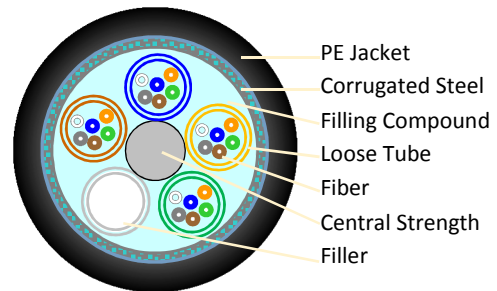




Outdoor Steel Armoured Fiber Optic Cable

STA Series



General 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 filling compound. A steel wire, sometimes sheathed with polyethylene (PE) for cable with high fiber count, locates in the center of the core as a metallic strength member. Tubes (and fillers) are stranded around the strength member into a compact and circular cable core. A steel tape, with Plastic coating on each side (PSP), is longitudinally applied over the cable core. The cable core is filled with filling compound to protect it from water ingress. The cable is completed with a Polyethylene (PE) sheath.

Application

This cable is suitable for Outdoor Direct Burial, Tunnel and Duct installation in harsh environment. The armoring provides rodent and termite protection and the PE Sheath provides UV and Chemical/Oil resistance.

Standards

ISO/IEC 11801, ANSI/TIA/EIA 568.2: 2002, ITU Recommendation G652, G652A/B/C/D.

Characteristics

- Accurate fiber excess length ensures good mechanical and temperature performance
- High strength loose tube that is hydrolysis resistant and special tube filling compound ensure a critical protection of fiber
- Specially designed compact structure is good at preventing loose tube from shrinking
- Crush resistance and flexibility
- Steel Tape (PSP) enhances the cable crush resistance, impact resistance and moisture proof
- Loose tubes are filled with filling compound to ensures tubes are watertight.
- 100% cable core filling ensures cable is watertight

Part Number #	Description
306-STA712-a000	12core 9/125µm Single mode Outdoor CST Armoured Fiber Optic Cable
306-STA700-a000-0144	144core 9/125µm Single mode Outdoor CST Armoured Fiber Optic Cable

Substitute xx : Number of fiber core

Substitute 306-STA7, with 4XG-STA5 for OM4, 3XG-STA5 for OM3, 306-STA5 for OM2, 306-STA6 for OM1
-a000 a = production code, subjected to change upon shipping

Single mode G.655 fiber are available upon request



Cable Properties

Fiber Count	No. of Tubes	No. of Fillers	Steel Wire Ø, mm	PE Sheath Steel Wire, mm	Cable Ø, mm	Cable Weight, kg/km
2 ~ 6	1	4	1.6	-	10.2	116
8 ~ 12	2	3	1.6	-	10.2	116
14 ~ 18	3	2	1.6	-	10.2	116
20 ~ 24	4	1	1.6	-	10.2	116
26 ~ 30	5	0	1.6	-	10.2	116
32 ~ 36	6	0	2.25	-	10.6	129
38 ~ 48	4	1	1.8	-	11.2	141
50 ~ 60	5	0	1.8	-	11.2	141
62 ~ 72	6	0	2.25	2.6	12.0	159
74 ~ 84	7	1	2.25	4.2	13.6	209
86 ~ 96	8	0	2.25	4.2	13.6	209

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

Physical Properties

Steel Tape (PSP) Thickness, mm	0.15 + 0.05 Plastic coating on each side		
Sheath Thickness, mm	nominal 1.8		
Loose Tube Diameter, mm	1.9		
Loose Tube Thickness, mm	0.3		
Tensile Strength, N	2 ~ 30 cores	Long Term	600
		Short Term	1500
	32 ~ 96 cores	Long Term	1000
		Short Term	3000
Crush Resistance, N/100 mm	Long Term	300	
	Short Term	1000	
Bending Radius, mm	Static	10 x Outer Diameter	
	Dynamic	20 x Outer Diameter	
Operating Temperature	-40 °C to +70 °C		
Storage Temperature	-40 °C to +70 °C		



Optical Properties

		SM G.652D	OM4 50/125 μm	OM3 50/125 μm	OM2 MM 50/125 μm	OM1 MM 62.5/125 μm
Attenuation (+ 20 °C)	@ 850 nm		≤ 3.0 dB/km	≤ 3.0 dB/km	≤ 2.3 dB/km	≤ 2.7 dB/km
	@ 1300 nm		≤ 1.0 dB/km	≤ 1.0 dB/km	≤ 0.55 dB/km	≤ 0.6 dB/km
	@ 1310 nm	≤ 0.35 dB/km				
	@ 1383 nm	≤ 0.35 dB/km				
	@ 1550 nm	≤ 0.20 dB/km				
	@ 1625 nm	≤ 0.22 dB/km				
Bandwidth	@ 850 nm		≥ 3500 MHz-km	≥ 1500 MHz-km	≥ 500 MHz-km	≥ 200 MHz-km
	@ 1300 nm		≥ 500 MHz-km	≥ 500 MHz-km	≥ 1000 MHz-km	≥ 600 MHz-km
Numerical Aperture					0.200 ± 0.015	0.275 ± 0.015
Cable Cut-off Wavelength , λ _{cc}		≤ 1260 nm				
Group Index of Refraction (N _{eff})	@ 850 nm		1.482	1.482	1.482	1.496
	@ 1300 nm		1.477	1.477	1.477	1.491
	@1310 nm	1.466				
	@1550 nm	1.467				