

ARMoured CABLES FOR RAILWAY DUCTS

TFvST Sheath - Micromodule structure - K209B Type



DESCRIPTION AND APPLICATION

Micromodule structure fibre-optic cables with a double LSZH thermoplastic sheath, fiberglass yarns and armoured with a steel tape for mechanical and rodent protection. This cable can be installed in underground ducts or directly buried. For use in medium or long distance networks.

CONSTRUCTION

1. Micromodules: fibres are grouped into a jelly-filled micro-structure of 6 or 12 fibres and a maximum diameter of 1.4 mm.
2. Core: The micro-modules are grouped inside without any central reinforcing element.
3. Water-blocking yarns and/or tapes.
4. LSZH thermoplastic inner sheath.
5. Fibreglass yarns.
6. Corrugated copolymer-coated steel tape longitudinally applied with overlap.
7. LSZH thermoplastic outer sheath. UV protected.

Markings:

CABLESCOM / Year / Number of fibres / Type of fibre / Type of sheath / Length markings
Other sheath markings available upon request



OPTICAL FIBRE CHARACTERISTICS

Optical fibres are according to ITU-T G.652D recommendations and EN 60793-2 - Class B 50 B 1. See our product sheet of fibre characteristics.

Optical transmission characteristics of cabled fibre:

Attenuation coefficient:

Maximum at 1310 nm: 0.36 dB/km

Average / Maximum at 1550 nm: 0.21 / 0.24 dB/km

PMD ≤ 0.20 ps/km^{1/2}

Cut-off wavelength (λ_{cc}) ≤ 1260 nm

MICROMODULE COLOUR CODE

Micromodule	# fibres in cable				
	6	12	36	72	144
1	Red	Red	Red	Red	Red
2		Blue	Blue	Blue	Blue
3			Green	green	green
4			Yellow	Yellow	Yellow
5			Violet	Violet	Violet
6			White	White	White
7					Orange
8					Grey
9					Brown
10					Black
11					Turquoise
12					Pink
Micromodule diameter (mm)	1.20	1.20	1.20	1.40	1.40

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_EE5345D_i

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2018-06-20

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OPTICAL FIBRE COLOUR CODE

# fibre	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

PRODUCT INFORMATION

Code	Num. Fibres	Fibres per micromodule	Nominal weight (kg/km)	Nominal OD (mm)	Max. Inst. Tensile strength (N)
EE5345D00000600N	6	6	115	9.5	1400
EE5345D00001200N	12	6	135	11.0	1400
EE5345D00003600N	36	6	155	11.5	1400
EE5345D00007200N	72	12	185	12.5	2000
EE5345D00014400N	144	12	240	14.5	2650

Mechanical characteristics	Standard	Test conditions
Installation Maximum Tensile Strength ($\epsilon_f < 0.3\%$; $\Delta\alpha < 0.1\text{dB/km}$ during the test and reversible after the test)	UNE-EN 60794-1-2, Met. E1	See table above
Bending resistance ($\Delta\alpha < 0.1\text{ dB}$ and reversible)	UNE-EN 60794-1-2, Met. 10	D=20 x \varnothing cable
Temperature cycling (operation, $\Delta\alpha < 0.1\text{ dB/km}$ and reversible)	UNE-EN 60794-1-2, Met. F1	-30°C / 60°C
Water penetration	UNE-EN 60794-1-2, Met.F5B	LP _{water} ≤ 3 m (8 hours)
Flame propagation	UNE-EN 60332-1-2 NF 32070 (C2)	
Smoke density	UNE-EN 61034-2	Transmittance > 50 %

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