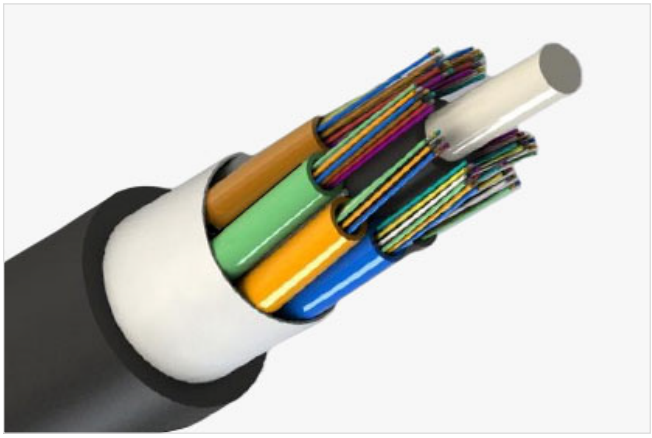
OFC – DUCT TYPE



PTCL Cables offers Duct Non-Metallic Dry Core Optical Fiber Cables; the construction of the non-metallic cables begins with our proven loose tube design. The loose tube provides protection against environment and mechanical forces. This is a light weight cable with smaller diameter and suitable enough for duct and conduit use. These cables are manufactured according to international standard and these cables fully conform to Pakistan Telecommunication Company Standard Specification TR-109 as applicable in Pakistan.

Applications:

- Inter Office Trunking, Data, Video Transmission, Control / Alarm System Light Weight and Flexible - Laying in Ducts and Concrete.

Cable Constructions:

- Loose Tube filled with Gel - Stranded around Central Strength Member - Water Blocking Material - Peripheral Strength Members - Polyethylene Outer Jacket

Technical Characteristics:

- The unique extruding technology provides the fibers in the tube with good flexibility and bending endurance.
- The unique fiber excess length control method provides the cable with excellent mechanical and environmental properties.
- Multiple water blocking material filling provides dual water blocking function.
- Provides good crush resistance.

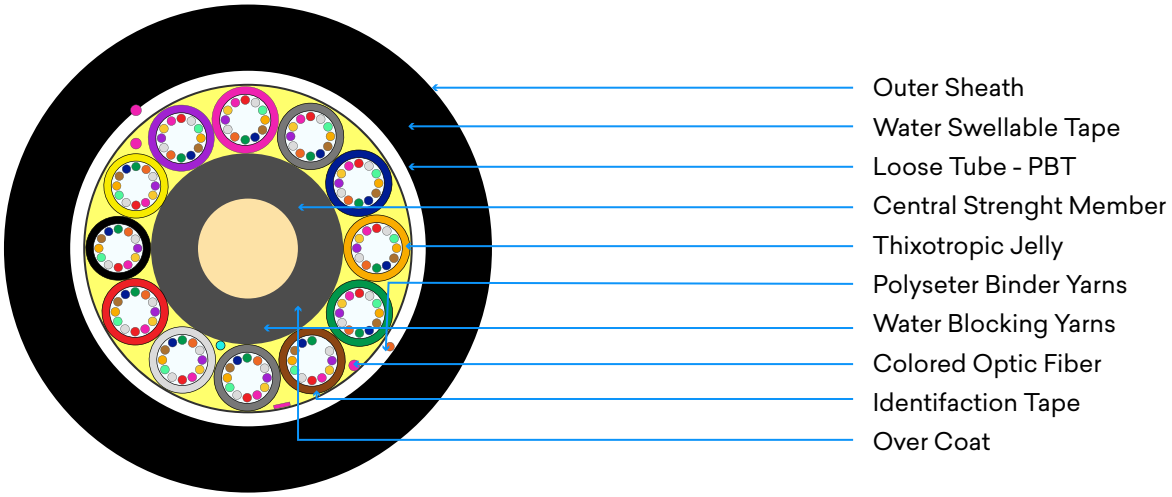


Diagram is for reference only

PTCL CABLES
Pakistan Telephone Cables Limited

OPTCIAL FIBER CABLES

Construction Parameters

Fiber Type	ITU-T G.652D, G.655 & G.657
Fiber Count	02 to 144 Fibers
Loose tube Filling Material	Thixotropic Terephthalate (PBT)
Central Strength Member	Fiber/Glass Reinforced Plastic (FRP/GRP)
Peripheral Strength Member (if required)	Aramid /Glass yarn
Filler Material	Polyethylene
Core Moisture Protection Methodology	Dry Block Design, Water Blocking Yarns/Tapes
Outer Sheath Material	Medium/High Density Polyethylene (HDPE/MDPE)
Printing on Outer Sheath	Engraved Hot Foil Ink or Inkjet Printing
Drum Length	2000 Meter & 4000 Meters ± 5%

Optical Characteristics

Fiber Type	CORNING® SMF-28e+ G.652D	CORNING® LEAF G.655	CORNING® G.657
Fiber Colour Coding	As per TIA/EIA-598A&C	As per TIA/EIA-598A&C	As per TIA/EIA-598A&C
Mode Field Diameter, µm	8.6 to 9.5 ± 0.7	9.6 ± 0.4	8.6 ± 0.4 µm @1310nm
Cladding Diameter, µm	125 ± 1	125 ± 0.7	125±1µm
Core Clad Concentricity error, µm	≤ 0.8 µm	≤ 0.5	≤ 0.6 µm
Cladding Non-Circularity, %	≤ 2 %	≤ 0.7 %	≤ 1 %
Cable Cut-off Wavelength, nm	≤1260 nm	≤1450 nm	≤1260 nm
Chromatic Dispersion (ps/nm.km)	≤ 3.5 @ 1310nm ≤ 18 @ 1550nm	2.0 - 5.5 @1530nm 4.5 - 6.0 @1565nm 5.8 - 11.2 @1625nm	≤ 3.5 @ 1310 ≤ 18 @ 1550
Cabled Attenuation @ 1310 nm (dB/km) Cabled Attenuation @ 1550 nm (dB/km)	≤ 0.35 (average) ≤ 0.21 (average)	≤ 0.22 dB/km (Max.Avg)	≤ 0.4 ≤ 0.3
Polarized Mode Dispersion (PMD) ps/√km	≤ 0.2	≤ 0.2	≤ 0.2

Mechanical Characteristics

Tensile Strength (N) (Max)	3000
Minimum Bending Radius	10 x outer without load
Diameter of cable (mm)	20 x outer with load
Crush Strength (N) (max)	2500
Temperature Range	-20 °C to +70 °C

Features & Benefits

Suitable for conduit and pipelines for long haul applications	It can be laid in vicinity of Power Cables
Supports all grades of single Mode & Multimode Fibers	Telemetry and SCADA Links for Oil & Gas, electricity

Note:

- Jelly Filled Cables option is also available for customers as per requirement
- Multimode Fiber OM1 (62.5µm) & OM2 (50µm) option is also available for customers as per requirement