

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) (± 0.3 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 μ m	G.657.A1 250 μ m	G.657.A1 250 μ m	G.657.A1 250 μ m	G.657.A1 250 μ m	G.657.A1 250 μ m	G.657.A1 200 μ m	G.657.A1 200 μ m	G.657.A1 200 μ m
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_EE2M61A_i

EDITION
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APPROVED BY
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DATE
2018-04-03