CTMC

4x SM G.657.A1 (1x4)

Article number: 74920

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 CTMC 4x SM G.657.A1 (1x4) A-D(ZN)9Y 74920 {Batch} {Year} {Length}
Weight (kg)	0.012
Colour outer sheath	Black
Material outer sheath	Polypropylene
Optical element	Loose tube, gel filled
Number of fibers per optical element	4
Cable metal free	Yes
Number of cores	1
Outer diameter approx.	3,9 mm
Number of fibers	4
Type of strain relief	Aramid fibre
Fibre type	Single mode 9/125
Cable type	CTMC
Strain relief	Yes
Outer sheath thickness	0,25 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	55 mm
Bending radius after installation	45 mm
Impact strength	4,5 J
Bending stiffness	0,014 Nm^2
Tensile load short term (Tm)	320 N
Tensile load Long Term (Tl)	80 N
Kink resistance	40 mm
Crush resistance acc. meth.E3A	1000 N/dm
Torsion resistance	1800 °/m

Optical specification

Attenuation @ 1310 nm	0,38 dB/km
Attenuation @ 1550 nm	0,25 dB/km
Attenuation @ 1625 nm	0,28 dB/km
Bending radius fiber (1 turn acc. to ITU rec.)	30 mm

Environmental specification

Operational temperature range Ta1 - Tb1	-30/70 °C
Operational temperature range Ta2 - Tb2	-40/70 °C
Max. attenuation increase during Ta2 - Tb2	0,15 dB
Max. attenuation increase during Ta1 - Tb1	0,05 dB
Transportation and storage temperature	-40/70 °C
UV resistant	Yes
Installation temperature	-15/55 °C

Other specification

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

Logistical specifications

Unit	meter
Default packaging	H X 6000/300

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 ± 0.3	µm
Mode field diameter: 1550 nm		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 to +85 ºC	max.	0.05	dB/km
Bending sensitivity - 100 turns around Ø50 mm - 1550 mm	max.	0.05	dB
Bending sensitivity - 100 turns around Ø60 mm - 1625 mm	max.	0.1	dB
Bending sensitivity - 10 turns around Ø30 mm - 1550 mm	max.	0.3	dB
Bending sensitivity - 10 turns around Ø30 mm - 1625 mm	max.	0.75	dB
Bending sensitivity - 1 turn around Ø20 mm - 1550 mm	max.	1.5	dB
Bending sensitivity - 1 turn around Ø20 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_Q	max.	0.06	ps/√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

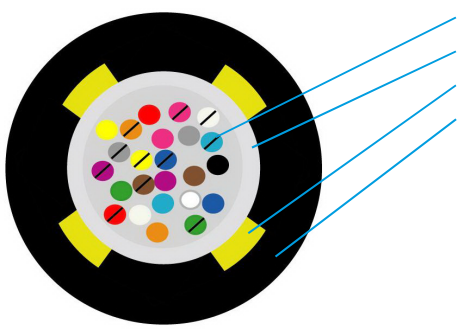
Revision date: 18-6-2018

TECHNICAL PRODUCT INFORMATION

Cable construction and colour code

CTMC

FO mini-cable with central tube



Description

1	Optical fibres
2	Central tube with 4, 6, 8, 12 or 24 fibres
3	Reinforcement of aramid yarns
4	Outer sheath (PP)

Standard colours

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

note +t: indicates a black tracer