



## Fibre optic cable

## CTC Eca

Article number: 75543

29-10-2020

**Description**

6x SM G.657.A1

The Central Tube Cable (CTC) Eca is a light-weight, non-metallic, universal central tube cable (indoor/outdoor) with small diameter, rodent protected, longitudinal water-protected, with Low Smoke Zero Halogen outdoorsheath. Installation: by blowing or pulling, into conduits or on cable trays.

**Trading information**

Product group	Fibre optic cable
Type	CTC Eca
Net. Weight	45 kg/km
Sheath marking	ACE - TKF CTC Eca 6x SM G.657.A1 (1x6) U-DQ(ZN)BH 75543 {Batch} [-CE-] DOP0039 {Year} {Length}

**Trade lengths**

(75543 / 8713182333010)



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**Construction characteristics**

Cable type	CTC
Cable metal free	Yes
Strain relief	Yes
Type of strain relief	E-glass
With rodent protection	Yes
Longitudinal water blocking cable	Yes
Longitudinal water blocking	Yes
Radial water blocking cable	No
Radial water blocking	No
Colour outer sheath	Black
Outer diameter approx.	6.7 mm
Outer sheath thickness	1.2 mm
Material outer sheath	LSZH
Number of fibres	6
Number of cores	1
Number of fibres per tube	6

**Properties**

Application	Inside/outside
Blowable	Yes
Type of tube	Loose tube, gel filled
Stripability optical element	> 1000mm, down to primary coating
Operational temperature range Ta1 - Tb1	-40 / 70 °C
Max. attenuation increase during Ta1 - Tb1	0.05 dB
TC sample length for TC acc F1 or F12	1000 m
Installation temperature	-15 / 50 °C
Transportation and storage temperature	-40 / 70 °C



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**Technical characteristics**

Standardization	EN IEC 60794-3-10
Test procedures	IEC 60794-1-2
Longitudinal watertight construction	Super Absorbing Polymer

**Mechanical characteristics**

Tensile load short term (Tm)	1600 N
Cable strain by Tm	0.6 %
Max. fiber strain at Tm	0.6 %
Tensile load long term (Tl)	400 N
Max. fibre elongation at Tl	0.2 %
Min. bending radius during installation	140 mm
Min. permitted bending radius, stationary application/permanent installation	100 mm
Crush resistance E3A short (1min)	3500 N/dm
Crush resistance E3A long	2000 N/dm
Crush load E3A long application time	10 min
Mandrel diameter by Crush meth. E3B	300 mm
Crush resistance E3B short term (1min)	2000 N/dm
Crush resistance E3B long term	600 N/dm
Crush load E3B long application time	10 min
Impact strength	10 J
Striking surface radius	300 mm
Torsion resistance	1800 °/m
Kink resistance	100 mm



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**Optical characteristics**

Fibre type	Single mode 9/125
Optical fibre standard	ITU-T G.657.A1
Fibre category	OS2
Max. attenuation @ 1310 nm	0.38 dB/km
Max. attenuation @ 1550 nm	0.22 dB/km
Max. attenuation @ 1625 nm	0.25 dB/km

**Other properties**

Halogen free	IEC 60754-1&2 / EN 50267-2-1&2
Halogen free (acc. EN 60754-1/2)	Yes
UV-protection	ISO 4892-2, 4000h
Color fastness	Blue wool scale 8
Euro fire class according to EN 13501-6	Eca
Vertical Flame Propagation (for Single Cable)	IEC 60332-1-2 / EN 50265-2-1
UV resistant	Yes



**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/nm <sup>2</sup> .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