



SFU

4x SM G.657.A1

Article number: 520061

Date: 15-11-2018

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 SFU 4 x SM G.657A1 520061 {Year} {Batch} {Length}
Weight (kg)	0.002
Colour outer sheath	Yellow
Material outer sheath	PE
Optical element	Multi-fibre units
Cable metal free	Yes
Outer diameter approx.	1,4 mm
Number of fibers	4
Fibre type	Single mode 9/125
Cable type	SFU
Outer sheath thickness	0,15 mm



Application

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

Mechanical specification

Crush resistance E3A short (1min)	300 N/dm
Crush resistance E3A long	100 N/dm
Crush load E3A long application time	10 min
Bending radius during installation	40 mm
Bending radius after installation	40 mm
Bending stiffness	0,00008 Nm ²
Tensile load short term (Tm)	20 N
Max. fiber strain at Tm	0,5 %
Torsion resistance	360 °/m
Cable strain by Tm	0,5 %

Optical specification

Attenuation @ 1310 nm	0,40 dB/km
Attenuation @ 1550 nm	0,30 dB/km

Environmental specification

Operational temperature range Ta1 - Tb1	-30/70 °C
Operational temperature range Ta2 - Tb2	-40/70 °C
Transportation and storage temperature	-10/50 °C
Installation temperature	-5/50 °C



Other specification

Standardization	EN IEC 60794-5-20
Halogen free (acc. EN 60754-1/2)	Yes

Logistical specifications

Unit	meter
Default packaging	H X 4000/200



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 °C	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 ₀	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