

OUTDOOR μ CABLE – PE SHEATH

MICRO FIBRE-OPTIC CABLES TOL_D T/E – INF 007

DESCRIPTION AND APPLICATION

Micro optic-fibre cables to be rapidly installed by blowing in micro-ducts Di/De 10/12 mm, and Di/De 14/18mm for the 396 optic-fibre cable.

High blowing distance due to the excellent friction properties of the outer sheath $\approx$ 1500 m depending on way route. It contains 6, 8 or 11 loose tubes of 12, 24 or 36 fibres each.

These cables are used for medium or long distance telecommunications networks and can be designed with single mode type ITU-T G 657A1. Generally according to INFRATEL specification INF-ING-ST-007-18 Vers. 3.0 of 27/02/2018.

CONSTRUCTION

- Central element: Fibre-glass reinforced plastic rod.
- Loose Tubes: PBT loose tubes filled with thixotropic compound. Optional fillers depending on the cable structure
- Core formation: Tubes are stranded in SZ.
- Core wrapping: Water-blocking tape and/or yarns to avoid water propagation.
- Outer sheath: Black HDPE, UV resistant outer jacket.
- Sheath marking: (where the indicated fields assume the meanings indicated in point 8 of the technical specification)
CABLESCOM - CAVO OTTICO – TO”LmD”NF” “NP”(“N” SM G657A1)T/E - INF-ING-ST-007-18 V3.0 – “CODFO” - INFRATEL-I –YEAR – “Batch Number” – “IQQ” – Length Marks

LOOSE TUBE AND OPTICAL FIBRE COLOUR CODE

Fibre Colour	1	2	3	4	5	6	7	8	9	10	11	12
	Red	Green	Yellow	Brown	Blue	Violet	White	Pink	Black	Orange	Grey	Turquoise

*Fibers from 13 to 24 will be marked with one black ring each 50 mm.

*Fibers from 25 to 36 will be marked with two black rings each 50 mm.

* In case of the black fiber, this could be natural fiber with one or two black rings.

Tube	Colour
1	Red
2	Green
Other	White

Filler elements if they are any in natural colour.



PRODUCT INFORMATION

CABLES FIBRES		12	24	48	72	96	144	192	288	396
Nominal OD (mm) ($\pm 0.3\text{mm}$)		6.3	6.3	6.3	6.3	7.5	7.5	7.5	8.0	11.0
Fibre Type		G.657.A1 250 μm	G.657.A1 250 μm	G.657.A1 250 μm	G.657.A1 250 μm	G.657.A1 250 μm	G.657.A1 250 μm	G.657.A1 200 μm	G.657.A1 200 μm	G.657.A1 200 μm
Nominal weight (kg/km)		37	36	35	34	53	51	61	71	119
Tubes Num.		1	2	4	6	4	6	8	8	11
Passive Elements Num.		5	4	2	0	2	0	0	0	0
Fibres Number per Tube		12	12	12	12	24	24	24	36	36
MAX. TENSILE STRENGTH (N)	UNE-EN 60794-1-2, Met. E1	600 N for cables ≤ 72 fo; 1000 N for cables ≥ 96 fo $\Delta\epsilon f \leq 0,5\%$, $\Delta\alpha \leq 0,1$ dB/km after test								
IMPACT RESISTANCE	UNE-EN 60794-1-2, Met. E4	3 J, 300 mm $\Delta\alpha$ reversible ($\Delta\alpha \leq 0,1$ dB/km after test)								
CRUSH RESISTANCE	UNE-EN 60794-1-2, Met. E3	100 N/cm $\Delta\alpha$ reversible ($\Delta\alpha \leq 0,1$ dB/km after test)								
REPEATED EBNDING	UNE-EN 60794-1-2, Met. E6	25 Cycles: 20 x $\varnothing$ cable $\Delta\alpha$ reversible ($\Delta\alpha \leq 0,1$ dB/km after test)								
TORSION	UNE-EN 60794-1-2, Met. E7	2m cable ; 100N ; 5 cycles ; $\pm 180^\circ$ $\Delta\alpha$ reversible ($\Delta\alpha \leq 0,1$ dB/km after test)								
BENDING	UNE-EN 60794-1-2, Met. 11	R=20 x $\varnothing$ cable; 5 turns; 3 cycles $\Delta\alpha$ reversible ($\Delta\alpha \leq 0,1$ dB/km after test)								
TEMPERATURE CYCLING	UNE-EN 60794-1-2, Met. F1	-30°C / 60°C; $\Delta\alpha < 0.1$ dB/km								
WATER PENETRATION	UNE-EN 60794-1-2, Met. F5B	LP water ≤ 3 m (8 hours); No leakage								
MARKING	UNE-EN 60794-1-2, Met. E2B	1mm; 4N, 100 cycles								

Optical fibre characteristics: See Annexes – Optical fibre characteristics.

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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Certified Company ISO 9001 – ISO 14001

TITLE
HP_EE2M61B_i

EDITION
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APPROVED BY
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DATE
2019-06-17