



**Single jacket dielectric fiber optic cable**

**1. Cable Description**

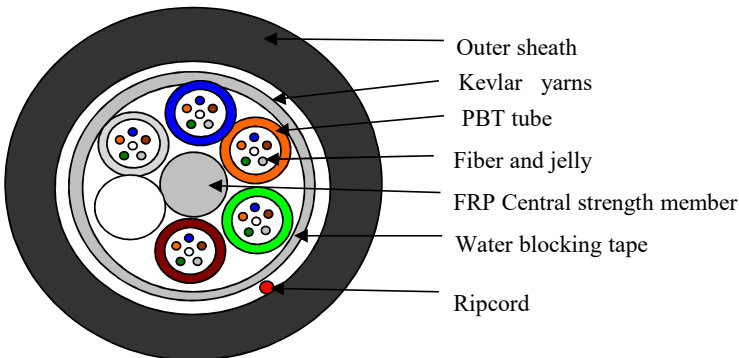
The fibers are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. The tube is wrapped with a layer of e-glass yarn. Between the glass yarn and the loose tube water-blocking material is applied to keep the cable compact and watertight. The cable is completed with a polyethylene (PE) sheath.

**2. Application**

The actual status of overhead power lines ,covers the general requirements of sing jacket ADSS dielectric Cable for aerial or duct or underground duct

**3. Characteristics**

- FRP central strength member
- Tube filling gel
- Loose tube stranded
- PE sheath outdoor cable
- E-glass yarn make cable more tensile and anti rodent



**4. Cable construction details**

Number of fiber	72 core	
Moisture Barrier	Water blocking system	
Loose tube and Filler elements	material	PBT
	thickness	0.35 mm ± 0.05 mm
	diameter	Φ2.2 mm ± 0.2 mm
Central strength member	material	FRP
	diameter	1.5 mm ± 0.2 mm
Outer sheath	material	PE
	thickness	1.6 mm ± 0.1 mm
	diameter	9.0 mm ± 0.3 mm

**5. Fiber color**

	72Core					
Tube Number	1 Blue	2 Orange	3 Green	4 Brown	5 Grey	6 White

Number of fiber per tube 12cores	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White
	7	8	9	10	11	12
	Red	Black	Yellow	Violet	Pink	Aqua

## 6.Cable Mechanical characteristic

core	Cable diameter	weight
72core	9.0mm ± 0.3mm	108 ± 10 KG
Min Bending Radius(mm)	Long term	10D
Min BendingRadius(mm)	Short term	20D
Min allowableTensile Strength(N)	Long term	1000
Min allowableTensile Strength(N)	Short term	1200
Min. Allowable Crush Load (N/100mm)	Long term	300
Min. Allowable Crush Load (N/100mm)	short term	1000
Operationtemperature (°C)	-40+70	
Installationtemperature (°C)	-15+60	
Storage temprature (°C)	-40+70	

## 7.Fiber characteristic

Fiber style	Unit	SM G652	SM G652D	MM 50/125	MM 62.5/125	MM OM3-300
condition	nm	1310/1550	1310/1550	850/1300	850/1300	850/1300
attenuation	dB/km	≤	≤	≤	≤3.0/1.0	≤3.0/1.0
		0.36/0.23	0.34/0.22	3.0/1.0	----	----
Dispersion	1550nm	Ps/(nm*km)	----	≤18	----	Dispersion
	1625nm	Ps/(nm*km)	----	≤22	----	
Bandwith	850nm	MHZ.KM	----	----	≥ 400	≥ 160
	1300nm	MHZ.KM	----	----	≥ 800	≥ 500
Zero dispersion wavelength	nm	1300-1324	≥ 1302, ≤ 1322	----	----	≥ 1295, ≤ 1320
Zero dispersion slope	nm	≤0.092	≤0.091	----	----	----
PMD Maximum Individual Fibr		≤0.2	≤0.2	----	----	≤0.11
PMD Design Link Value	Ps(nm <sup>2</sup> *k m)	≤0.12	≤0.08	----	----	----
Fibre cutoff wavelength λc	nm	≥ 1180, ≤ 1330	≥ 1180, ≤ 1330	----	----	----
Cable sutoffwavelength λcc	nm	≤ 1260	≤ 1260	----	----	----
MFD	1310nm	um	9.2+/-0.4	9.2+/-0.4	----	----
	1550nm	um	10.4+/-0.8	10.4+/-0.8	----	----
Numerical Aperture(NA)		----	----	0.200+/-0.015	0.275+/-0.015	0.200+/-0.015
Step(mean of bidirectional measurement)	dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10
Irregularities over fiber length and point	dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10

## Dicontinuity

Difference backscatter coefficient	dB/km	≤0.05	≤0.03	≤0.08	≤0.10	≤0.08
Attenuation uniformity	dB/km	≤0.01	≤0.01			
Core diameter	um			50+/-1.0	62.5+/-2.5	50+/-1.0
Cladding diameter	um	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1	125.0+/-0.1
Cladding non-circularity	%	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Coating diameter	um	242+/-7	242+/-7	242+/-7	242+/-7	242+/-7
Coating diameter concentricity error	um	≤12.0	≤12.0	≤12.0	≤12.0	≤12.0
Coating non circularity	%	≤6.0	≤6.0	≤6.0	≤6.0	≤6.0
Core/cladding concentricity error	um	≤0.6	≤0.6	≤1.5	≤1.5	≤1.5
Curl(radius)	um	≤4	≤4	----	----	----

## 8.Package

<b>1.Packing material:</b> Wooden drum
<b>2.Packing length:</b> standard length of cable shall be 2 km. Other cable length is also availabler if required by custome