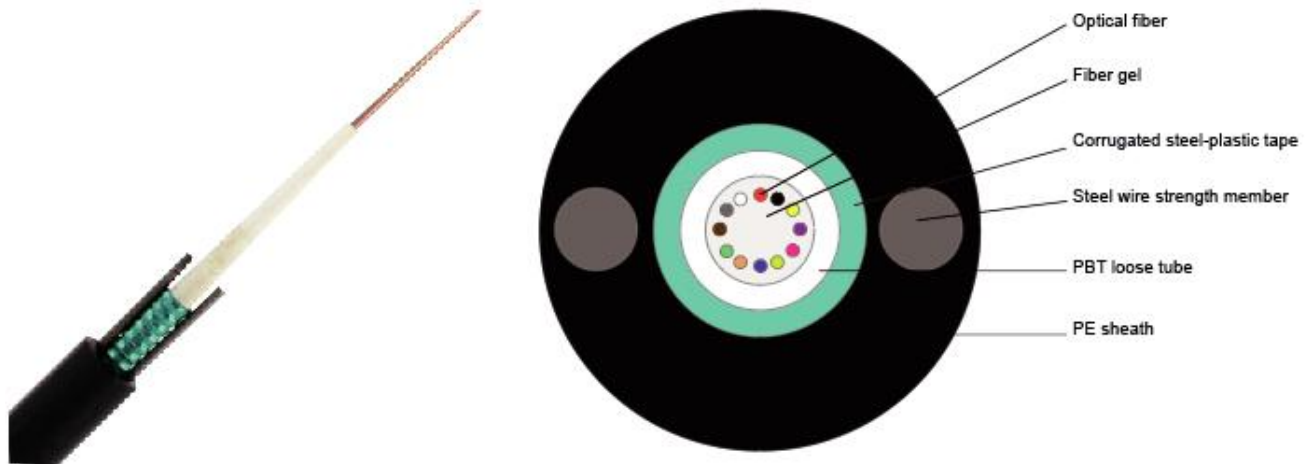

Specification FOR Outdoor Aerial Cable

1. Cable Construction

1.1 Cross Sectional Diagram



2. Technical Specification

Fiber Counts	1-12F
OD of Loose Tube (mm)	2.0 ± 0.1 mm
Steel Wire strength member	0.8 ± 0.02 mm
Outer Sheath Material	PE
Armored	Steel Tape
OD of Cable	7.8 ± 0.2 mm
Net weight (kg/km)	78
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

Items	Units	Specification
Fiber Type	-	G652D
Attenuation	dB/km	1310 nm≤ 0.36 1550 nm≤ 0.22
Chromatic Dispersion	ps/nm.km	1310 nm≤ 3.5 1550 nm≤ 18 1625 nm≤ 22
Zero Dispersion Slope	ps/nm ² .km	0.092
Zero Dispersion Wavelength	nm	1300 ~ 1324
PMD (M=20, Q=0.01%)	ps/√km	≤ 0.1
Cut-off Wavelength (λ _{cc})	nm	≤ 1260
Attenuation vs. Bending (60mm x100turns)	dB	≤ 0.1 at 1625 nm
Mode Field Diameter	μm	9.2 ± 0.4 @1310nm
Core-Clad Concentricity	μm	≤ 0.5
Cladding Diameter	μm	125±1
Cladding Non-circularity	%	≤ 0.8
Coating Diameter	μm	245±5
Proof Test	Gpa	≥ 0.69

5. Mechanical and Environmental Performance of the Cable

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test	#Test method: IEC 60794-1-E1 -. 1000N -. Cable length: ≥ 50 m	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
2	Crush Resistance Test	#Test method: IEC 60794-1-E3 -.Long load: 1000 N/100mm -.Short load: 2000 N/100mm Load time:1 min of short term load, followed by 10 min of long term load	-. Attenuation increment@1550 nm: ≤ 0.1 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: $\geq 3/\text{point}$	-. Attenuation increment@1550 nm: ≤ 0.1 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: ≤ 0.1 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: $\geq 10/\text{point}$	-. Attenuation increment@1550 nm: ≤ 0.1 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	#Test method: IEC 60794-1-F1 -.Temperature steps: + 20°C 、 - 40°C、 + 70°C、 + 20°C -.Testing Time: 24 hours/step -.Cycle index: 2	-. Attenuation increment@1550 nm: ≤ 0.1 dB -. No jacket cracking and fiber breakage
8	Drop Performance	#Test method:IEC 60794-1-E14 -.Testing length: 30 cm -.Temperature range: $70 \pm 2^\circ\text{C}$ -.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.652 : 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.

4km/roll Wooden Drum

7.2 Mark

According to customer requirements