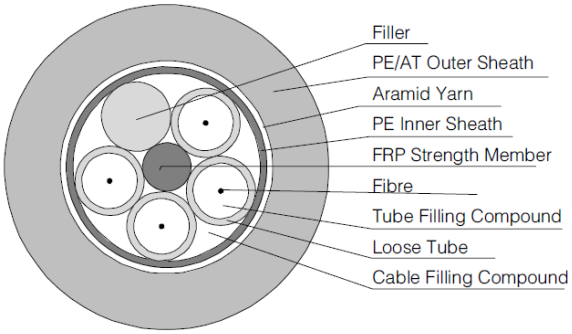
All Dielectric Self-supporting Aerial Cable (ADSS)

In U1 ADSS cable, single-mode/multimode fibres are positioned in the loose tubes, which are made of high modulus plastic materials, while the loose tubes strand together around non-metallic central strength member(FRP) into a compact and circular cable core. The loose tubes are filled with filling compound, while water-blocking materials are distributed into interstices of the cable core. The PE inner sheath is extruded over the cable core with aramid yarns outside.
Then, the cable is completed with a PE/AT outer sheath.

Characteristics

- Easy installation
- Excellent corrosion resistance, due to AT sheath
- Light weight and small diameter
- Large span with the largest span of over 1000m
- Accurate excess fibre length and stranding pitch to guarantee the good tensile and temperature Performance
- The life expectancy is over 30 years



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 careful design of aramid yarn quantity and stranding process can satisfy the demand on various spans.

Applicable climate conditions of cable can be divided into four categories

Climate Type	Wind Speed(m/s)	Ice(mm)	Extra Load(N/m)
A	25	0	0.7
B	35	0	0.7
C	10	5	2.5
D	10	10	4.4

Ref. Outer Diameter (mm)	Ref. Weight (kg/km)		Rec. Daily Max. Working Tension (kN)	Tensile Strength (kN)	Break Strength (kN)	Strength Member CSA (mm^2)	Modulus of Elasticity (kN/mm^2)	Operation, Storing, Transport Temperature (℃)	Heat Expansion Coefficient ($\times 10^{-6}$/K)	Suitable Span (NESC Standard m)			
	PE Sheath	AT Sheath								A	B	C	D
12.5	125	136	1.5	4	10	4.6	7.6	−40~+60	1.8	160	100	140	100
13.0	132	142	2.25	6	15	7.6	8.3	−40~+60	1.5	230	150	200	150
13.3	137	148	3.0	8	20	10.35	9.45	−40~+60	1.3	300	200	290	200
13.6	145	156	3.6	10	24	13.8	10.8	−40~+60	1.2	370	250	350	250
13.8	147	159	4.5	12	30	14.3	11.8	−40~+60	1.0	420	280	400	280
14.5	164	177	5.4	15	36	18.4	13.6	−40~+60	0.9	480	320	460	320
14.9	171	185	6.75	18	45	22.0	16.4	−40~+60	0.6	570	380	550	380
15.1	179	193	7.95	22	53	26.4	18.0	−40~+60	0.3	670	460	650	460
15.5	190	204	9.0	26	60	32.2	19.1	−40~+60	0.1	750	530	750	510
15.6	194	208	10.5	28	70	33.0	19.6	−40~+60	0.1	800	560	800	560
16.3	211	226	12.75	34	85	40.0	20.1	−40~+60	0.1	880	650	880	650
16.8	226	242	15.45	41	103	48.0	24.0	−40~+60	−0.4	1000	750	1000	760
17.2	236	253	16.2	45	108	51.0	25.1	−40~+60	−0.5	1100	800	1100	830
17.9	249	266	18.0	50	120	58.8	26.1	−40~+60	−0.8	1180	880	1180	900

Note:

1. Only a part of ADSS cables are listed in the table. ADSS cables with other spans can be inquired from YOFC directly.
2. Specifications in the table are listed under condition that there is no height difference between two suspension points while the
installation sag is 1%.
3. Fibre count is 2 to 60.
4. Fibres, either single-mode or mulitmode, can be used in the cable on request.
5. Specially designed cable structure is available on request.
6. YOFC reserves the right to revise the specifications in the table.