Optical Fiber Cable Specification

ADSS CABLE
SPAN 120 METERS
SuADSS120M

1. General

1.1 This specification covers the requirements for the supply of single-mode optical fiber cables.

1.2 The single mode optical fiber cable comply with the requirements of this specification and generally meet any latest relevant ITU-T Recommendation G.652.

2. Fiber characteristics

2.1 G.652D

2.1.1 Geometric characteristics

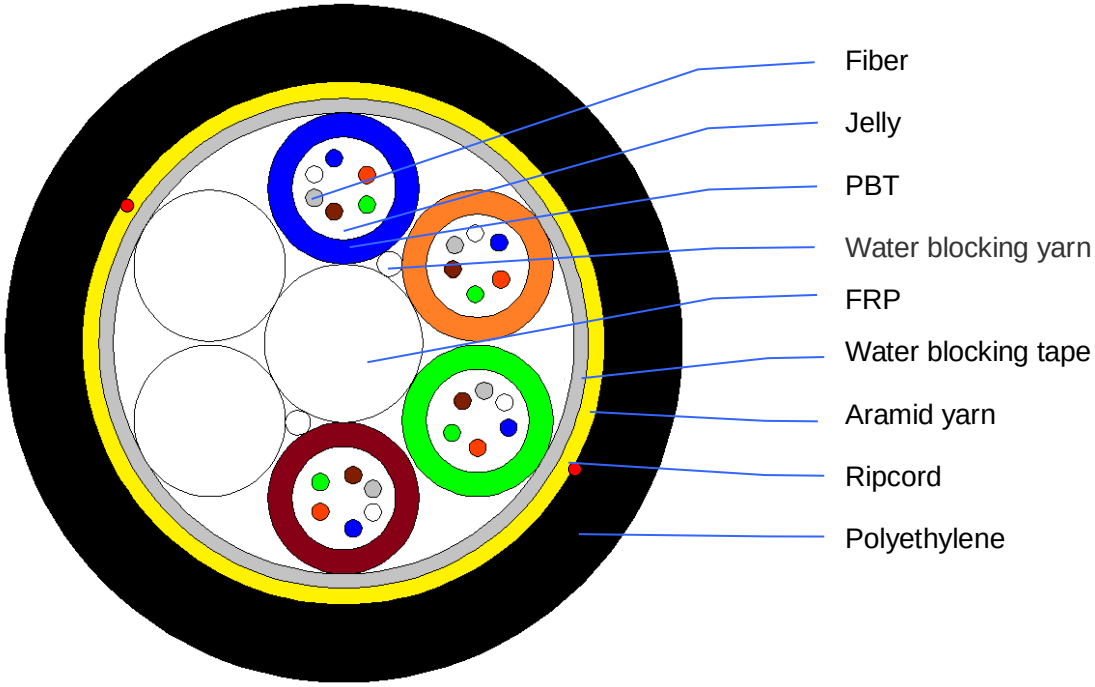
Item		Construction
Mode field diameter	At 1310nm	9.2±0.4μm
Cladding diameter		125±0.7μm
Core concentricity error		≤0.6μm
Cladding non-circularity		≤0.7%
Cut-off wavelength (λcc) (for cable)		≤1260nm
Cut-off wavelength (λc) (for fiber)		1180nm~1330nm
Primary coating diameter	(Not included color layer)	242±5μm
	(Included color layer)	250±10μm
Coating-cladding concentricity error		≤12.0μm
Fiber curl radius		≥4m

2.1.2 Transmission characteristics

Item		Performance
Attenuation	At 1310nm	≤0.36dB/km
	At 1550nm	≤0.22dB/km
Macro bending loss	Φ=60mm, 100turns at 1550nm	≤0.1dB
Chromatic dispersion	Within 1288~1339nm	≤3.5ps/nm·km
	At 1550nm	≤18ps/nm·km
Zero dispersion wavelength		1300~1324nm
Zero dispersion slope		≤0.092ps/nm^2·km

3 Optical Fiber Cable

3.1 Cross section



3.2 Dimension of the cable

Amount of fiber	Max. numb. of the fiber per tube	Span	Number of Tube Positions	Number of Active Tubes	MAT	RTS	Installation Sag	*Nom. thickness of outer sheath	Diameter (Appr.)	Weight (Appr.)
		m			N	N	%	mm	mm	Kg/km
6	6	120	6	1	2100	5200	1.5	1.7	10.7	94
12	6	120	6	2	2100	5200	1.5	1.7	10.7	94
24	6	120	6	4	2100	5200	1.5	1.7	10.7	94
48	12	120	6	4	2100	5200	1.5	1.7	10.8	95

*Note：The minimum thickness of the outer sheath is 1.5mm.

3.3 Performance

NO	ITEM	TEST METHOD	SPECIFICATION
1	Tensile performance IEC60794-1-21-E1	- Load: MAT - Time: 5 minute	Loss change ≤ 0.10 dB@1550 nm (after test) - Fiber strain ≤ 0.60 % - No sheath damage
2	Crush test IEC60794-1-21-E3	- Load: 1500 N /100mm - Time: 5 minute - Length: 100 mm	Loss change ≤ 0.10 dB@1550 nm (during test) - No sheath damage
3	Impact test IEC60794-1-21-E4	- Impact hight:1m - Impact weight:300g - Points of impact: 3 - Times of per point: 2	Loss change ≤ 0.10 dB@1550 nm (during test) - No sheath damage
4	Repeated bending IEC60794-1-21-E6	- Bending radius.: 20 × D - Load: 150N - Flexing rate: 2sec/cycle - No. of cycle: 25	- No fiber break - No sheath damage
5	Water penetration IEC60794-1-22-F5	- Height of water: 1m - Sample length: 3 m - Time: 24 hr	- No drip through the cable core assembly
6	Twist IEC60794-1-21-E7	- Length: 1 m - Load: 150N - Twist rate: ≤60sec/cycle - Twist angle: ±180° - No. of cycle: 5	Loss change ≤ 0.10 dB@1550 nm (during test) - No sheath damage
7	Temperature Cycling IEC60794-1-22-F1	- Temperature step: +20ºC→-20ºC→+70ºC→+20ºC - Number of cycle: 2 turns - Time per each step: 12 hrs	- Loss change ≤ 0.15dB/km@1550 nm (during test) - Loss change ≤ 0.05dB/km@1550 nm (after test) - No sheath damage

D*: Cable diameter

3.4 Color Coding of Loose Tubes and Fibers

Fiber color code

Position	Fiber color
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Aqua

Color codes for Loose Tube

Position	Loose Tube Color
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Aqua

4. Sheath marking