

### 1. Cable Description

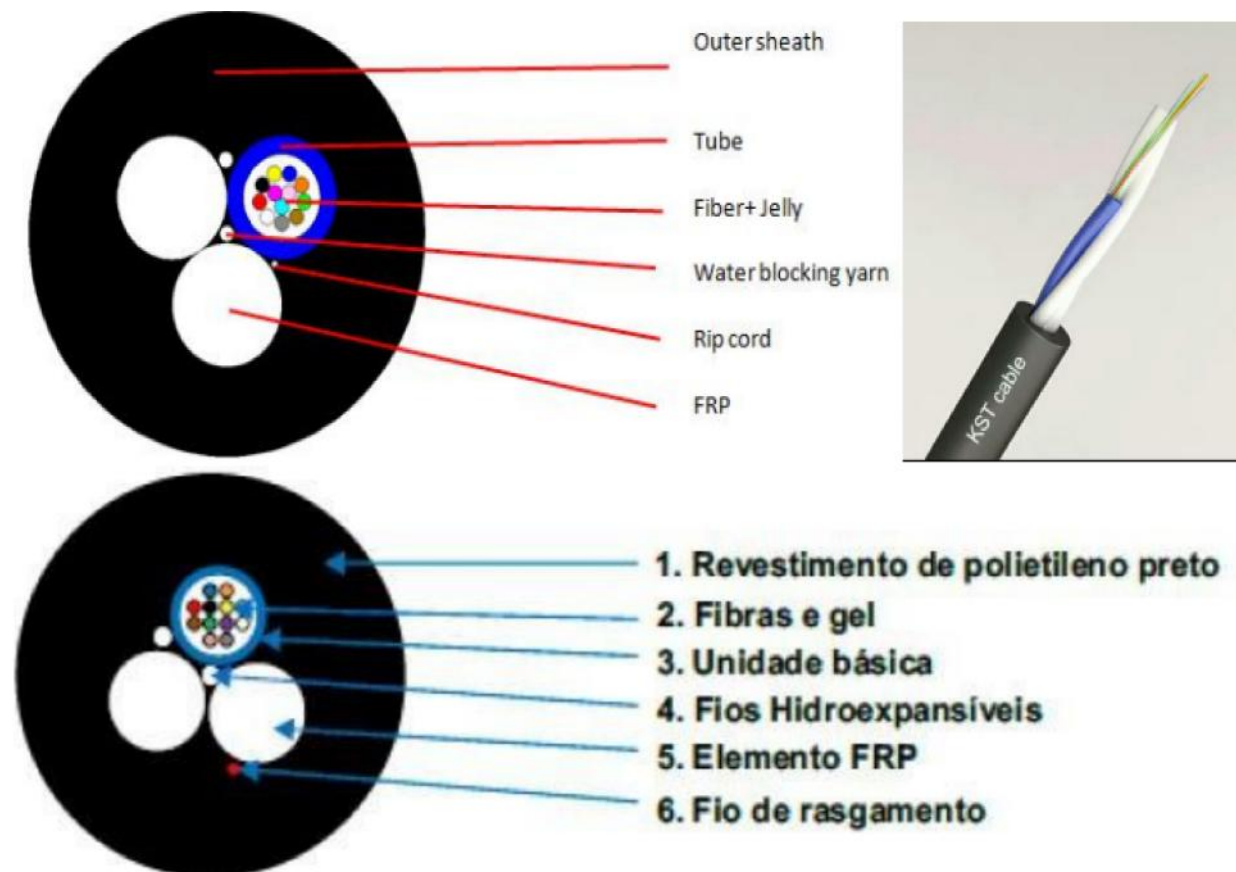
The fibers are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. FRP rods filled . The cable is completed with a polyethylene (PE) sheath.

### 2. Application

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

### 3. Characteristics

- FRP Filled element make cable high tension
- Tube filling gel
- Loose tube stranded
- PE sheath outdoor cable



### 4. Cable construction details

Number of fiber	8core	
Loose tube	number	1
	material	PBT
	diameter	2.0mm ±0.1mm
Strength member	material	FRP
	diameter	2.0mm±0.1mm

Overall cable diameter	8.0±0.3mm
Cable weight per km	55.0 kg/km±5kg

### Fiber color

Color code according to customer's requirement

Cable	Color code Brazil	Internacional color code
1	Green	Blue
2	Yellow	Orange
3	White	Green
4	Blue	Brown
5	Red	Grey
6	Violet	White
7	Brown	Red
8	Pink	Black
9	Black	Yellow
10	Grey	Violet
11	Orange	Pink
12	Aqua	Aqua

### Cable Mechanical characteristic

core	Cable diameter	weight
8	8.0±0.3mm	55 kg/km±5kg
Temperature range	-40+70	
Min Bending Radius(mm)	Long term	10D
Min Bending Radius(mm)	Short term	20D
Min allowable Tensile Strength(N)	Long term	1500
Min allowable Tensile Strength(N)	Short term	3000
Operation temperature (°C)	-40+70	
Installation temperature (°C)	-20+60	
Storage temperature (°C)	-40+70	

### 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	0.36/0.23	3.0/1.0			
Dispersion	1550nm	Ps/(nm*km)	----	≤18	----	----	Dispersion
	1625nm	Ps/(nm*km)	----	≤22	----	----	
Bandwidth	850nm	MHZ.KM	----	----	≥400	≥160	Bandwidth
	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 c	nm	$\geq 1180,$ $\leq 1330$	$\geq 1180, \leq$ 1330	----	----	----
Cable cutoff wavelength cc	nm	$\leq 1260$	$\leq 1260$	----	----	----
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	$\leq 0.05$	$\leq 0.05$	$\leq 0.10$	$\leq 0.10$	$\leq 0.10$
Irregularities over fiber length and point	dB	$\leq 0.05$	$\leq 0.05$	$\leq 0.10$	$\leq 0.10$	$\leq 0.10$

## Dicontinuity

Difference backscatter coefficient	dB/km	$\leq 0.05$	$\leq 0.03$	$\leq 0.08$	$\leq 0.10$	$\leq 0.08$
Attenuation uniformity	dB/km	$\leq 0.01$	$\leq 0.01$			
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	%	$\leq 1.0$	$\leq 1.0$	$\leq 1.0$	$\leq 1.0$	$\leq 1.0$
Coating diameter	um	242+/-7	242+/-7	242+/-7	242+/-7	242+/-7
Coating/chaffinch concentricity error	um	$\leq 12.0$	$\leq 12.0$	$\leq 12.0$	$\leq 12.0$	$\leq 12.0$
Coating non circularity	%	$\leq 6.0$	$\leq 6.0$	$\leq 6.0$	$\leq 6.0$	$\leq 6.0$
Core/cladding concentricity error	um	$\leq 0.6$	$\leq 0.6$	$\leq 1.5$	$\leq 1.5$	$\leq 1.5$
Curl(radius)	um	$\leq 4$	$\leq 4$	----	----	----