



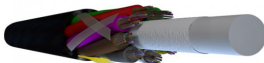
LTMC

48x SM G.657.A1 (4x12)

Article number: 74815

Date: 28-03-2019

Within the ACE concept we offer mini and micro optical fibre cables specially designed for the access market. Mini and micro cables are compact (have the smallest possible diameter), light-weighted and their outer sheath has excellent low-friction properties, resulting in optimal blowing performances in micro duct systems.



Product characteristics

Optical fibre standard	ITU-T G.657.A1
Marking	ACE - TKF LTMC 48x SM G.657.A1 (4x12) A-DQ(ZN)2Y 74815 {Batch} {Year} {Length}
Weight (kg)	0.027
Colour outer sheath	Black
Material outer sheath	HDPE
Optical element	Loose tube, gel filled
Number of fibers per optical element	12
Cable metal free	Yes
Number of cores	4
Number of layers	1 Layer
Outer diameter approx.	6,0 mm
Number of fibers	48
Type of strain relief	FRP
Strip method	1 Rip cord
Fibre type	Single mode 9/125
Cable type	LTMC



Strain relief	Yes
Outer sheath thickness	0,45 mm

Application

Euro fire class according to EN 13501-6	Fca
Blow in	Yes
Application	Outside
Test procedures	EN IEC 60794-1-2

Mechanical specification

Bending radius during installation	120 mm
Bending radius after installation	90 mm
Impact strength	2 J
Tensile load short term (Tm)	1000 N
Tensile load Long Term (Tl)	150 N
Kink resistance	180 mm
Max. fiber strain at Tm	0,5 %
Crush resistance acc. meth.E3A	1200 N/dm
Torsion resistance	360 °/m

Optical specification

Attenuation @ 1310 nm	0,35 dB/km
Attenuation @ 1550 nm	0,22 dB/km
Attenuation @ 1625 nm	0,25 dB/km

Environmental specification

Operational temperature range Ta1 - Tb1	-40/70 °C
Max. attenuation increase during Ta1 - Tb1	0,05 dB
Longitudinal watertight construction	Super Absorbing Polymer
UV-protection	ISO 4892/2
Transportation and storage temperature	-40/70 °C
Longitudinal water blocking	Yes



UV resistant	Yes
Installation temperature	-15/50 °C

Other specification

Standardization	EN IEC 60794-5-10
Halogen free (acc. EN 60754-1/2)	Yes

Logistical specifications

Unit	meter
Default packaging	H X 12000/600



Fibre specification G.657.A1

ACE-DS-OT-VSP-SM G657A1-v02-e

date : 25-01-2018

Technical product information

Product characteristics - optical fibers

Fibre

Type of fibre	Hydrogen passivated, dispersion unshifted, matched cladding bending loss insensitive single mode fibre 9/125 μm 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, B6_a1
Standard	ITU-T G.657.A1

Characteristics

Parameter	Properties	Unit
Mode field diameter: 1310 nm	9.0 \pm 0.3	μm
Mode field diameter: 1550 nm	10.2 \pm 0.4	μm
Core non-circularity	max. 6	%
Core/cladding concentricity error	max. 0.4	μm
Cladding diameter	125.0 \pm 0.5	μm
Cladding non-circularity	max. 0.7	%
Coating diameter	242 \pm 5	μm
Coating/cladding concentricity error	max. 8	μm
Temperature sensitivity: -60 to +85 °C	max. 0.05	dB/km
Bending sensitivity - 100 turns around \varnothing 50 mm - 1550 mm	max. 0.05	dB
Bending sensitivity - 100 turns around \varnothing 60 mm - 1625 mm	max. 0.1	dB
Bending sensitivity - 10 turns around \varnothing 30 mm - 1550 mm	max. 0.3	dB
Bending sensitivity - 10 turns around \varnothing 30 mm - 1625 mm	max. 0.75	dB
Bending sensitivity - 1 turn around \varnothing 20 mm - 1550 mm	max. 1.5	dB
Bending sensitivity - 1 turn around \varnothing 20 mm - 1625 mm	max. 0.2	dB
Proof test level	min. 0.70	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/nm ² ·km
Chromatic dispersion: 1285 nm – 1330 nm	max. 3.2	ps/nm·km
Chromatic dispersion: 1550 nm	max. 17	ps/nm·km
Chromatic dispersion: 1625 nm	max. 21	ps/nm·km
Polarisation mode dispersion: max. individual fibre	max. 0.1	ps/nm·km
PMD ₀	max. 0.06	ps/ $\sqrt{\text{km}}$
Max. attenuation at 1383 nm (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