EE2103F- Ed1

OPTICAL FIBRE CABLES FOR DUCTS - FvP SHEATH


Optical fibre


Water blocked


Uv resistant

Dielectric

ROHS Compliant

STANDARDS

Construction: IEC 60794-3
Optical fibre: *ITU-T G.652D and* EN 60793-2 - Class B 50 B 1.3 (others on request)
Test method : IEC 60794-1-2

DESCRIPTION AND APPLICATION

Loose tube optical fibre cables from 24 to 144 fibres. PE sheath with a reinforcement of fibre glass yarns. For installation in ducts by pulling or blowing with maximum tensile strengths of 150 Kp. These cables are designed for medium or long distance telecommunications networks with single mode fibre optic type ITU-T G 652D (EN 60793-2 - Class B 50 B 1.3). They can also be made with other types of fibres on request.

CONSTRUCTION

- **Central element:** Fibre-glass reinforced plastic element**.**
- **Loose tubes:** Gel filled PBT loose tubes with up to 12 single mode ITU-T 652D fibres each. Colour coding of tubes and fibres according to tables 1 and 2.
- ***Core formation***: Loose tubes stranded in SZ. Sweallable yarns and tapes to avoid water penetration and make the cable waterproof**.**
- **Reinforcement:** Fibre glass (optionally aramid yarns) as reinforcing element.
- **Outer sheath:** Black PE, UV resistant.
- **Sheath marking:** The cables will be marked with the following information:
  - *CABLESCOM / Year / Nº fibres / fibre type / sheath / length marking*
  - *Other marks are available upon request*

OPTICAL FIBRE CHARACTERISTICS

The parameters of the optical fibre used in these cables meet the ITU-T G.652D and EN 60793-2 - Class B 50 B 1.3.
See our fibre product for the characteristics of the fibre.
***Note**: On request they can be incorporated other types of single mode or multimode fibres.*

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 / 0,26 dB/km

PMD ≤ 0,20 ps/km$^{1/2}$
PMDq link ≤ 0,10 ps/km$^{1/2}$
Cut-off wavelength (λ_{cc}) ≤ 1260nm

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Certified Company **ISO 9001** - **ISO 14001**

CABLESCOM ZARAGOZA

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TABLE 2: OPTICAL FIBRE COLOUR CODE

Fibre no.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Black	Turquoise	Pink

TABLE 1 : LOOSE TUBES COLOUR CODE

Tube position in the layer	Colour
First	Red
Direction	Blue
Remainder	White

MECHANICAL CHARACTERISTICS	Specification	Test conditions
Maximum tensile strength (Δεf<0,33%, Δα reversible)	IEC 60794-1-2 E1	200 daN
Impact resistance (Δα reversible)	IEC 60794-1-2 E4	5 J, r_{impact} = 300mm
Crush resistance (Δα<0,1 dB)	IEC 60794-1-2 E3	20 daN/cm
Torsion test (Δα<0,1 dB)	IEC 60794-1-2 E27	25 N, ±180º, 20 cycles
Bending (Δα<0,1 dB)	IEC 60794-1-2 E11B	D= 10 x Ø cable, 5 cycles
Temperature cycling (operation, Δα<0,1 dB/km)	IEC 60794-1-2 F1	-25º C / +70º C
Water penetration	IEC 60794-1-2 F5B	LP_{water} ≤ 3 m (24 hours)

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CONSTRUCTION, DIMENSIONS AND WEIGHTS

Code	No. fibres	Fibres per tube	Tubes No.	Fillers No.	Diameter (mm)	Weight (kg/km)
EE2113F00002400N	24	6	4	2	10,8	90
EE2103F00002400N	24	8	3	3	10,8	90
EE2123F00002400N	24	12	2	4	10,8	90
EE2103F00003200N	32	8	2	4	10,8	90
EE2113F00003600N	36	6	6	-	10,8	90
EE2123F00003600N	36	12	3	3	10,8	90
EE2113F00004800N	48	6	8	-	12,0	105
EE2103F00004800N	48	8	6	-	10,8	90
EE2123F00004800N	48	12	4	2	10,8	90
EE2113F00006000N	60	6	10	-	13,7	128
EE2123F00006000N	60	12	5	1	10,8	90
EE2103F00006400N	64	8	8	-	12,0	105
EE2113F00007200N	72	6	12	-	15,2	145
EE2103F00007200N	72	8	9	-	12,8	119
EE2123F00007200N	72	12	6	-	10,8	90
EE2123F00008400N	84	12	7	-	11,3	97
EE2103F00009600N	96	8	12	-	15,2	145
EE2123F00009600N	96	12	8	-	12,0	105
EE2123F00010800N	108	12	9	-	10,8	119
EE2123F00012000N	120	12	10	-	13,7	128
EE2123F00013200N	132	12	11	-	14,4	137
EE2123F00014400N	144	12	12	-	15,2	145

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