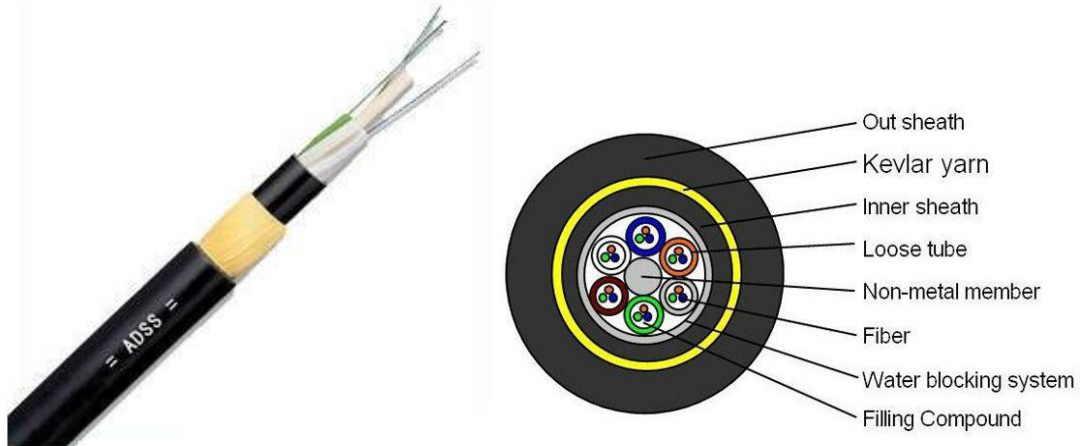


All Dielectric Self-supporting Aerial Cable (ADSS) (GYFTCY)

1、 Cable Drawing



2、 Description

ADSS cable is loose tube stranded. Fibers are positioned into a loose tube made of high modulus plastics. The tubes are filled with a water-resistant filling compound. The tubes (and fillers) are stranded around a FRP (Fiber Reinforced Plastic) as a non-metallic central strength member into a compact and circular cable core. After the cable core is filled with filling compound, it is covered with thin PE (polyethylene) inner sheath. After stranded layer of aramid yarns are applied over the inner sheath as strength member, the cable is completed with PE or AT (anti-tracking) outer sheath.

3、 Features

- Can be installed without shutting off the power
- Excellent AT performance. The maximum inductive at the operating point of AT sheath can reach 25KV
- Light weight and small diameter reducing the load caused by ice and wind and the load on towers and backprops
- Large span lengths and the largest span is over 1000m
- Good performance of tensile strength and temperature
- The design life span is 30 years

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4、 Application

- The actual status of overhead power lines is taken into full consideration when ADSS cable is being designed
- For overhead power lines under 110kV, PE outer sheath is applied
- For power lines equal to or over 110kV, AT outer sheath is applied
- The dedicate design of aramid quantity and stranding process can satisfy the demand on various spans

5、 Specification

1) Fiber Allocation Scheme

Fiber number	Tube number	Fiber per tube	Fiber type
2-144	1-12	12 F/Tube	OS1,OS2,OM1,OM2,OM3,OM4

2) Cable construction details

Items	Description	
Number of fiber	2~144 cores	
Filling rope	1~12	
Moisture Barrier	Water blocking system	
Central strength member	Material	FRP
	diameter	2.0mm
Inner sheath	Material	PE
Loose tube	material	PBT
	diameter	Φ2.0(outer/inner)
Tube-filling	material	Tube filling compound
Cable filling	material	Cable filling compound
Outer sheath	material	PE/HDPE
	diameter	1.6+/-0.2mm

3) Standard color of fiber and tube

The color code of the tubes and the individual fibers, shall be in accordance with the table as below:

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Standard Colour Identification						
No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Slate	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

Note: The color can be required by customers.

4) Cable Mechanical characteristic

Items	Cable diameter	Weight
2 core to 60core	12±0.5mm	140±5kg/km
72core	13±0.5mm	190±5kg/km
96core	14.5±0.5mm	220±5kg/km
144core	16.5±0.5mm	240±10kg/km
Installation Temperature range	-15--+60°C	
Operation and transport temperature	-40--+70°C	
Min Bending Radius(mm)	Long term	10D
	short term	20D

5) Requirement for Order

- (1) Fiber sort: Single mode:G652,G655,G657, Multi mode:OM1,OsM2,OM3,OM4.
- (2) Fiber brand: YOFC, Corning, Fiberhome,Fujikura,OFS etc.
- (3) Sheath material: PE,LSZH(can be required).
- (4) Sheath color: Black ,can be required.
- (5) The fiber and tube color: according to stranded color, can be required.
- (6) The cable Size: shall be in accordance with the table, can be required.
- (7) Length of cable: generally is 2KM, can be required.
- (8) Other requirement: can be negotiated.

6) Fiber Characteristic

Fiber style		Unit	SM 9/125	MM 50/125	MM 62.5/125
condition		nm	1310/1550	850/1300	850/1300
attenuation		dB/km	≤0.36/0.23	≤3.0/1.0	≤3.0/1.0
Dispersion	1310nm	Ps/(nm*km)	≤18	.....	.....
	1550nm	Ps/(nm*km)	≤22	.....	.....
Bandwidth	850nm	MHZ. KM	.....	≥400	≥160
	1300nm	MHZ. KM	.....	≥800	≥500
Zero dispersion wavelength		nm	≥1302, ≤1322	.....	.....
Zero dispersion slope		nm	≤0.091	.....	.....
PMD Maximum Individual Fiber		ps/km	≤0.2	.....	.....
PMD Design Link Value		Ps(nm ² *km)	≤0.08	.....	.....
Fiber cutoff wavelength λ_c		nm	≥1180, ≤ 1330	.....	.....
Cable cutoff wavelength λ_{cc}		nm	≤1260	.....	.....
MFD	1310nm	um	9.2±0.4	.....	.....
	1550nm	um	10.4±0.8	.....	.....
Numerical Aperture(NA)			.....	0.200± 0.015	0.275± 0.015
Step(mean of bidirectional measurement)		dB	≤0.05	≤0.10	≤0.10
Irregularities over fiber length and point discontinuity		dB	≤0.05	≤0.10	≤0.10
Difference backscatter coefficient		dB/km	≤0.03	≤0.08	≤0.10
Attenuation uniformity		dB/km	≤0.01	.....	.....

Core diameter	um	.....	50±1.0	62.5±2.5
Cladding diameter	um	125.0±0.1	125.0±0.1	125.0±0.1
Cladding non-circularity	%	≤1.0	≤1.0	≤1.0
Coating diameter	um	242±7	242±7	242±7
Coating/chaffinch concentricity error	um	≤12.0	≤12.0	≤12.0
Coating non circularity	%	≤6.0	≤6.0	≤6.0
Core/cladding concentricity error	um	≤0.6	≤1.5	≤1.5
Curl(radius)	um	≤4	.....	.....

6、 Cable marking and cable reel marking

6.1 Cable marking

The cable sheath shall be marked with white characters at intervals of one meter with following information:

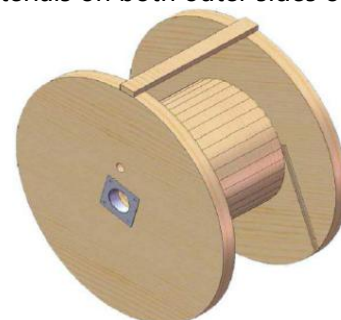
- (1) Purchaser' s name
- (2) Cable type
- (3) Fiber type and counts
- (4) Year of manufacture
- (5) Length marking

Notice: cable mark is available if requested by customer.s

6.2 Cable reel

Details given below shall be marked with a weather materials on both outer sides of the reel flange :

- (1) Cable type and fiber counts
- (2) Length of cable in meters
- (3) Year of manufacture



Notice: shipping mark is available if requested by customer.

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7、 Packing Informations

- (1) Packing material: Wooden drum
- (2) Packing length: standard length of cable shall be 2 km. Other cable length is also available if required by customer

8、 Our certificates

- (1) ISO9002
- (2) SGS, ROHS
- (3) ULE329066
- (4) REACH

9、 Testing Lab

No	Device name	No	Device name
1	Optical time domain reflectometer (OTDR)	8	GNZV Cable Torsion Testing Machine
2	Fiber Polarization Mode Dispersion	9	GQNV Cable Flexing Testing Machine
3	Fiber Dispersion ,Strain Tester	10	GJRV Cable Winding Testing Machine
4	High Low Temperature Test Chamber	11	GZDV Cable Vibration Testing Machine
5	Cable Impact Testing Machine	12	Cable Water Penetration Test
6	Cable Squash Tensile Testing Machine	13	Fusion Splicer
7	GWQV Cable Bending Tester	14	Cable Water Penetration Test Rig

Fiber Optic Cable Mechanical Performance Testing Laboratory

- (1) Main Testing Type: Precision Test and Mechanical Test.
- (2) Precision Testing Machine: EXFO OTDR, EG&G PMD-440,CD-400.
- (3) Mechanical Performance Testing : Temperature, Impact, Tensile, Bending, Torsion, Flexing, Winding, Vibration, Water Penetration, Fusion Splicer, Water Penetration.

XDK Communication Equipment (Huizhou) Co., Ltd.

10、 Our advantages

- (1) Professional cable manufacturer
- (2) About 10 years experiences in cable industry
- (3) MOQ just 1Km
- (4) ISO, UL , ROSH,REACH...certifications
- (5) Can be customized production of fiber optic cable

