Specification

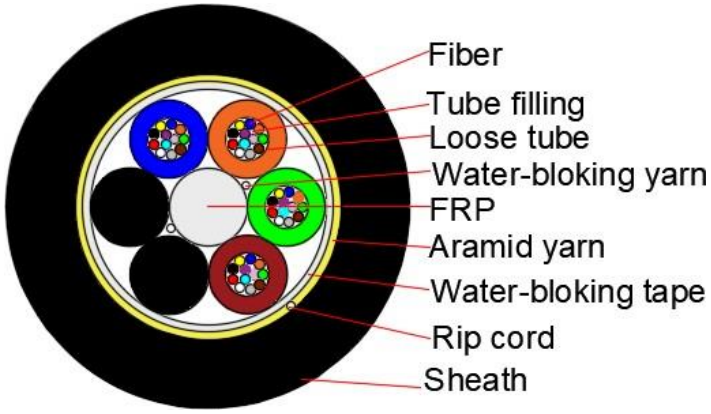
FOR

All Dielectric Self-supporting Aerial Cable

[ADSS(Single sheath)]
Span 100M

1. Cable Construction

1.1 Cross Sectional Diagram



2. Technical Specification

Fiber Counts		**48F**
Loose Tube	Material	PBT
	OD(mm):	2.0± 0.1 mm
Water Blocking Material		Water Blocking Tape
Central Strength member		2.0mm FRP
supporting Member		Aramid yarns
Sheath	Material:	HDPE
	Color:	Black
Cable	Diameter	10.0 ± 0.5 mm
	Weight	90±5 kg/km
Rate Tensile strength (RTS)		7.5KN
Max tension load (MAT)		2.5kN
Maximum installation tension (≤20% RTS)		1.5KN
Strain Margin Strength (60%RTS)		4.5KN
Everyday Stress (16%~25%RTS)		1.2~1.8KN
Max. span		100M
Crush resistance		1000N/100mm
Operating temperature		-40℃~+60℃
Store/Transport temperature		-40℃~+70℃
Installation temperature		-30℃~+50℃

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	White	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≤ 0.35 1550 nm≤ 0.22
Chromatic Dispersion	ps/nm.km	1310 nm≤ 3.5 1550 nm≤ 18 1625 nm≤ 22	
Zero Dispersion Slope	ps/nm2.km	0.093	
Zero Dispersion Wavelength	nm	1300 ~ 1324	
PMD (M=20, Q=0.01%)	ps/√km	≤ 0.2	
Cut-off Wavelength (λcc)	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	
Proof Test	Gpa	≥ 0.69	

5. Mechanical and Environmental Performance of the Cable

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test IEC 60794-1-E1	-. Tensile load：2500N -. Maintained time：1min - Length of cable: about 150m	-.Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage

2	Crush Resistance Test IEC 60794-1-E3	-.Load：1000 N/100mm -Load time：≥1 minutes	-.Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
3	Impact Resistance Test IEC 60794-1-E4	Points of impact:3 Times of per point: 2 Impact energy: 4.4J Radius of hammer head: 12.5mm Impact rate: 2sec/cycle	-.Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
4	Repeated Bending IEC 60794-1-E6	Bending Dia.: 20 x OD Load: 150N Flexing rate: 3sec/cycle No. of cycle: 30	-.Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
5	Torsion Test IEC 60794-1-E7	Length: 1m Load: 150N Twist rate: 1min/cycle Twist angle: ±180° No. of cycle: 10	-.Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
6	Water Penetration Test	#Test method:IEC 60794-1-F5B -.Height of pressure head：1m -.Length of specimen：3m -.Test time: 24 hours	-. No leakage through the open cable end
7	Temperature Cycling Test IEC 60794-1-F1	-.Temperature steps：＋20℃、－40℃、＋60℃、＋20℃ -.Testing Time：24 hours/step -.Cycle index：2	-. Attenuation increment@1550nm:≤0.1dB -. No jacket cracking and fiber breakage
8	Compound Flow IEC 60794-1-E14	- Sample length: 30 cm - Temp: 70°C 2°C - Time: 24 hours	- No compound flow

Fiber Optical Cable bending radius

Static bending: ≥ 10 times than cable out diameter

Dynamic bending: ≥ 20 times than cable out diameter.

6. Reference Standard

IEC 60794-3 Outdoor cables - Sectional specification

7. Package and Mark

7.1 PACKAGE

Material of the drum shall be fumigation wood.

Standard drum length is 3000, 4000 & 5000m±5%.

The disc length can be customized according to customer requirements

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.

7.2 MARK

White color Ink jet printing, Cable Mark: Brand, Cable type, Fiber type and counts, Year of manufacture and Length marking.