

All Dielectric Self-Supporting Aerial Cable Application

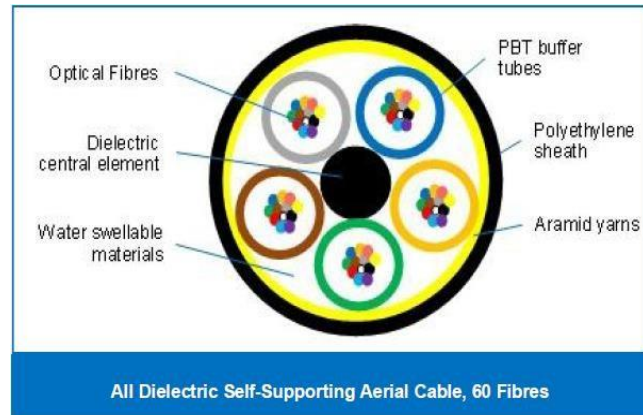
- This specification covers the general requirements for All Dielectric Self-Supporting Aerial Cable

Cable Description

- All-dielectric, self supporting aerial cables (ADSS) are designed to support themselves when strung between structures such as utility poles.
The self supporting feature requires no catenary wires or other supports, providing for ease and speed of installation.
The loose tube design features gel-filled buffer tubes arranged around a dielectric central strength member, with dry water-blocking materials bound inside a cable core.
- The core is surrounded with Aramid yarns and an outer polyethylenesheath as the standard.
- The single sheath, short span ADSS cable is designed for smaller spans with wind loading of up to 110 km/hr.
- All dielectric cables are suitable for applications which are adjacent to aerial power transmission standards lines.

Features and Benefits

- All-dielectric cable construction
- Requires no grounding or bonding
- Polyethylene outer jacket
- Standard PE to AS1049
- Interstitial water blocking yarns/tapes
- Craft friendly, no mess cable core
- Integral strength elements
- High strength aramid yarns



Standards

- IEC 60794-1: Optical Fibre Cables, Part 1-1: Generic Specification General
- AS 1049.1: Telecommunications cables; Insulation, sheath and jacket—Materials

Generic Physical and Mechanical Properties

Cable Type	Fiber counts	Cable dia. (mm)	Approx. cable weight (kg/km)	Minimum bending radius (mm)	
				Under load	No load
Small Span ADSS	6 ~ 36 (6F/T)	10.0 ± 0.5	73	200	100
	8 ~ 48 (8F/T)	10.0 ± 0.5	76	200	100
	12 ~ 72 (12F/T)	10.6 ± 0.5	83	210	105
	96	11.3 ± 0.5	100	230	115
	144	14.3 ± 0.5	155	290	145
	288	16.7 ± 0.5	209	330	165

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Fibre Specifications

Fibre Type	Attenuation (dB/km)				Bandwidth (MHz.km)	
	850nm	1300nm	1310nm	1550nm	850nm	1300nm
OM1	3.5	1.0			200	500
OM3	3.0	1.0			1000	600
OM4					1100	600
OS2			0.35	0.22		
	Cutoff λ: ≤1260 nm		Proof Stress ≥0.69 GPa		Dispersion: 18.0 (1550 nm)	

The table below shows typical minimum clearances of the aerial cabling system from other overhead plant at the closest point in the span with conductors at maximum sag.

For your location local Electrical Safety Standards must be observed

ADSS Minimum Clearances from Aerial Fixed Attachments

ADSS below the conductors up to and including 33kV	Maximum clearance at maximum sag
Below conductors lowest point at the max sag for cables attached to the same poles	300mm
Below conductors lowest point at the max sag for cables attached to separate poles	500mm
Above conductors at minimum sag	200mm

Notes:

For voltages 66kV and above, the cable manufacturers shall be asked to advise as to the cable placement, which minimises electric field effects, based upon the overhead electricity construction.

The cable manufacturer may suggest the use of an anti-tracking cable sheath and/or corona coils.

The manufacturer will need to know the span between poles.

The manufacturer will also ask for wind and ice conditions of the area.