

INDOOR /OUTDOOR 5 12 OPTICAL FIBRES CABLE– KT TYPE



Optical fibre



Dielectric



Water blocked



UV resistant

Flame
retardantLow smoke
emissionROHS
compliant

STANDARDS

Construction: Telefonica standard ERQ.f6.0237- 2nd edition

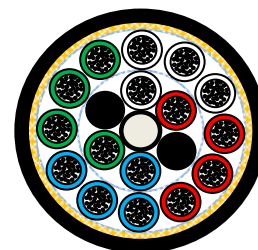
Fibre: ITU-T G652D

DESCRIPTION AND APPLICATION

Loose tube single mode optical fibre cable, totally dielectric with 512 fibbers. The tubes are filled with a thixotropic filling compound. Water blocking between the tubes is achieved by swellable dry elements. The core is protected by a reinforced flame retardant LSOH KT sheath that allows the installation in ducts for maximum lengths up to 1000 m. Indoor or duct Installations.

CONSTRUCTION

- **Central reinforcing element:** Dielectric fibreglass (FRP).
- **Loose tubes:** PBT loose tubes filled with thixotropic compound with 32 optical fibres. Colour coding of tubes and fibres according to tables 1 and 2.
- **Stranding:** Loose tubes stranded in SZ. Swellable yarns and tapes to avoid water penetration and make the cable waterproof.
- **Reinforcement:** Aramid yarns as reinforcing element.
- **Outer sheath:** Special halogen free, UV resistant and flame retardant, thermoplastic material. Black colour.
- **Sheath marking :** The cable sheath will be marked with white ink at regular intervals with the following information :
 - CABLESCOM/year/No. fibres / 10.D KT / Owner / Batch number + length markings
 - Other sheath marks available upon request



OPTICAL FIBRE CHARACTERISTICS

The parameters of the optical fibres are compliant with the ITU-T G.652D recommendation.

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 / 0,39 dB/km

Average / Maximum at 1550 nm: 0,22 / 0,26 dB/km

$PMD \leq 0,20 \text{ ps/km}^{1/2}$

$PMD \text{ link} \leq 0,10 \text{ ps/km}^{1/2}$

Cut-off wavelength (λ_{cc}) $\leq 1260\text{nm}$

All drawings, designs, specifications and particulars of weights, dimensions, etc. in this documentation are only indicative and must not be considered contractual.

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TABLE 1: LOOSE TUBES COLOUR CODE

	Number of tubes in layer											
	1	2	3	4	5	6	7	8	9	10	11	12
1 st layer	White	Red	Black	Blue	Green	Black						
2 nd layer	White	White	White	Red	Red	Red	Blue	Blue	Blue	Green	Green	Green

Note: Black tubes are fillers

TABLE 2: OPTICAL FIBRES COLOUR CODE

Fibre	Colour	Fibre	Colour
1	Green	17	Green **
2	Red	18	Red **
3	Blue	19	Azul **
4	Yellow	20	Yellow**
5	Grey	21	Grey **
6	Violet	22	Violet **
7	Brown	23	White **
8	Orange	24	Orange **
9	Green *	25	Green ***
10	Red *	26	Red ***
11	Blue*	27	Blue***
12	Yellow *	28	Yellow ***
13	Grey *	29	Grey ***
14	Violet *	30	Violet ***
15	White *	31	White***
16	Orange *	32	Orange ***

(*): fibres from 9 to 16 are marked with a black ring approximately every 50 mm.

(**): fibres from 17 to 24 are marked with a double black ring approximately every 50 mm.

(* * *): Fibres from 25 to 32 are marked with a triple black ring approximately every 50 mm.

MECHANICAL CHARACTERISTICS	Specification	Test conditions
Tensile strength ($\Delta\epsilon=0\%$, $\Delta\alpha<0.05$ dB)	EN 187000, Met. 501	3500 N
Maximum tensile strength ($\Delta\epsilon<0,33\%$, $\Delta\alpha$ reversible)		6500N
Impact resistance ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 505	5J, R = 10mm
Crush resistance ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 504	1500 N
Static bending ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 513	r =15d mm, 3 cycles
Repeated bending ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 507	r =15d , 100 N, 100 cycles
Torsion test ($\Delta\alpha<0.05$ dB)	EN 187000, Met. 507	$\pm 360^\circ$, 100 N, 5 cycles
Temperature cycling	EN 187000, Met. 601	
Operation ($\Delta\alpha<0.05$ dB/km)		-20°C / +60°C Cycles=4
Storage ($\Delta\alpha<0,1$ dB/km, reversible)		-25°C / +70°C Cycles=4
Water penetration	EN 187000, Met. 605B	LP _{water} = 1 m (14 days)

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INDOOR /OUTDOOR 512 OPTICAL FIBRES CABLE– KT TYPE

FIRE REACTION CHARACTERISTICS

	Specification	Requirement
<i>Flame propagation</i>	EN 50265	Compliant
<i>Corrosive and toxic smoke emissions</i>	EN 50267-2-1	$\text{pH} \geq 4,3$ y $\sigma \leq 10 \mu\text{S}/\text{mm}$
<i>Smoke density</i>	EN 50268-1	Transmittance > 40 %

DIMENSIONS AND WEIGHT

Code	No. fibres	Diameter (mm)	Nominal Weight (kg/km)
EE6102L00051202N	512	20,2	360

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