

Applications

Non-metallic optical fibre external use with optimum protection against environmental factors.

Sector - BT Optical-Tec®

Multi loose tube cable

Design

1. Loose Buffer Tube

PBT,
8 optical fibres per tube

1.1 Fibre Colour Code

Fibre Colours:(1) Blue; (2) Orange;
(3) Green; (4) Red; (5) Grey;
(6) Yellow; (7) Brown; (8) Violet
(acc. IEC 60304).

1.2 Tube Colour Code

acc. IEC 60304 – refer to table.

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2. Central Strength Member

FRP, Water Blocked, Dielectric central strength member.

3. Cable Core

FRP + Loose Tubes

4. Water Blocking

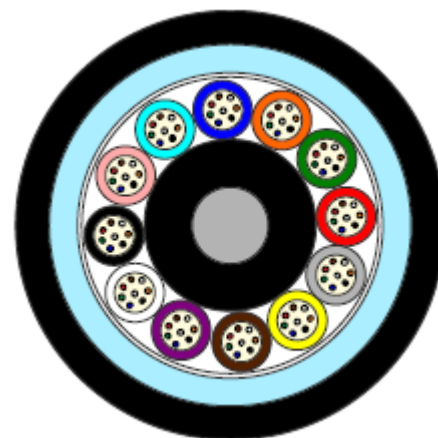
Dry Yarns and tapes.

5. Fibre Glass Yarns

Strength reinforcement element.

6. Outer Sheath

Polyethylene.



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	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
96	Blue	Orange	Green	Red	Grey	Yellow	Brown	Violet	White	Black	Pink	Turquoise

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	8	16.4	230

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
1310 nm	1383 nm	1550 nm				1285 - 1330 nm	1270 - 1350 nm	1550 nm	1625 nm		
dB/km	dB/km	dB/km	nm	nm	(ps/nm ² .km)	(ps/(nm.km))				(ps/√km)	(ps/√km)
≤0.37	≤0.37	≤0.24	≤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	Non-circularity coating	Cladding Diameter Coloured)
1310 nm	1550 nm					
μm	μm	μm	μm	μm	%	μm
9.20 ± 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.	3000 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 RESISTANCE	IEC 60794-1-E11 Proc.1	- No attenuation increase	Bend Radius: 15 X Cable Diameter
TEMPERATURE RANGE	IEC 60794-1-F1	- Operation	-25 °C to + 70 °C
WATER PENETRATION	IEC 60794-1-F5	- 3m Sample of cable with 1m	No water leakage in 24 hours under first layer.