

INDOOR/OUTDOOR - TKEST Sheath

MULTITUBE FIBRE-OPTIC CABLES

DESCRIPTION AND APPLICATION

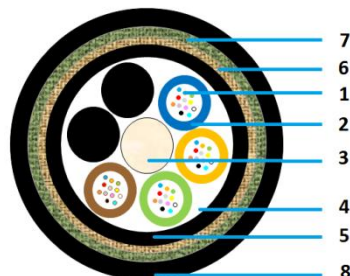
"Loose Tube" type fibre-optic cables with a double LSZH sheath, aramid yarns and armoured with a steel tape for mechanical and rodent protection. This cable can be installed in tunnels or indoors. For use in medium or long distance networks.

CONSTRUCTION

1. Jelly-filled PBT loose tubes.
2. Optical fibres according to ITU-T G.652 D.
3. Dielectric fibreglass-reinforced central element.
4. Water-blocking yarns and/or tapes.
5. LSZH material inner sheath.
6. Aramid yarns.
7. Corrugated copolymer-coated steel tape longitudinally applied with overlap.
8. LSZH material outer sheath UV resistant.

Markings:

CABLESCOM / Year / Number of fibres / Type of fibre / Type of sheath / Length markings



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: 0.22/0.30 dB/km

PMD individual ≤ 0.30 ps/km^{1/2}; PMD average ≤ 0.20 ps/km^{1/2}; PMD link ≤ 0.10 ps/km^{1/2}

Cut-off wavelength (λ_{cc}) ≤ 1250 nm

LOOSE TUBES COLOUR CODE

		Fibres in cable				
		16	32	64	96	128
Layer 1	# Tube	1	White	White	White	White
	2	White	Red	White	White	White
	3	Red	Blue	Red	White	Red
	4	Red	Green	Red	Red	Red
	5	Blue	Black	Blue	Red	Blue
	6	Blue	Black	Blue	Red	Blue
	7	Green			Blue	
	8	Green			Blue	
	9				Blue	
	10				Green	
	11				Green	
	12				Green	
Layer 2	1					White
	2					White
	3					Red
	4					Red
	5					Blue
	6					Blue
	7					Green
	8					Green
	9					Grey
	10					Grey
	11					Black
	12					Black
Fibres per tube		2	8	5 of 12/ 1 of 4	8	8

* 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.

Cables de Comunicaciones Zaragoza, SL.

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Certified Company ISO 9001 – ISO 14001

TITLE
HP_EE5106D_i

EDITION
2

APPROVED BY
OSZ

DATE
2019-03-01

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MULTITUBE FIBRE-OPTIC CABLES

OPTICAL FIBRES COLOUR CODE

Fibre Colour Abrev.	1	2	3	4	5	6	7	8	9	10	11	12
	Red	Green	Blue	Yellow	Violet	Orange	Brown	Grey	Black	Pink	Turquoise	White
	Rd	Gr	Bl	Ye	Vi	Or	Br	Gy	B	P	Tq	Wh

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

Mechanical characteristics	Standard	Test conditions
Tensile Strength ($\Delta\epsilon_f=0\%$; $\Delta\alpha<0.05$ dB)	UNE-EN 60794-1-2, Met. E1	3200 N
Maximum Tensile Load (No fibre break)	UNE-EN 60794-1-2, Met. E1	6200 N
Torsion test ($\Delta\alpha < 0.05$ dB)	UNE-EN 60794-1-2, Met. E7	$\pm 360^\circ$, L=1m, 50 cycles
Repeated bending ($\Delta\alpha < 0.05$ dB)	UNE-EN 60794-1-2, Met. E6	50 cycles, $\pm 180^\circ$
Static bending ($\Delta\alpha < 0.05$ dB)	UNE-EN 60794-1-2, Met. E11	D= 15 x ϕ , 10 cycles
Temperature Cycling (operation, $\Delta\alpha<0.05$ dB)	UNE-EN 60794-1-2, Met. F1	-20°C / 70°C
Water penetration	UNE-EN 60794-1-2, Met.F5C	LP _{water} $\leq$ 1 m (14 days)
Crush ($\Delta\alpha<0.05$ dB)	UNE-EN 60794-1-2, Met. E3	2600 N, 10 cm
Vertical flame spread	UNE-EN 60332	
Vertical fire spread	UNE-EN 50266	
Corrosivity of the emitted gases	UNE-EN 50267-2-1	pH $\geq$ 4,3 y $\sigma \leq 10$ μ S/mm
Density of smoke	UNE-EN 50268	Transmittance $\geq$ 60 %

PRODUCT INFORMATION

Code	Num. Fibres	Nominal weight (kg/km)	Nominal OD (mm)
EE5106D0000160WN	16	275	15.5
EE5106D0000320WN	32	310	16.2
EE5106D0000640WN	64	310	16.7
EE5106D0000960WN	96	505	21.3
EE5106D0000128WN	128	505	23.0

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