

CABLES FOR RAILWAY LINES AND DUCTS

MICROMODULE STRUCTURE – TYPE CT2243

DESCRIPTION AND APPLICATION

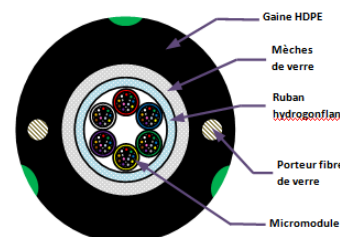
Outdoor fibre optic cables, from 6 to 144 fibres. Dielectrics and waterproof through yarns and ribbons. Polyethylene outer sheath with peripheral fibreglass reinforcements that allow installation in conduit for pulling or blowing along the railway lines. This cable is designed for telecommunication connections in a medium-or long-distance with single-mode fibre according to ITU-T G 652D (EN 60793-2 - Class B 50 B 1.3) or multi-mode fibre according to ITU-T 50/125 OM2 (EN 60793-2-10 type A1a2).

CONSTRUCTION

1. Micromodules: the fibers are grouped in a micro-structure (group of fibers inside of a thin-walled tube) of 6 or 12 fibers with filling compound inside and a maximum diameter of 1.4 mm.
2. Core: The micro-modules are grouped inside without any central reinforcing element.
3. Water blocking elements: Sweallable yarns and tapes to avoid water penetration and make the cable waterproof.
4. Reinforcing elements: Aramid Yarns or fiberglass and reinforcing elements (FRP) embedded in the outer sheath.
5. Outer sheath: High density Polyethylene (HDPE), UV resistant with a rip cord and three green bands.
6. Sheath marking: The cable sheath will be marked at regular intervals with the following information:

Manufacturing year / CABLESCOM/ cable identification/ owner + length markings

Other sheath marks available upon request



G652D OPTICAL FIBRE CHARACTERISTICS

Optical fibres are according to ITU-T G.652D recommendations and EN 60793-2 - Class B 50 B 1.3
See our product sheet of the fibre characteristics.

Optical transmission characteristics of cabled fibre:

Attenuation coefficient:

Maximum at 1310 nm: 0.35 dB/km

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

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

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

OM2 OPTICAL FIBRE CHARACTERISTICS

Optical fibres are according to ITU-T 50/125 OM2 recommendations and EN 60793-2-10 type A1a2
See our product sheet of the fibre characteristics.

Optical transmission characteristics of cabled fibre:

Attenuation coefficient:

Maximum at 850 nm: 2.8 dB/km

Average / Maximum at 1300 nm: 1.0 dB/km

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_EE5303G_i

EDITION
1

APPROVED BY
E. Huang

DATE
2018-02-01

CABLES FOR RAILWAY LINES AND DUCTS

MICROMODULE STRUCTURE – TYPE CT2243

MICROMODULES 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
fibres per micromodule	6	6	6	12	12
Micromodule diameter (mm)	1.40	1.40	1.40	1.40	1.40

OPTICAL FIBRE COLOUR CODE

Fibre Colour Abbrev.	1	2	3	4	5	6	7	8	9	10	11	12
	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Black	Turquoise	Pink
	Rd	Bl	Gr	Ye	Vi	Wh	Or	Gy	Br	Bk	Tq	Pk

PRODUCT INFORMATION

CODE	Fibre Num.	Nominal OD (mm)	Nominal Weight (kg/km)	Installation Tensile Strength (daN)
EE5303G0000060WN	6	11.4	95	225
EE5303G0000120WN	12	11.4	95	225
EE5303G0000360WN	36	11.8	105	225
EE5303G0000720WN	72	11.8	105	225
EE5303G0001440WN	144	14.2	145	275

MECHANICAL CHARACTERISTIC	STANDARD	TEST CONDITIONS
TENSILE STRENGTH ($\Delta\epsilon_f < 0,3\%$, $\Delta\alpha < 0,2$ and reversible)	UNE-EN 60794-1-2, Met. E1	See table acc. To cable
CRUSH RESISTANCE (N/cm) ($\Delta\alpha < 0,1$ dB/km)	UNE-EN 60794-1-2, Met. E3	30 daN/cm
IMPACT RESISTANCE ($\Delta\alpha < 0,1$ dB/km)	UNE-EN 60794-1-2, Met. E4	5 J, r= 300 mm
BENDING RESISTANCE	UNE-EN 60794-1-2, Met. E10	D=20xcable OD
WATER PENETRATION	UNE-EN 60794-1-2, Met. F5B	-30°C / 60°C
TEMPERATURE CYCLING (operation, $\Delta\alpha < 0,1$ dB/km)	UNE-EN 60794-1-2, Met. F1	LPwater $\leq$ 3 m (168 hours)

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