

Applications

Non-metallic optical fibre external use with peripheral strength elements, suitable for Indoor and Outdoor installation.

Design

1. Loose Buffer Tube

PBT, 12 optical fibres per tube

1.1 Fibre Colour Code

Fibre Colours:(1) Red; (2) Green; (3) Blue; (4) Yellow; (5) Violet; (6) Pink; (7) Orange; (8) Black; (9) Gray; (10) Brown; (11) White; (12) Turquoise.

1.2 Tube Colour Code

Refer to table.

1.3 Filler (where applicable)

Black. Loose buffer tubes without fibres.

2. Central Strength Member

FRP, Water Blocked, Dielectric central strength member.

3. Cable Core

FRP + Loose Tubes/Fillers.

4. Water Blocking

Dry Yarns and tapes.

5. Fibre Glass Yarns

Peripheral strength elements.

6. Outer Sheath

Flame retardant, Low Smoke, Halogen Free thermoplastic compound. Black.



Sheath Markings

As per customer requirement.

e.g. Product details and metre marking

BT Cables

Manufacturer Year

Operator Identification

Number of Fibres and Fibres per tube

Loose Tube Colour Scheme

No. of Fibres	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	T 9	T 10	T 11	T 12
96	RED	GREEN	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE

Cable Structure, Dimensions and Weights

No. of Fibres	Number of Tubes and Fillers	Number of Fibres per Tube	Nominal Diameter (mm)	Nominal Weight (kg/km)
96	12	0	13.8	190

Optical and Geometric Characteristics – Type Singlemode 9/125 G.652D

Attenuation (Typical/Maximum)			Cable Cut-off Wavelength	Zero Dispersion point	Zero Dispersion Slope	Chromatic Dispersion				Individual Fibre PMD	PMDq
dB/km						nm	nm	ps/nm.km			
1310 nm	1383 nm	1550 nm				1285 – 1330 nm	1270 – 1350 nm	1550 nm	1625 nm		Q=0.01%, N=20
≤0.35	≤0.35	≤0.21	≤1260	1300 – 1324	≤0.092	≤ 3,5	≤ 5,3	≤ 18,0	≤ 22,0	≤0.15	≤0.08

Mode Field Diameter		Concentricity error core/cladding	Cladding Diameter	Concentricity error coating/cladding	Cladding Non-circularity	Cladding Diameter Coloured)
1310 nm	1550 nm					
μm	μm	μm	μm	μm	%	μm
9.40 ± 0.40	10.50 ± 0.80	≤0.4	125 ± 0.50	≤12	≤10	250 ± 15

Mechanical / Environmental Characteristics of Cable

CHARACTERISTIC	Test Specification	REQUIREMENT	VALUE/PERFORMANCE
TENSILE LOAD (MAX.)	IEC 60794-1-E1	- No change in attenuation, before and after load.	5000 N
CRUSH RESISTANCE	IEC 60794-1-E3	- No attenuation increase	20 N/mm
IMPACT RESISTANCE	IEC 60794-1-E4	- No attenuation increase	5 J
BENDING RADIUS	IEC 60794-1-E11 Proc.1	- No attenuation increase	Bend Radius: 20 X Cable Diameter
TEMPERATURE RANGE	IEC 60794-1-F1	- Operation	-305 °C to + 70 °C
WATER PENETRATION	IEC 60794-1-F5	- 3m Sample of cable with 1m head of water, end fed.	No water leakage in 24 hours under first layer.
FLAME PROPAGATION	IEC 60332-1-2	- As per standard	- As per standard
ACID GAS EMISSION	UNE 50267-2-2	- As per standard	- As per standard
SMOKE DENSITY	EN 61034-2	- As per standard	- As per standard