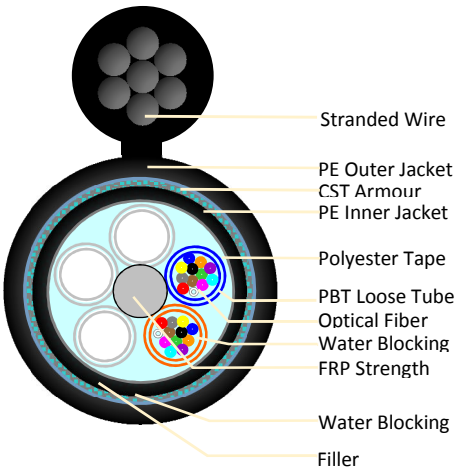
Outdoor Double Jacket Armoured Fiber Optic Cable

F8A-DSF Series

Description

The fibers, either single mode or multimode type, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant gel filling compound. Straned around a FRP non-metallic strength member. Tubes (and fillers) are stranded around the strength member into a compact and circular cable core. A corrugated steel tape armor over inner sheath to protect both buffer tubes and optical fibers from rodent. The outer cable sheath is composed of a smooth PE outer jacket. 7×1.0mm stranding steel wires as figure-8 messenger to support cable.



Application

This cable is suitable for Outdoor Self-Supporting Aerial installation. The corrugated steel tape armor protects the cable from rodent and termites. The PE Sheath provides UV and Chemical/Oil resistance.

Standards

ISO/IEC 11801, ANSI/TIA/EIA 568.2: 2002, ITU G652.D

Characteristics

- The loose tubes are stranded around the central strength member utilizing SZ stranding
- FRP central strength member that provides both tensile and anti-buckling strength to the cable. Loose tubes
- 12 optical fibers are housed in group of 1 jelly filled PBT tubes(12fibers/tube), colored coded for easy identification
- The water blocking filling compound between the loose tube and the inner sheath protect cable from water intrusion.
- A corrugated steel tape armour with double PE coated sheath which is wrapped directly over the inner sheath, providing additional cable compression strength, maximum anti-crush property, rodent protection and bullet resistant performance.
- A black PE jacket is extruded over the cable core and steel armor tape as the sheath.
- 7×1.0mm stranding steel wires as messenger provide tensile support to hang cable between two poles or towers.

Part Number #	Description
306-F8A7xx-aMyy-DSF0	
306-F8A712-aM08-DSF0	12core 9/125 Singlemode Double Jacket Steel Armoured Figure 8 (7x0.8mm) Aerial Fiber Optic Cable
306-F8A736-aM10-DSF0	36core 9/125 Singlemode Double Jacket Steel Armoured Figure 8 (7x1.0mm) Aerial Fiber Optic Cable

Note: Substitute xx : Number of fiber core

*-D000, D = production code, subjected to change upon shipping

ALANTEK COMMUNICATIONS • USA

Cable Properties

Item		Description		
		6 Fiber	12 Fiber	36 Fiber
Cable Diameter		12.5mm ±0.2mm x 21mm ±0.2mm		
Cable Weight		280KG /KM		
Central Strength member	Material	FRP		
	Diameter	2.0mm		
Loose Tube	Material	PBT (polybutelene terathylate)		
	Outer diameter	2.0mm		
	Thickness	0.3mm		
	Type of filling compound	Jelly		
	No. of Fiber in tube	6	6	6
	No. of Tubes	1	2	6
	No. of Fillers	5	4	0
Filler	Material	PP	PP	No filler
	Outer diameter	2.0mm		
Tube Assembly	Tube Layout	1+6		
	Stranding type	SZ		
Water-blocking system		Filling Compound		
Core wrap	Material	Polyester tape		
Inner Sheath	Material	PE		
	Thickness	1.0mm		
Armour	Material	Steel Tape		
	Thickness	0.25mm		
	Coating material	Plastic		
	Coating thickness	0.1mm		
Outer Sheath	Material	PE		
	Thickness	1.8mm		
Messenger	Size	7 x 0.8mm	7 x 0.8mm	7 x 1.0mm
Sheath marking	Type of marking	Laser printing		
Tensile Strength (N) Crush Resistance (N/100 mm)	Long Term	1000		
	Short Term	3000		
Operating	Temperature	-40 °C to +60 °C		
Storage		-40 °C to +70 °C		

Fibers Colour

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	Natural	Red	Black	Yellow	Violet	Pink	Aqua

Loose Tubes Colour

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	Natural	Red	Black	Yellow	Violet	Pink	Aqua

Optical Properties

Technical parameter of ITU-T G.652D Single-mode Optical Fiber			
Characteristics	**Conditions**	**Specified Values**	**Units**
Optical Characteristics			
Mode field diameter (MFD)	1310nm 1550nm	9.0 ±0.4 10.1 ±0.5	μm μm
Attenuation coefficient	1310nm 1383nm 1460nm 1550nm 1625nm	0.33 - 0.35 0.32 - 0.35 0.25 0.19 - 0.21 0.20 - 0.23	dB/km dB/km dB/km dB/km dB/km
Attenuation with Bending	1turn, Φ10mm, 1550nm 1turn, Φ10mm, 1625nm 10turn, Φ15mm, 1550nm 10turn, Φ15mm, 1625nm	≤ 0.75 ≤ 1.50 ≤ 0.25 ≤ 1.00	dB
Cut-off wavelength (λccf)		≤ 1260	nm
Chromatic Dispersion	1285~1330nm 1550nm 1625nm	≤ 3.0 ≤ 18.0 ≤ 22.0	Ps/(nm.km) Ps/(nm.km) Ps/(nm.km)
Zero dispersion wavelength		1300~1322	nm
Nominal Zero Dispersion Slope **Max Zero Dispersion Slope**		≤ 0.085 ≤ 0.090	Ps/(nm^2.km) Ps/(nm^2.km)
Polarization Mode Dispersion Link Design	IEC 60794 –3, Ed 3 (Q=0.01%)	≤ 0.06	(ps√km)
Effective group index	1310nm 1550nm 1625nm	1.467 1.468 1.468	
Geometric characteristic			
Cladding diameter		125.0 ±0.7	μm
Core/cladding concentricity error		≤ 0.5	μm
Cladding non-circularity		≤ 0.7	%
Coating diameter		242.0 ±7	μm
Cladding/coating concentricity error		≤ 12.0	μm
Coating non-circularity		≤ 5	%
Mechanical characteristic			
Proof stress		≥ 0.7	Gpa
Coating strip force	Average value Peak value	1.0 - 3.0 1.2 - 8.9	N N
Dynamic fatigue, unaged and aged* **Static fatigue, aged***	*Aging: • 0°C and 45°C • 30 days at 85°C and 85% RH • 14 days water immersion at 23°C • Wasp spray exposure (Telcordia)	≥ 20 ≥ 23	n_d n_s