

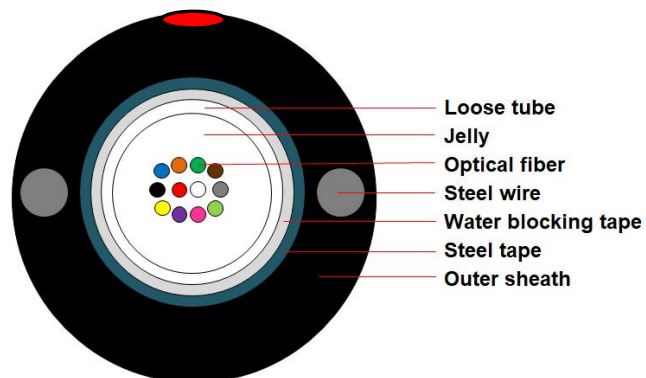
Specification FOR

Central Loose Tube Optical Cable

[GYXTW]

1. Cable Construction

1.1 Cross Sectional Diagram



2. Technical Specification

Fiber Counts		12
Loose Tube	Material	PBT
	OD(mm):	2.4± 0.1 mm
Water Blocking Material		Water Blocking tape
Strength Member	Material	Steel Wire
	Diameter(±0.1mm)	1.0 mm
Armored		Steel tape
Sheath	Material:	HDPE
	Color:	Black
Outer Diameter (mm)		8.2±0.5
Weight (kg/km)		71 ± 10%

3. Fiber and Loose buffer tube Identification

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

4. Optical Fiber

ITEMS	UNITS	SPECIFICATION	
Fiber Type	-	G652D	
Attenuation	dB/km	Before cable	After cable
		1310 nm ≤ 0.34 1550 nm ≤ 0.21	1310 nm ≤ 0.36 1550 nm ≤ 0.24
Chromatic Dispersion	ps/nm.km	1310 nm ≤ 3.5 1550 nm ≤ 18 1625 nm ≤ 22	
Zero Dispersion Slope	ps/nm ² .km	0.093	
Zero Dispersion Wavelength	nm	1300 ~ 1324	
PMD (M=20, Q=0.01%)	ps/√km	≤ 0.2	
Cut-off Wavelength (λ _{cc})	nm	≤ 1260	
Attenuation vs. Bending (60mm x100turns)	dB	≤ 0.1 at 1625 nm (60mm x100turns)	
Mode Field Diameter	μm	(8.6-9.5) ± 0.7 @1310nm	
Core-Clad Concentricity	μm	≤ 0.5	
Cladding Diameter	μm	125±2	
Cladding Non-circularity	%	≤ 0.8	
Coating Diameter	μm	245±5	

5. Mechanical and Environmental Performance of the Cable

NO.	Items	Test Method	Acceptance Criteria
1	Tensile Loading Test	#Test method: IEC 60794-1-E1 -. Short-tensile load:1500 N -. Cable length: ≥ 50 m	-. Attenuation increment@1550 nm: ≤ 0.1 dB after the test -. No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test method: IEC 60794-1-E3 -.Short load: 1000 N/100mm Load time: 10 minutes	-. Attenuation increment@1550nm: ≤ 0.1 dB after the test -. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method: IEC 60794-1-E4 -.Striking surface radius:300mm -.Impact weigh: 4.5J -.Impact frequency: 3/point	-. Attenuation increment@1550 nm: ≤ 0.1 dB after the test -. No jacket cracking and fiber breakage
4	Repeated Bending	#Test method:IEC 60794-1-E6 -.Mandrel diameter: 20D (D = cable diameter) -.No.of cycles: 25 -.Duration of cycle: Approximately 2 s	-. Attenuation increment@1550 nm: ≤ 0.1 dB after the test -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method: IEC 60794-1-E7 Test method: IEC 60794-1-E7 -Length under test: 1 m -.Subject weight: 50N -.Angle: +180 degree -.Frequency ≥ 10 /point	-. Attenuation increment@1550 nm: ≤ 0.1 dB after the test -. No jacket cracking and fiber breakage
6	Water Penetration Test	#Test method: IEC 60794-1-F5B -.Height of pressure head: 1 m -.Length of specimen: 3 m -.Test time: 24 hours	-. No leakage through the open cable end
7	Temperature Cycling Test	#Test method: IEC 60794-1-F1 -.Temperature steps: + 20°C、 - 40°C、 +60°C、 + 20°C -.Testing Time: 12 hours/step -.Cycle index: 2	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage

5.2 Fiber Optical Cable bending radius

Static bending: ≥ 10 times than cable out diameter

Dynamic bending: ≥ 20 times than cable out diameter.

6. Reference Standard

ITU-T G.652 : Characteristics of a single-mode optical fibre and cable

IEC 60794-3-11-2010 Outdoor cables -Product specification for duct,directly buried, and lashed aerial single-mode optical fibre telecommunication cables

7. Package and Mark

7.1 PACKAGE

Material of the drum shall be plywood wood.

Delivery length: 4 km/Drum;

Not allowed two length units of cable in one drum, Two ends should be packed inside drum, reserve length of cable not less than 1meter.