
Number of fibres per tube	12
Fibre type	Single mode 9/125
Strain relief	Yes
With rodent protection	Yes
Material outer sheath	HDPE



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Colour outer sheath	Black
Cable metal free	Yes
Euro fire class according to EN 13501-6	Fca
Halogen free (acc. EN 60754-1/2)	Yes
UV resistant	Yes
Outer diameter approx.	15.3 mm
Blowable	Yes
Optical fibre standard	ITU-T G.657.A1
Number of cores	12
Cable type	LTC
Number of layers	1 Layer
Strip method	1 Rip cord
Outer sheath thickness	1.5 mm
Max. cord diameter	15.8 mm

## Properties

Application	Outside
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**Technical characteristics**

Standardization	EN IEC 60794-3-10
Test procedures	IEC 60794-1-2
Longitudinal water blocking	Yes
Longitudinal watertight construction	Super Absorbing Polymer
Installation temperature	-15 / 55 °C
Transportation and storage temperature	-40 / 70 °C
Operational temperature range Ta1 - Tb1	-30 / 70 °C
Max. attenuation increase during Ta1 - Tb1	0.05 dB
Operational temperature range Ta2 - Tb2	-40 / 70 °C
Max. attenuation increase during Ta2 - Tb2	0.15 dB
UV-protection	ISO 4892/2

**Mechanical characteristics**

Tensile load short term (Tm)	5500 N
Tensile load long term (Tl)	3000 N
Min. bending radius after installation	245 mm
Min. bending radius during installation	330 mm
Crush resistance acc. meth.E3A	4500 N/dm
Impact strength	5 J
Torsion resistance	360 °/m

**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



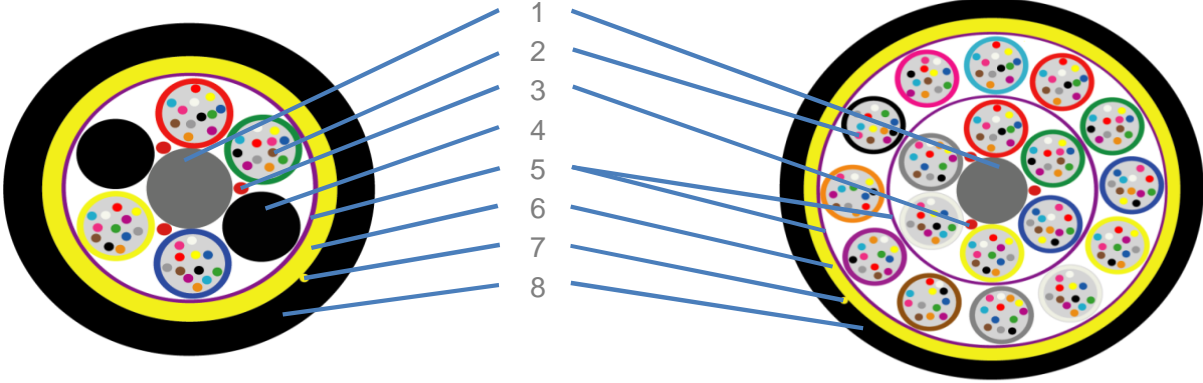
Product Information

Cable construction and colour code

LTC RP

Version: PM-M11J15

FO cable with stranded loose tubes  
Rodent Protection



Description:

1	Centre element, FRP optional with over sheath
2	Loose tube with optical fibres (2, 4, 6, 8, 12 or 24 fibres per tube)
3	Water blocking yarns or tape
4	Filler
5	Water blocking tape
6	Glass yarn strength members (Rodent Protection)
7	Ripcord (optional)
8	Outer sheath (PE)

Standard Colours:

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

note +t: indicates a black tracer

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Fibre:		Product Characteristics - Optical fibres
type of fibre		Hydrogen passivated, dispersion unshifted, matched cladding. Bending loss insensitive singlemode fibre 9/125µm.
		Full 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, B-657.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. 0.7	%
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 - 100 turns around Ø50mm - 1550nm	max. 0.05	dB
Bending sensitivity - 100 turns around Ø60mm - 1625nm	max.0.05	dB
Bending sensitivity - 10 turn around Ø30mm - 1550nm	max.0.1	dB
Bending sensitivity - 10 turn 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. 0.7	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 ( $\alpha_{1383}$ ) [note a]	<max. $\alpha_{1310}$	
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