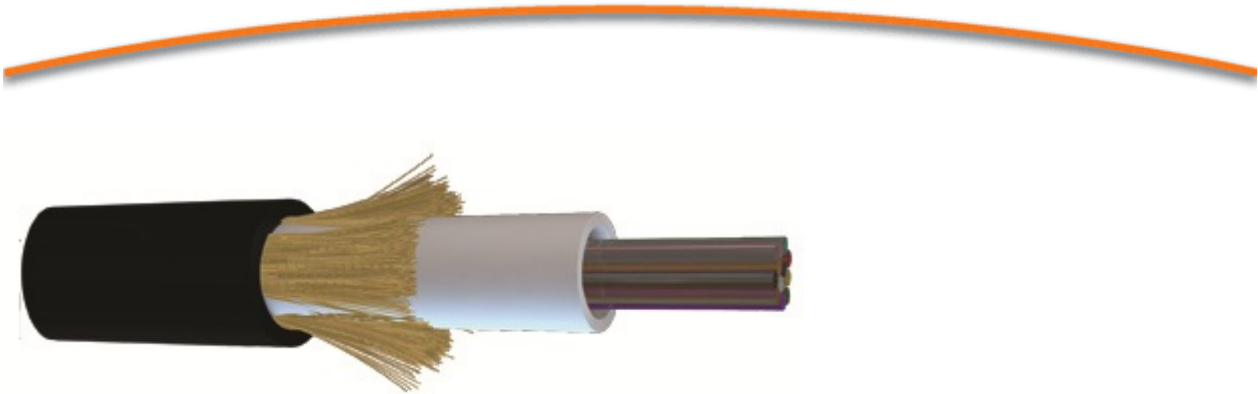


CTMC



CTMC - Central Tube Mini Cable.

The CTMC is a customer drop cable, consisting of a central tube filled with low bend radius, no waterpeak G.657.A1 fibres, finished with aramid yarns (as strenght-elements) and a polypropylene outer jacket. This cable has a small outside diameter and is ideal for blowing in micro-tubes in the Access Network.

Installation: blowing into microducts of 5.5 mm. (inside diameter)

Commercial information		Properties	Unit
Product group		Fibre optic cable	
Series		Fibre optic cable Single mode	
Type		CTMC	
Description		4x SM G.657.A1 (1x4)	
Net weight		13	kg/Km
Marking	ACE - TKF CTMC 4x SM G.657.A1 (1x4) A-D(ZN)9Y 74920 {Batch} {Year} {Length}		

Article number / standard length	EAN number	Properties	Unit
74920	8713182094829	Drum à 1	m

Construction		Properties	Unit
Cable type		CTMC	
Fibre type		Single mode	
Optical fibre standard		ITU-T G.657.A1	
Number of fibres		4	
Number of fibres per optical element		4	
Number of cores		1	
Optical element		Loose tube, gel filled	
Cable metal free		Yes	
Strain relief		Yes	
Type of strain relief		Aramid fibre	
Material outer sheath		Polypropylene	
Colour outer sheath		Black	
Outer sheath thickness		0.25	mm
Outer diameter approx.		3.9	mm





Characteristics for use		Properties	Unit
Application		Outside	
Blow in		Yes	

Technical characteristics		Properties	Unit
Test procedures		IEC 60794-1-2	
Installation temperature		-10 / 50	°C
Operation temperature range		-30 / 70	°C
Transportation and storage temperature		-30 / 70	°C
UV resistant		Yes	

Mechanical characteristics		Properties	Unit
Tensile load short term (Tm)		320	N
Tensile load Long Term (TI)		80	N
Bending radius after installation		45	mm
Bending radius during installation		55	mm
Crush resistance acc. meth.E3A		1000	N/dm
Impact strength		4.5	J
Bending stiffness		0.014	Nm ²
Torsion resistance		1800	°/m
Kink resistance		40	mm

Optical characteristics		Properties	Unit
Attenuation @ 1310 nm		0.36	dB/km
Attenuation @ 1550 nm		0.21	dB/km
Attenuation @ 1625 nm		0.24	dB/km
Bending radius fiber (1 turn acc. to ITU rec.)		30	mm

Other characteristics/features		Properties	Unit
Halogen free (acc. EN 50267-2-2)		Yes	

Product Characteristics - Optical fibres

Fibre:			
	type of fibre	hydrogen passivated, dispersion unshifted, matched cladding bending loss insensitive singlemode fibre 9/125µm	
		Fully 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:	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 0.6	%
Coating diameter, uncoloured	242 ± 5	µm
Coating diameter, coloured	248 ± 6	µm
Coating/Cladding concentricity error	max 8	µm
Temperature sensitivity; -60°C to +85°C	max 0.05	dB/km
Bending sensitivity - 10 turns around Ø30mm - 1550nm	max 0.1	dB
Bending sensitivity - 10 turns 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 0.69	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; 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
PMD _Q	max 0.08	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