

CENTRAL TUBE OPTICAL FIBRE CABLE



Optical fibre



Overhead line cable



Flexible Cable



Water blocked



UV resistant



Dielectric



ROHS compliant

STANDARDS

IEC 60794

DESCRIPTION AND APPLICATION

Optical fibre cable containing from 2 to 12 fibres, completely dielectric. Aramid yarns as traction resistance element, HDPE sheath. Recommended for transmission systems of 1310 to 1625 nm using ITU-T G652D fiber

CONSTRUCTION

- **Tube:** Central PBT loose tube from 2 to 12 fibres inside and thixotropic compound in order to avoid water penetration
- **Reinforcement:** Aramid yarns as traction resistance elements
- **Outer sheath:** HDPE black outer sheath
- **Sheath marking :** The cable sheath will be marked at regular intervals with the following information:
 - *Manufacturer / year / Number of fibres / Length markers/*
 - *Other sheath marks available upon request*



OPTICAL FIBER CHARACTERISTICS

The parameters of the optical fibres are compliant with the ITU-T G.652D recommendation.

Physical characteristics:

Cladding diameter: $125 \pm 1 \mu\text{m}$

Cladding non circularity $\leq 1\%$

Coating diameter (coloured):: $250 \pm 15 \mu\text{m}$

Coating-Cladding concentricity error $\leq 12,5 \mu\text{m}$

Coating non circularity $\leq 6\%$

Optical characteristics:

Attenuation coefficient:

Average at 1310 nm $\leq 0,36 \text{ dB/km}$

Individual maximum at 1310 nm $\leq 0,37 \text{ dB/km}$

Average at 1550 nm $\leq 0,22 \text{ dB/km}$

Individual maximum at 1550 nm $\leq 0,24 \text{ dB/km}$

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

All drawings, designs, specifications and particulars of weights, dimensions, etc. in this documentation are only indicative and must not be considered contractual.

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TABLE 1: OPTICAL FIBERS COLOUR CODE

Fiber number	Colour
1	White
2	Red
3	Yellow
4	Green
5	Blue
6	Grey

Fiber number	Colour
7	Brown
8	Black
9	Violet
10	Turquoise
11	Orange
12	Pink

MECHANICAL CHARACTERISTICS

CABLE FIBERS		2-12
Diameter (mm)		6,5
Weight (kg/km)		36
Maximum installation/sag load (N) ($\Delta\epsilon_r \leq 0,5\%$)	IEC 60794-1 Met E1	1500
Maximum working load (N) ($\Delta\alpha \leq 0,05$ dB)	IEC 61284	800
Crush resistance (N/cm) ($\Delta\alpha < 0.05$ dB)	IEC 60794-1 Met E3	800
Curvature ($\Delta\alpha < 0.05$ dB)	IEC 60794-1 Met E11	$r = 15 \times \varnothing_{\text{cable}}$
Water penetration (3m cable, 1m water column, 14 days)	IEC 60794-1 Met F5B	No leakage
Operating temperature ($\Delta\alpha < 0.05$ dB)	IEC 60794-1 Met F1	-20 °C/60 °C
Compound Flow Test	IEC 60794-1 Met E14	>70°C

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