



## Fibre optic cable CTC Eca

Article number: 75539

21-02-2025

### Description

12x SM G.657.A1 (1x12)

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 outer sheath. Installation: by blowing or pulling, into conduits or on cable trays.



\* This image may differ from the actual product.

### Trading information

Product group	Fibre optic cable
Type	CTC Eca
Net. Weight	0.038 kg/m
Sheath marking	ACE - TKF CTC Eca 12x SM G.657.A1 (1x12) U-DQ(ZN)BH 75539 {Batch} [-CE-] DOP0039 {Year} {Length}

### Trade unit (length or pieces)

Minimal order

(75539 / 8713182332976)	1 MTR
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# DECLARATION OF PERFORMANCE (DOP) CE

Nr. DoP0039

1. Unique identification code for the product type:  
**See appendix 1 (page 2/2)**
2. Intended use of the construction product:  
**Supply of optical fibre cables in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.**
3. Manufacturer:  
**TKF (B.V. Twentsche Kabelfabriek)  
Spinnerstraat 15  
7481 KJ Haaksbergen  
Netherlands  
Tel.: +31(0)53 573 22 55  
E-mail: info@tkf.nl**
4. System of assessment and verification of constancy of performance of the construction product asset out in CPR, Annex V: **System 3**
5. Notified body: **SP NB 0402**
6. Declared performance:

Essential characteristics	Performance	Harmonized technical specification
Reaction to fire	Eca	EN50575:2014/A1:2016
Dangerous substances	NPD	(EC) No 1907/2006, (REACH)

7. The performance of the product identified is in conformity with the declared performance.  
  
This declaration of performance is issued under the sole responsibility of the manufacturer identified in this document.

Signed for and on behalf of the manufacturer by:

H. Woldhuis  
R&D Manager Optical Fibre Cables

Haaksbergen, March 17<sup>th</sup> 2023

Signature



Nr. DoP0039



Appendix 1

Product type	Number of tubes	Number of fibres
CTC Eca	1	1 - 24
CTAC Eca	1	1 - 24



# TECHNICAL PRODUCT INFORMATION

Product characteristics - optical fibres

20-12-2024

## Fibre specification G.657.A1

Fibre	
Type of fibre	Hydrogen passivated, dispersion unshifted, matched cladding, bending loss insensitive single mode fibre 9/125 $\mu\text{m}$ 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

Parameter		Properties	Unit
Mode field diameter: 1310 nm		$9.0 \pm 0.3$	$\mu\text{m}$
Mode field diameter: 1550 nm		$10.2 \pm 0.4$	$\mu\text{m}$
Core non-circularity	max.	6	%
Core/cladding concentricity error	max.	0.4	$\mu\text{m}$
Cladding diameter		$125.0 \pm 0.5$	$\mu\text{m}$
Cladding non-circularity	max.	0.7	%
Coating diameter		$242 \pm 5$	$\mu\text{m}$
Coating/cladding concentricity error	max.	8	$\mu\text{m}$
Temperature sensitivity: -60 to +85 °C	max.	0.05	dB/km
Bending sensitivity - 100 turns around $\varnothing 50$ mm - 1550 nm	max.	0.05	dB
Bending sensitivity - 100 turns around $\varnothing 60$ mm - 1625 nm	max.	0.05	dB
Bending sensitivity - 10 turns around $\varnothing 30$ mm - 1550 nm	max.	0.1	dB
Bending sensitivity - 10 turns around $\varnothing 30$ mm - 1625 nm	max.	0.3	dB
Bending sensitivity - 1 turn around $\varnothing 20$ mm - 1550 nm	max.	0.75	dB
Bending sensitivity - 1 turn around $\varnothing 20$ mm - 1625 nm	max.	1.5	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 <sup>2</sup> ·km
Chromatic dispersion: 1285 - 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/ $\sqrt{\text{km}}$
PMD <sub>Q</sub>	max.	0.04	ps/ $\sqrt{\text{km}}$
Max. attenuation at 1383 nm ( $\alpha_{1383}$ ) [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]

# TECHNICAL PRODUCT INFORMATION

Cable construction and colour code

13-12-2023

## CTC Eca

Cross section image	Description
	Optical fibres
	Gel-filled central tube
	Water blocking glass yarns
	Outer sheath

## Standard Colours

Fibres		Tubes							
Group 1		Group 2		Layer 1		Layer 2		Layer 3	
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