INDOOR/OUTDOOR – TKT Sheath

MULTITUBE FIBRE-OPTIC CABLES

DESCRIPTION AND APPLICATION

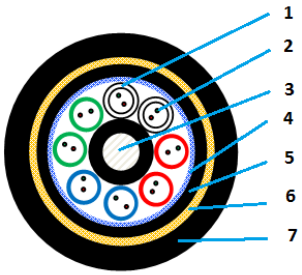
4 to 256 single mode optical fibers cables, totally dielectric, with TKT sheath for installation in tunnels or in cable galleries. May also be installed inside buildings or canalizations.

CONSTRUCTION

1. Loose Tubes: PBT loose tubes filled with thixotropic compound and containing single mode optical.
2. Optical fibres: single mode optical fibres according to ITU-T G.652 D.
3. Central Element: Fibre-glass reinforced plastic central element.
4. Core formation: Loose tubes stranded in SZ. Swellable yarns and tapes to avoid water penetration and make the cable waterproof.
5. Inner sheath: thermoplastic flame retardant, low smoke and halogen free.
6. Mechanical reinforcement: Aramid yarns as traction resistant
7. Outer jacket: Black coloured LSZH compound.

Sheath marking: The cables will be marked with the following information

- *CABLESCOM / Year / Fibre Num: / Fibre Type / Sheath Type / Length markings*
- *Other marks are available on request*



OPTICAL FIBRE CHARACTERISTICS

The parameters of the optical fibres used in these cables meet the ITU-T recommendation G 652D.
See our fibre product sheet for the characteristics of the fibre.

Optical transmission characteristics of cabled fibre:

Attenuation coefficient:

Average/Maximum at 1310 nm: 0.36/0.37 dB/km
Average/Maximum at 1550 nm: 0.22/0.24 dB/km

PMD link ≤ 0.20 ps/km1/2

PMD Q ≤ 0.02 ps/km1/2

Cut-off wavelength (λcc) ≤ 1260nm

LOOSE TUBES COLOUR CODE

		FIBRES IN CABLE							
	# Fibre	16	24	32	48	64	96	128	256
1st Layer	1	White	White	White	White	White	White	White	White
	2	Red	White	Red	White	White	White	Red	Red
	3	Black	Red	Black	Red	Red	White	Black	Black
	4	Blue	Red	Blue	Red	Red	Red	Blue	Blue
	5	Green	Blue	Green	Blue	Blue	Red	Green	Green
	6	Black	Blue	Black	Blue	Blue	Red	Black	Black
	7					Green	Blue		
	8					Green	Blue		
	9						Blue		
	10						Green		
	11						Green		
	12						Green		
2nd Layer	1							White	White
	2							White	White
	3							White	White
	4							Red	Red
	5							Red	Red
	6							Red	Red
	7							Blue	Blue
	8							Blue	Blue
	9							Blue	Blue
	10							Green	Green
	11							Green	Green
	12							Green	Green
	Fibres per tube	4	4	8	8	8	8	8	16

** Note: The black tubes are passive elements (no fibre)*

All drawings, weights and dimensions details, as well as tube and fibre colours in this document are only indicative and must not be considered contractual.

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INDOOR/OUTDOOR – TKT Sheath

MULTITUBE FIBRE-OPTIC CABLES

OPTICAL FIBRES COLOUR CODE

Fibre	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Green	Red	Blue	Yellow	Grey	Violet	Brown	Orange	White	Black	Pink	Turquoise
Abbrev.	Gr	Rd	Bl	Ye	Gy	Vi	Br	Or	Wh	Bl	Tq	Rs
Fibre	**13**	**14**	**15**	**16**								
Colour	White*	Yellow*	Orange*	Pink*								
Abbrev.	W	Ye	Or	P								

(*): Fibres from 13 to 16 are marked with black rings separated up to 50 mm apart.

PRODUCT INFORMATION

Code	*Num. Fibres*	*Nominal OD* (kg/km)	*Nominal weight* (mm)
EE6102F0000040WN	4	13.0	175
EE6102F0000060WN	6	13.0	175
EE6102F0000080WN	8	13.0	175
EE6102F0000120WN	12	13.0	175
EE6102F0000160WN	16	13.0	175
EE6102F0000240WN	24	13.0	175
EE6102F0000320WN	32	13.0	175
EE6102F0000480WN	48	13.0	175
EE6102F0000640WN	64	14.7	220
EE6102F0000960WN	96	17.7	300
EE6102F0001280WN	128	18.6	315
EE6102F0001440WN	144	18.6	315
EE6102F0002560WN	256	20.3	370

Mechanical characteristics	*Standard*	*Test conditions*
Tensile strength (Δεf=0.33%, Δα≤0.05 dB)	EN 187000 Met. 501	2700 N
Impact resistance (Δα≤0.05 dB)	EN 187000 Met. 505	5 J, 10 mm
Curvature (Δα≤0.05 dB)	EN 187000 Met. 513	R=15 x Ø cable; r ≥ 250 mm
Temperature cycling (operation, Δα≤0.05 dB)	EN 187000 Met. 601	-25ºC / 70ºC
Water penetration	EN 187000 Met. 605B	LPwater ≤ 1 m (14 days)
Crush resistance (Δα≤0.05 dB)	EN 187000 Met. 504	1500 N
Flame retardancy	EN 60332-1-2	
Smoke density	EN 61034-2	Transmittance > 50%

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