



Specification

FOR

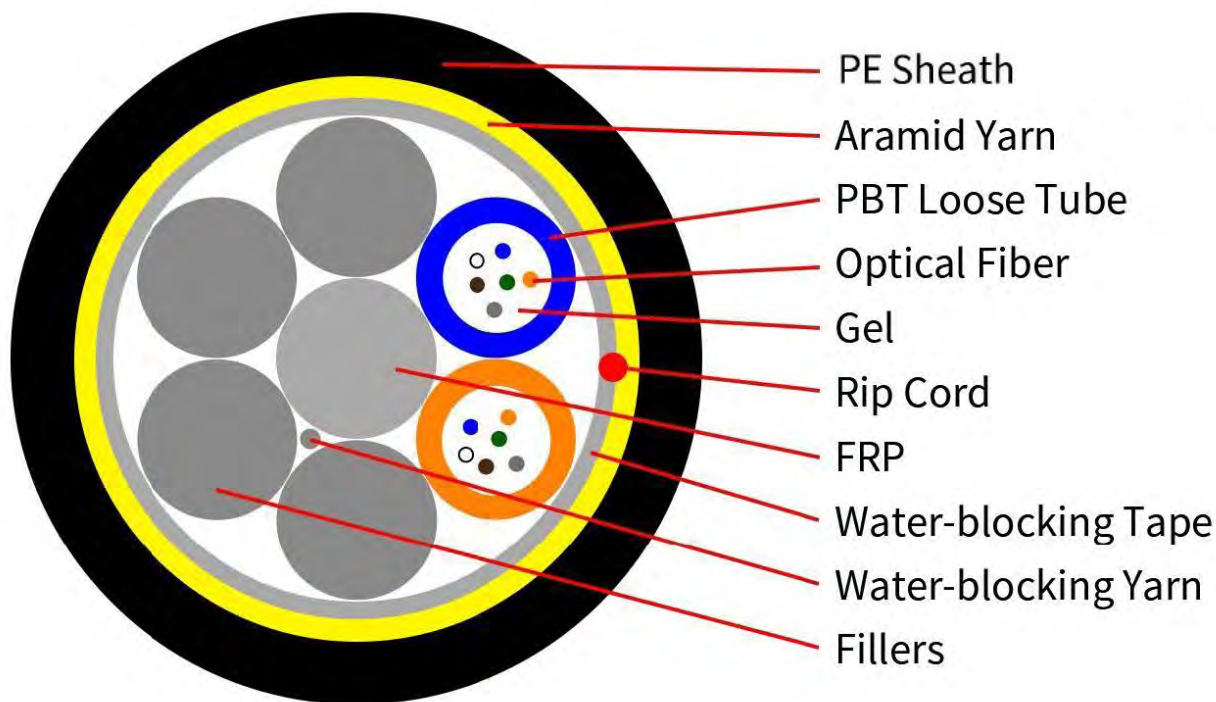
Non-Metal Optic Cable

[ADSS-110-120m]



1. CABLE CONSTRUCTION

1.1 CROSS SECTIONAL DIAGRAM



2. TECHNICAL SPECIFICATION

2.1 TECHNICAL SPECIFICATION

Fiber Count	6/12	24F	36F	48F	72F	96F	144F
OD of Loose Tube (mm)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max Fiber Count/tube	6	6	6	12	12	12	12
NO. of Tube	1/2	4	6	4	6	8	12
NO. of Filler	5/4	2	0	2	0	0	0
FRP/Coat(mm)	2.1	2.1	2.1	2.1	2.1	2.1/3.5	2.1/6.0
Water Blocking Material	Water Blocking Tape/Yarn						
Reinforced Materials	Aramid Yarn						
PE Sheath Thickness	1.7 ±0.2 mm						
OD of Cable (±0.4 mm)	10.0	10.0	10.0	10.0	10.0	11.4	14.0
Net weight (kg/km)	80	80	80	80	80	100	150
RTS (N)	3500			4000		5000	7000
MAT (N)	1400			1600		2000	3000



2.2 TEMPERATURE RANGE

Operating temperature	- 40°C~+70°C
Store/Transport temperature	- 40°C~+70°C
Installation temperature	- 20°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	Slate	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	Slate	White	Red	Black	Yellow	Violet	Pink	Aqua

4. OPTICAL FIBER

4.1 The Optical and Geometrical Performance of Single Mode Fiber (ITU-T G652D G655)

ITEMS	UNITS	SPECIFICATION	
		G652D	G655
Fiber Type	-	G652D	G655
Attenuation	dB/km	1310 nm ≤ 0.36 1550 nm ≤ 0.22	1550 nm ≤ 0.23 1625 nm ≤ 0.26
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	≤ 0.2	≤ 0.2
Cut-off Wavelength (λ _{cc})	nm	≤ 1260	≤ 1450
Attenuation vs. Bending (60mm x 100turns)	dB	≤ 0.1 at 1625 nm	≤ 0.05 @1550 nm ≤ 0.05 @1625 nm
Mode Field Diameter@1310nm	μm	9.2±0.4	9.6±0.5μm@1550nm
Core-Clad Concentricity	μm	≤ 0.6	≤ 0.5
Cladding Diameter	μm	125±0.7	125±0.7
Cladding Non-circularity	%	≤ 1.0	≤ 0.8
Coating Diameter	μm	245±10	242±5
Proof Test	Gpa	≥ 0.70	≥ 0.70
Temperature Dependence	dB	≤ 0.5 (-60°C to +85°C)	≤ 0.5 (-60°C to +85°C)



5 Multi Mode Fiber

ITEMS	UNITS	SPECIFICATION					
		62.5/125	50/125	OM3-150	OM3-300	OM4-550	
Fiber Core Diameter	μm	62.5 ± 2.5	50.0 ± 2.5	50.0 ± 2.5			
Fiber Core Non-circularity	%	≤ 6.0	≤ 6.0	≤ 6.0			
Cladding Diameter	μm	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0			
Cladding Non-circularity	%	≤ 2.0	≤ 2.0	≤ 2.0			
Coating Diameter	μm	245 ± 10	245 ± 10	245 ± 10			
Coat-Clad Concentricity	μm	≤ 12.0	≤ 12.0	≤ 12.0			
Coating Non-circularity	%	≤ 8.0	≤ 8.0	≤ 8.0			
Core-Clad Concentricity	μm	≤ 1.5	≤ 1.5	≤ 1.5			
Attenuation	850nm	dB/km	3.0	3.0	3.0		
	1300nm	dB/km	1.5	1.5	1.5		
OFL	850nm	MHz · km	≥ 160	≥ 200	≥ 700	≥ 1500	≥ 3500
	1300nm	MHz · km	≥ 300	≥ 400	≥ 500	≥ 500	≥ 500
The biggest theory numerical aperture	/	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015			



6 Mechanical and Environmental Performance of the Cable

NO.	ITEMS	TEST METHOD	ACCEPTANCE CRITERIA
1	Tensile Loading Test	#Test method: IEC 60794-1-E1 -. Load:MAT -. 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: 300 N/100mm -.Short load: 1000 N/100mm Load time: 1 minutes	-. 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 weigh: 450 g -.Impact point: ≥ 5 -.Impact frequency: ≥ 1 /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) -.Subject weight: 15 kg -.Bending frequency: 30 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: 1 m -.Subject weight: 15 kg -.Angle: ± 180 degree -.Frequency: ≥ 10 /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: -40°C 、 $+70^{\circ}\text{C}$ -.Testing Time: 12 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



6.1 FIBER OPTIC CABLE BENDING RADIUS

Static bending: ≥ 10 times than cable out diameter

Dynamic bending: ≥ 20 times than cable out diameter.

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.

7.2 MARK

Cable shall be permanently marked in English at regular intervals with the following information

- a. Name of manufacturer
- b. Type of cable
- c. Fiber category

8. TEST REPORT

Test report and certification supplied.