Fibre optic cable

SFU

Article number: 520061 | 26-03-2021

Description

4x SM G.657.A1

The Smooth Fibre Unit (SFU) consists of a bundle of low bend radius, no water peak G.657.A1 fibres, encapsulated by a dry acrylate layer and protected by a smooth, slightly ribbed polyethylene outer sheath, for application in the access network. Installation: blowing into micro ducts of 3.5mm. or 4.0mm. (inside diameter)

Trading information

Product group	Fibre optic cable
Type	SFU
Net. Weight	2 kg/km
Sheath marking	ACE - TKF SFU 4x SM G.657.A1 520061 {Batch} {Year} {Length}

Trade lengths

	(520061 / 8713182110840)
Box à 4000	(520061H X 4000/200 / 8713182113056)

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Construction characteristics

Cable type	SFU
Cable metal free	Yes
Colour outer sheath	Yellow
Outer diameter approx.	1.4 mm
Outer sheath thickness	0.15 mm
Material outer sheath	Polyethylene (PE)
Number of fibres	4

Properties

Application	Inside/outside
Blow in	Yes
Type of tube	Central tube
Operational temperature range Ta1 - Tb1	-30 / 70 °C
Operational temperature range Ta2 - Tb2	-40 / 70 °C
Installation temperature	-15 / 50 °C
Transportation and storage temperature	-40 / 70 °C

Technical characteristics

Standardization	EN IEC 60794-5-20
Test procedures	IEC 60794-1-2

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Mechanical characteristics

Tensile load short term (Tm)	20 N
Max. fiber strain at Tm	0.5 %
Min. bending radius during installation	40 mm
Min. permitted bending radius, stationary application/permanent installation	40 mm

Optical characteristics

Fibre type	Single mode 9/125
Optical fibre standard	ITU-T G.657.A1
Max. attenuation @ 1310 nm	0.4 dB/km
Max. attenuation @ 1550 nm	0.3 dB/km

Other characteristics/features

Halogen free (according to EN 60754-1/2)	Yes
Reaction-to-fire class according to EN 13501-6	Fca

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℃ to +85℃	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 (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