Optical Fiber Cable Specification

ADSS

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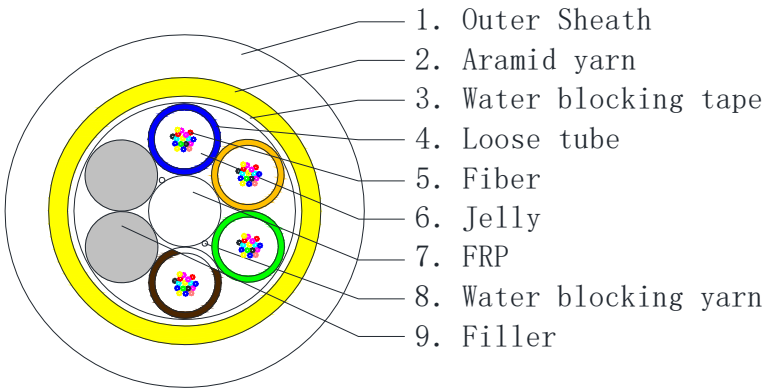
1. Cable Construction

1.1 Cable cross-section



2. Cable Specification

2.1 Fiber Color Code

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

2.2 Tube Color Code

No.	1	2	3	4
Color	Blue	Orange	Green	Brown

The color of the fillers will be natrual.

2.3 Cable configuration

Item	contents	Value
Fiber	Type	G.652D
	Number	48
Loose tube	Material	PBT
	Type of filling compound	Jelly
	Diameter（mm）	2.5±0.1
	Number	4
Filler	Material	PP
	Number	2
Max. fiber counts per tube	core	12
Central strength member	Material	FRP
	FRP diameter（mm）	2.5±0.1
	PE diameter（mm）	/
Water Block	Water blocking yarn and tape	
Armour	Material	Aramid yarns
Outer sheath	Material	HDPE
	Color	Black
	Diameter（mm）	1.6±0.2
MAT(kN)		6.6

Span(m)	244
Operating temperature	-40~+70℃
Cable diameter(mm) (±0.5)	11.7
Cable weight（kg/km）(±20%)	108

2.4Mechanical Performance of Cable

Value	**Crush(N/100mm)**
	Short term
48	1500

2.5 Minimum Allowable Bending Radius

Static: 15D

Dynamic: 25D

D is the out diameter of the cable

3. Mechanical, Electrical and Environmental Test Characteristics

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-2-E1	- Load: Short term tension - Length of cable: about 50m - Load time: 1min	- Fiber strain ≤ 0.25% - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- Loss change ≤ 0.1dB@1550nm - No fiber break and no sheath damage.
Cable bend IEC 60794-1-2-E11	-Diameter of mandrel:20 x OD -Number of turns:4 -Number of cycles:3	- Loss change ≤ 0.1dB@1550nm - No fiber break and no sheath damage.
Water Penetration IEC 60794-1-2-F5B	- Height of water: 1m - Sample length: 3m - Time: 24h	- No water leak from the cable core of the opposite end
Temperature Cycling IEC 60794-1-2-F1	- Temperature: -40oC~+70oC - Time of each step: 12h - Number of cycle: 2	- Loss change ≤ 0.1dB/km@1550nm - No fiber break and no sheath damage.

Remark: “No attenuation changes” is considered as the attenuation changes ≤ 0.05 dB.

The properties of single mode optical fiber (ITU-T Rec. G.652D)

Description		**Specification**
		After Cable
Mode Field diameter	@1310nm	9.2±0.4μm
Mode Field diameter	@1550nm	10.4±0.5μm
Cladding diameter		125.0± 1μm
Core concentricity error		≤0.6μm
Cladding non-concircularity		≤ 0.8%

Coating diameter	245±7μm (Before colored)
	250±15μm (colored)
Coating/cladding concentricity error	≤ 12μm
Cable cutoff wavelength	≤1260 nm
Point discontinuity	≤0.05dB
Attenuation coefficient @ 1310 nm	≤0.35dB/km
@ 1383 nm	≤0.36dB/km
@ 1550 nm	≤0.21dB/km
@ 1625nm	≤0.25dB/km
Macro-bend induced attenuation	
100 turns, 30mm radius @1550n/1625m	≤0.05dB
PMD	
Max. individual fiber	≤0.2 ps/$km^{1/2}$
PMD_Q	≤0.1 ps/$km^{1/2}$
Zero-dispersion wavelength	1300 ~ 1324 nm
Zero-dispersion slope	≤ 0.092 ps/(nm^2.km)
Chromatic dispersion coefficient	
@ 1288-1339 nm	≤3.5ps/(nm. km)
@ 1271-1360nm	≤5.3ps/(nm. km)
@ 1550 nm	≤18ps/(nm. km)
@ 1625 nm	≤22ps/(nm. km)
Proof test level	100 kpsi (0.69 Gpa), 1% strain
Coating strip force(peak value)	1.3~8.9N
Fiber curl (Radius)	≥ 4 m