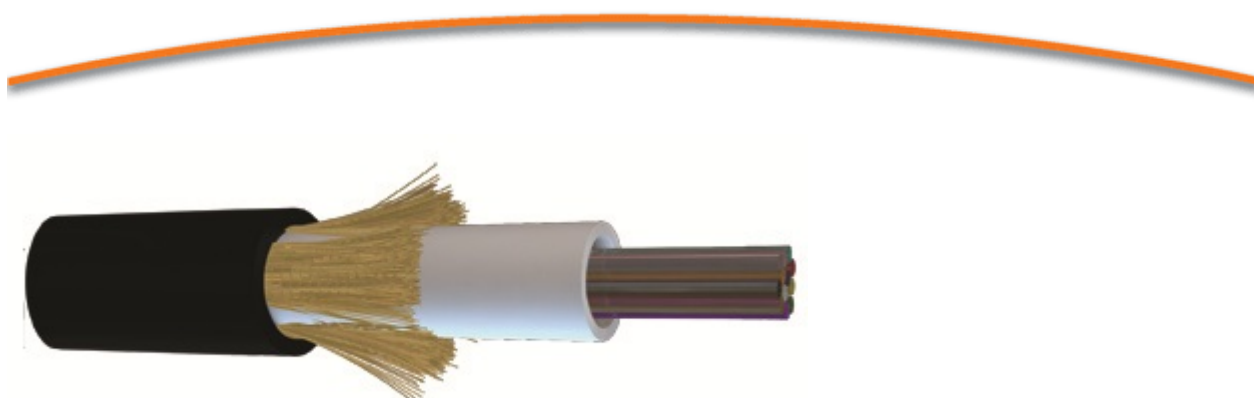




CTMC - Central Tube Mini Cable.

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	24x SM G.657.A1 200um	
Net weight	13	kg/Km
Marking	ACE - TKF CTMC 24x SM G.657.A1 (1x24) A-D(ZN)9Y 74934 {Batch} {Year} {Length}	

Article number / standard length	EAN number	Properties	Unit
74934	8713182189990	Drum à 1	m
74934H X 4000/200	8713182205973	Drum à 4000	m
74934H X 6000/500	8713182225445	Drum à 6000	m

Construction	Properties	Unit
Cable type	CTMC	
Fibre type	Single mode	
Optical fibre standard	ITU-T G.657.A1 200um	
Number of fibres	24	
Number of fibres per optical element	24	
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	





Construction	Properties	Unit
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	
Longitudinal water blocking	Yes	
Operational temperature range TA1 - TB1 acc. IEC 60794-1-22	-30 / 70	°C
Max. attenuation increase during Ta1-Tb1	0.20	dB/km
Max. attenuation increase during TA2 - TB2	0.30	dB/km
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
Crush resistance acc. meth.E3B	200	N/dm
Mandrel diameter by Crush meth. E3B	25	mm
Impact strength	3	J
Striking surface radius	10	mm
Bending stiffness	0.014	Nm ²
Torsion resistance	1800	°/m
Kink resistance	40	mm

Optical characteristics	Properties	Unit
Attenuation @ 1310 nm	0.38	dB/km
Attenuation @ 1550 nm	0.25	dB/km
Attenuation @ 1625 nm	0.28	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	
	Reduced coating diameter	
standard		
standard	ITU-T G.657.A1	

Characteristics:	Properties	Unit
Mode field diameter; 1310nm	9.0 ± 0.4	µm
Mode field diameter; 1550nm	10.2 ± 0.5	µm
Core non-circularity	max 6	%
Core/Cladding concentricity error	max 0.5	µm
Cladding diameter	125.0 ± 0.5	µm
Cladding non-circularity	max 0.8	%
Coating diameter, uncoloured	190 ± 5	µm
Coating diameter, coloured	198 ± 6	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 turns around Ø30mm - 1550nm	max 0.25	dB
Bending sensitivity - 10 turns around Ø30mm - 1625nm	max 1.0	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