

## All Dielectric Self-supporting Aerial Cable - ADSS

### ► Overview

ADSS cable is loose tube stranded. 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 tubes (and fillers) are stranded around FRP 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 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 outer sheath.



### ► 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 backstops
- ✧ Large span lengths and the largest span is over 1000m
- ✧ Good performance of tensile strength and temperature
- ✧ ADSS cable complies with Standard IEEE 1222-2004 as well as IEC60794-1
- ✧ Storage/Operating Temperature: -40°C to 70°C

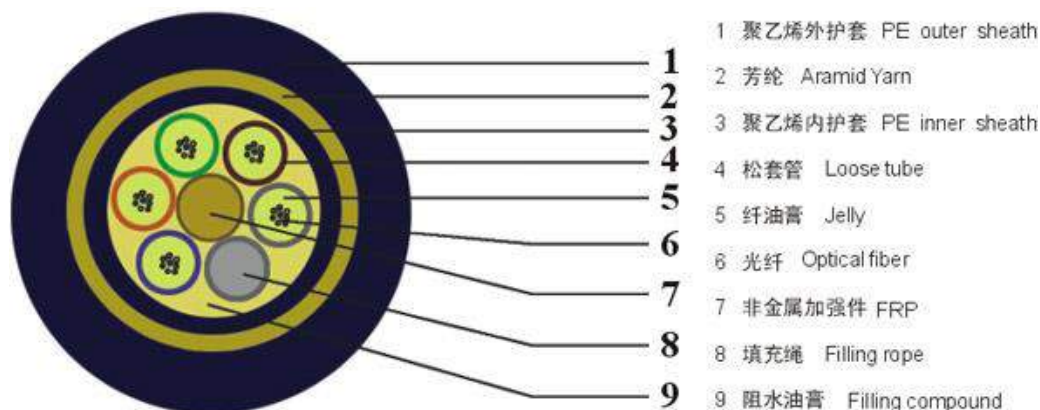
### ► Application

- ✧ 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.

### ► Optical Characteristics

		G.652	G.655	50/125μm	62.5/125μm
Attenuation (±20°C)	850nm			≤0.30dB/km	≤0.30dB/km
	1300nm			≤1.0dB/km	≤1.0dB/km
	1310nm	≤0.36dB/km	≤0.40dB/km		
	1550nm	≤0.22dB/km	≤0.23dB/km		
Bandwidth (Class A)	850nm			≥500MHz.km	≥200MHz.km
	1300nm			≥1000MHz.km	≥600MHz.km
Numerical Aperture				0.200±0.015NA	0.275±0.015NA
Cable Cut-off Wave length		≤1260nm	≤1480nm		

## Structure



## Parameter

Ref. weight (kg/km)		Ref. daily max. working tension (KN)	Max allowable working tension (KN)	Strength member CSA mm <sup>2</sup>	Modulus of elasticity (KN/mm <sup>2</sup> )	Heat expansion coefficient (x 10 <sup>-6</sup> /K)	Suitable span (NESC Standard, m)			
PE sheath	AT sheath						A	B	C	D
125	136	4	20	4.6	7.6	1.8	160	100	140	100
132	142	6	15	7.6	8.3	1.5	230	150	200	150
137	148	8	20	10.35	9.45	1.3	300	200	290	200
145	156	10	24	13.8	10.8	1.2	370	250	350	250
147	159	12	30	14.3	11.8	1	420	280	400	280
164	177	15	36	18.4	13.6	0.9	480	320	460	320
171	185	18	45	22	16.4	0.6	570	380	550	380
179	193	22	53	26.4	18	0.3	670	460	650	460
190	204	26	60	32.2	19.1	0.1	750	530	750	510
194	208	28	70	33	19.6	0.1	800	560	800	560
211	226	34	85	40	20.1	0.1	880	650	880	650
226	2472	41	103	48	24	-0.4	1000	750	1000	760
236	253	45	108	51	25.1	-0.5	1100	800	1100	830
249	266	50	120	58.8	26.1	-0.8	1180	880	1180	900