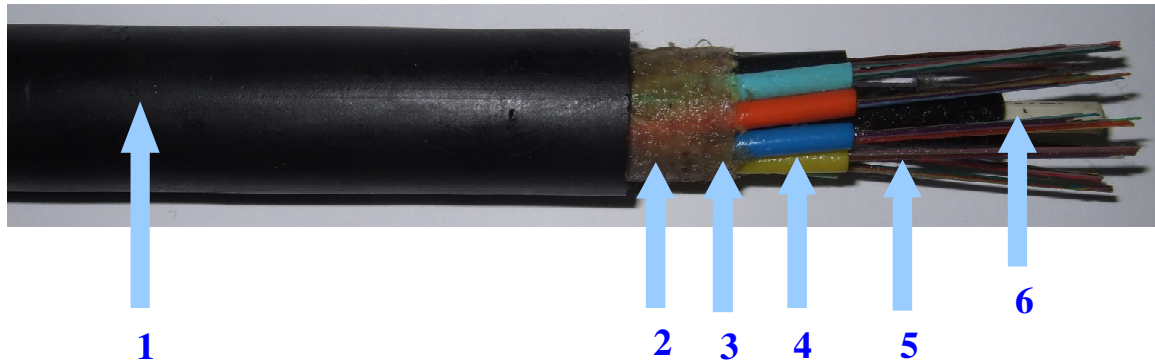


Non-Metallic Loose Tube Type Fiber Optic Cable

Application : Non-metallic cable used for power line transmission system or wayside , excessive thunder areas and high electromagnetic interface. Its mainly application is for aerial or duct use.

Construction :



- ❶ Outer sheath
- ❷ Ripcord & Water blocking element
- ❷ Peripheral strength element-Aramid yarn
- ❸ Loose tube
- ❹ Colour fibers
- ❸ Center strength member(CSM)- FRP rod, with oversheathing when needed

Features and Benefits :

- ◆ CSM: Glass fiber reinforced plastic rod(FRP), with oversheathing or waterblocking element wrapping could provide efficient tension and anti-water function for cable.
- ◆ Loose Tube: 6 or 12 fiber per loose tube and filled with a suitable jelly compound.
- ◆ Filler:Thermoplastic rods, where needed.
- ◆ Stranding:Loose tubes (and filler), SZ stranded around the CSM.
- ◆ Longitudinal water tightness : (Option)
 - The core is water blocked using jelly.
 - Water blocking element used for eliminates the need for traditional flooding compound and provides efficient and craft-friendly cable preparation.
- ◆ Peripheral Strength Element: Aramid yarns be used.
- ◆ Water Blocking Element: Could be used by requirement(Option).
- ◆ Ripcord:Nylon thread or Aramid yarn for the sheath can be easily strip.
- ◆ Outer sheath: PE

Specification : 6C~96C , Detail specification

1. Configuration

No. of Fibers	Unit	6	12	18	24	36	48	72	96
Tubes xFibers	NO.xC	1x6	2x6	3x6	4x6	6x6	8x6	6x12	8x12
Loose Tube/Filler- ϕ	mm	2.5					3.1		
CSM-Over sheath- ϕ	mm	2.1				3.0			
Sheath	mm	2.0							
Cable Diameter	mm	17.0				17.4	19.8	20.0	20.4
Cable weight(App.)	kg/m	0.15				0.20	0.20	0.21	0.22

2. Application

Temperature Range	Minimum Bending Radius
Transportation&Storage: -30~+60℃ Installation: 0~+60℃ Operation: -30~+60℃	Under Maximum Tension : 20xCable- ϕ Without Tension: 10xCable- ϕ

3. Mechanical and Environmental Characteristics :

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile Loading and Bending Test	EIA-455-33A	Mandrel diameter: 20D (D = cable diameter) Tensile load: 273kgf for 10 minutes	(1) Attenuation Increment ≤ 0.2 dB (2) No jacket cracking and fiber breakage
Cyclic Flexing Test	TIA/EIA-455-104A	Sheave diameter: 20D (D=cable diameter) No. of flexing cycles: 25 cycles Flexing speed: 30 cycles/minute	
Repeated Impact Test	TIA/EIA-455-25B	Height of impact: 150mm No. of impact cycles: 20 cycles Cycle speed: 30 $\pm$ 1 cycle/min.	
Cable Twist Test	TIA/EIA-455-85A	Cable length twisted: 4m No. of twist cycles: 10 cycles for 10 min. Twist angle: $\pm 180^\circ$ /cycle	
Compressive Loading Resistance Test	TIA/EIA-455-41A	Applied load: 4.54kgf/mm Duration of loading: 10 minutes Load length: more than 100 mm Compressive speed: 2.54 mm/min.	
Water Penetration	TIA/EIA-455-82B/ IEC 60794-1-2F5B	Length of specimen: 1m Height of pressure head: 1m Test time: 4 hours	No leakage through the open cable end

This section shall be performed at 1550nm.

4. Optical Characteristics

4.1 Maximum Attenuation

Wavelength	Attenuation(dB/km)
1260nm	≤ 0.45
1310nm	≤ 0.40
1383nm $\pm$ 3nm	≤ 0.35
1550nm	≤ 0.25 (90%) ≤ 0.30 (100%)
1625nm	≤ 0.35

4.2 Chromatic Dispersion

Wavelength	Specification (ps/km-nm)
1260nm	≤ 6.21
1310nm	≤ 1.14
1383nm	≤ 7.05
1550nm	≤ 18.21
1625nm	≤ 22.31

4.3 Polarization Mode Dispersion , PMD

Individual Polarization Mode Dispersion	0.2 ps / $\sqrt{\text{km}}$
Linked Polarization Mode Dispersion , PMD _Q 20 Cables(M=20) 0.01% Probability level(Q=0.01%)	0.1ps / $\sqrt{\text{km}}$

4.4 Cut-off Wavelength of Cabled : Less than 1260nm °

4.5 Mode Field Diameter

1310nm	9.0~9.4 μm $\pm$ 0.4 μm
1550nm	10.0~10.7 μm $\pm$ 0.7 μm

5. Identification

5.1 Fiber Colours

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Yellow	Green	Red	Violet	White	Brown	Black	Aqua	Orange	Pink	Grey

5.2 Loose Tube Colours

1ST Layer

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Yellow	Green	Red	Violet	White	Brown	Black	Aqua	Orange	Pink	Grey

5.3 Sheath Colour: Black

5.4 Sheath Marking

PACIFIC 《year of manufacture》《Cable type and fiber count》《length marking in meter》

6. Packing

Metal or Wooden drums with protection.

7. Delivery Lengths

Standard delivery length are 2000 meters.