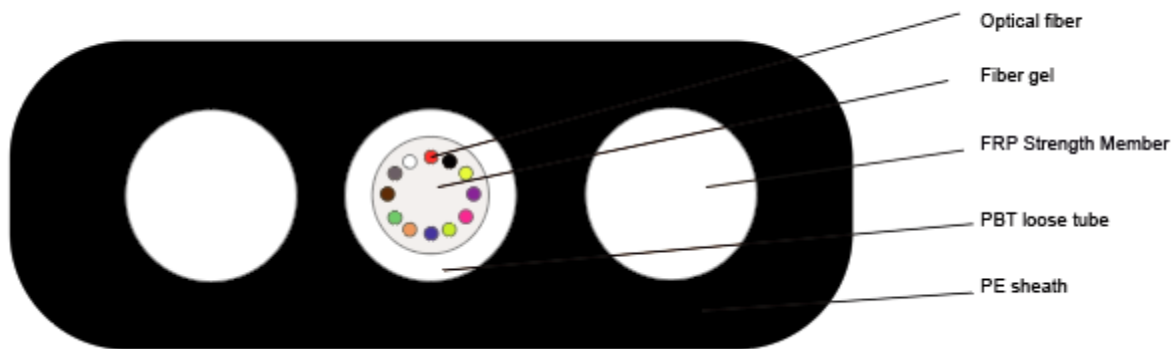


1. Cable Construction

1.1 Cross Sectional Diagram



2. Technical Specification

Fiber Counts	2F
OD of Loose Tube (mm)	1.6 ± 0.1 mm
Max Fiber Counts/tube	2
FRP Strength Member	1.8mm*2
Outer Sheath Thickness	1.8 ± 0.2 mm
Outer Sheath Material	PE
OD of Cable	$4.0*8.0 \pm 0.2$ mm
Net weight (kg/km)	38kg/km
Tensile(N)	1500N
Operating temperature	- 40°C~+70°C
Store/Transport temperature	- 20°C~+70°C
Installation temperature	- 10°C~+60°C

3. Fiber and Loose buffer tube Identification

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

Category	Description		Specifications
Type			G.657A2
Optical Specifications	Attenuation	@1310nm	$\leq 0.35\text{dB/km}$
		@1383nm	$\leq 0.35\text{dB/km}$
		@1550nm	$\leq 0.22\text{dB/km}$
		@1625nm	$\leq 0.25\text{dB/km}$
	Attenuation Non-uniformity		$\leq 0.03\text{ dB}$
	Point Discontinuity @1310nm,1550nm		$\leq 0.03\text{ dB}$
	Attenuation vs. Wavelength	@1285~1330nm	$\leq 0.05\text{ dB/km}$
		@1525~1575nm	$\leq 0.05\text{ dB/km}$
	Zero Dispersion Wavelength		1300~1324
	Zero Dispersion Slope		$\leq 0.092\text{ps/nm.km}$
	Dispersion	@1310nm	$\leq 3.5\text{ ps/nm.km}$
		@1550nm	$\leq 18\text{ ps/nm.km}$
	Polarization Mode Dispersion(PMD)		$\leq 0.2\text{ps/km}^{1/2}$
	PMD Link value		$\leq 0.2\text{ps/km}^{1/2}$
	Cable Cutoff Wavelength(λ_{cc})		$\leq 1260\text{nm}$
	Macro bending Loss (100 turns; $\Phi 60\text{mm}$) @1625nm		$\leq 0.10\text{ dB}$
Dimensional Specifications	Mode Field Diameter	@1310nm	8.4-9.2 μm
		@1550nm	9.3-10.3 μm
	Effective Group Index of Refraction	@1310nm	1.4675
		@1550nm	1.4681
	Fiber Curl Radius		$\geq 4.0\text{m}$
	Cladding Diameter		125 $\pm 0.8\mu\text{m}$
	Mode field Core/clad concentricity		$\leq 0.5\mu\text{m}$
Mechanical Specifications	Cladding Non-Circularity		$\leq 1.0\%$
	Coating Diameter		245 $\pm 5\mu\text{m}$
	Coating/Cladding Concentricity		$\leq 8\mu\text{m}$
	Coating Non-Circularity		$\leq 6.0\%$
Environmental Specifications	Proof Test		$\geq 1.0\%$
	Peak Coating Strip Force		1.0~8.9N
Environmental Specifications	Temperature Cycling Induced Attenuation @1310nm,1550nm,1625nm(-60°C to+85°C)		$\leq 0.05\text{ dB/km}$

5. Mechanical and Environmental Performance of the Cable

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test	#Test method: IEC 60794-1-E1 -. MAT 1500 -. Cable length: ≥ 50 m	-. Attenuation increment@1550 nm: ≤ 0.15 dB -. No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test method: IEC 60794-1-E3 -.Long load: 200 N/100mm -.Short load: 1000 N/100mm Load time:1 min of short term load, followed by 10 min of long term load	-. Attenuation increment@1550 nm: ≤ 0.15 dB -. No jacket cracking and fiber breakage
3	Impact Resistance Test	#Test method: IEC 60794-1-E4 -.Impact height: 1 m -.Impact energy: 10 J with striking surface radius of 300 mm -.Impact point: ≥ 5 -.Impact frequency: ≥ 3 /point	-. Attenuation increment@1550 nm: ≤ 0.15 dB -. No jacket cracking and fiber breakage
4	Repeated Bending	#Test method: IEC 60794-1-E6 -.Mandrel diameter: 20 D (D = cable diameter) -.Bent backwards and forwards through angles: 180° -.Bending frequency: 25 times -.Bending speed: 2s/time	-. Attenuation increment@1550 nm: ≤ 0.15 dB -. No jacket cracking and fiber breakage
5	Torsion Test	#Test method: IEC 60794-1-E7 -.Length: 2 m -.Tension : 50 N -.Angle: ± 180 degree -.Frequency: ≥ 10 /point	-. Attenuation increment@1550 nm: ≤ 0.15 dB -. 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 method: IEC 60794-1-F1 -.Temperature steps: + 20°C、-	-. Attenuation increment@1550 nm: ≤ 0.15 dB

	Test	40°C、+ 70°C、+ 20°C -.Testing Time: 24 hours/step -.Cycle index: 2	-. No jacket cracking and fiber breakage
8	Drop Performance	#Test method:IEC 60794-1-E14 -.Testing length: 30 cm -.Temperature range: 70 ±2°C -.Testing Time: 24 hours	-. No filling compound drop out

5.2 Fiber Optical Cable bending radius

Static bending: ≥ 12.5 times than cable out diameter

Dynamic bending: ≥ 25 times than cable out diameter.

6. Reference Standard

ITU-T G.657 : Characteristics of a single-mode optical fibre and cable

IEC 60794-4-2018--Optical fibre cables. Sectional specification. Aerial op.

7. Package and Mark

7.1 Package

Not allowed two length units of cable in one drum, two ends should be sealed, Two ends should be packed inside drum, reserve length of cable not less than 3 meters.

2~4km/roll Wooden Drum

7.2 Mark

According to customer requirements