

TECHNICAL DATA SHEET

FOR

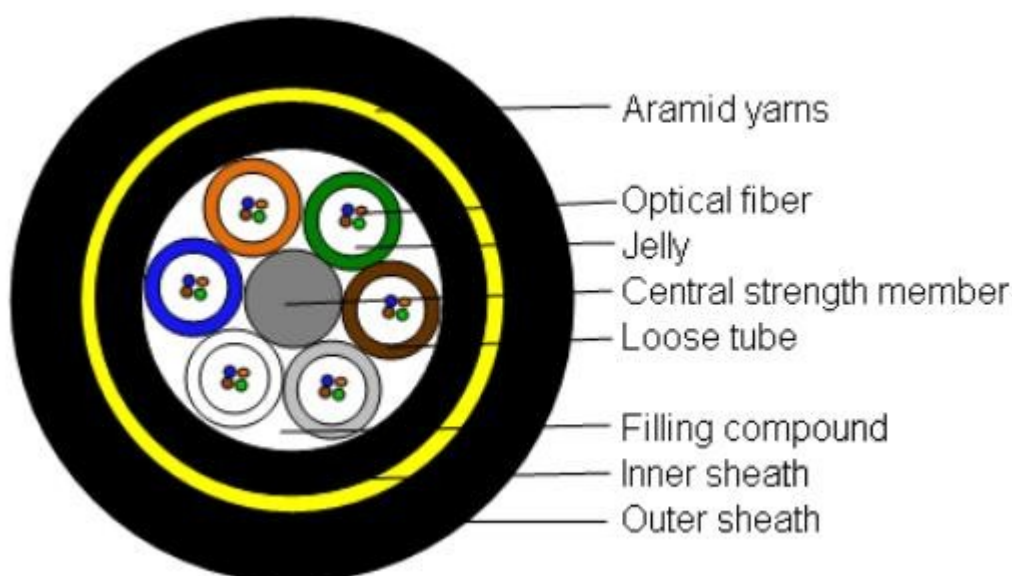
Single Mode Optical Fiber Cable

Type: 12F ADSS-9KN-DoubleHDPE-200m

Type: 48F ADSS-9KN-DoubleHDPE-200m

1. Cable Construction

1.1 Cable cross-section



2. Cable Specification

2.1 Introduction

Loose tube construction, tubes jelly filled, tubes with filler rods lay up around non metallic FRP (Fiber-glass Reinforced Plastic) central strength member, compound filled in the apertures of the cable core, PE inner sheath, aramid yarns reinforced, and PE outer sheath.

PE outer sheath is applied for the application in which cable is installed at the place where the spatial potential $\leq 110\text{KV}$, if exceed 110KV, we recommend to use AT (anti-tracking) sheath to protect the fiber systems.

2.2 Fiber color code

1	2	3	4
Blue	Orange	Green	Brown

2.3 Color Codes for Loose Tube/Filler

The tubes and filler rods are stranded according to full color code as follows, if there are fillers, its color is natural

1	2	3	4	5	6
Red	Green	Natural	Natural	Natural	Natural

2.4 Cable structure and parameter

S/N	Item		Unit	Value	
1	Number of fibers		-	12F	48F
2	Number of tubes + fillers		-	2 + 4	4 + 2
3	Fibers per tube		counts	6	12
4	Tube/Probable Filler	Diameter	mm	2.2	2.2
5	FRP strength member	Diameter	mm	2.3	2.3
6	PE inner sheath	Thickness	mm	1.0	1.0
7	Outer sheath	Thickness	mm	1.7	1.7
		Out diameter	mm	12.3	12.3
8	Cable weight		Kg/km	130.0	135.0

3. Characteristic of Optical Fiber

Optical Fiber Parameter	
Fiber Type	G652.D
Mode Field Diameter (1310nm)	9.2 $\mu\text{m} \pm 0.4 \mu\text{m}$
Mode Field Diameter (1550nm)	10.4 $\mu\text{m} \pm 0.8 \mu\text{m}$
Cladding Diameter	125 $\pm 1 \mu\text{m}$
Cladding Non-Circularity:	$\leq 1\%$
Attenuation Coefficient	$\leq 0.35\text{dB/km}$ at 1310nm, $\leq 0.21\text{dB/km}$ at 1550nm
Chromatic Dispersion	$\leq 3.5\text{ps/nm/km}$ at 1285~1330nm, $\leq 18\text{ps/nm/km}$ at 1550nm
Zero Dispersion Wavelength	1300~1322nm
PMD Coefficient	$\leq 0.2\text{ps}/\sqrt{\text{km}}$

4. Characteristic of Optical Cable

Mechanical & Environmental Performance		
Item	Reference standard	Specification
(RTS)	DL/788-2001	9.0KN
(MAT)	DL/788-2001	3.65KN
(EDS)	DL/788-2001	2.3KN
Minimum Bending Radius	DL/788-2001	165mm/ 275mm
Temperature Recycle	DL/788-2001	Step: +20°C -> -40°C > +70°C -> +20°C, 24Hrs
Water Proof	DL/788-2001	3 meters cable, 1 meter water, no water penetrating for 24 hours
Elastic Modulus		4.36GPa
Thermal Expansion Coefficient		2.74×10^{-5}

Weather Conditions	
Item	Specification
Installing Temperature	15°C
Installing Wind Speed	0m/s
Temperature at Max. Wind Speed	5°C
Max. Wind Speed	25m/s
Temperature at Max. Ice	-5°C
Wind Speed at Max. Ice	10m/s
Ice Cover Thickness	5mm
Installing Sag	1.86%