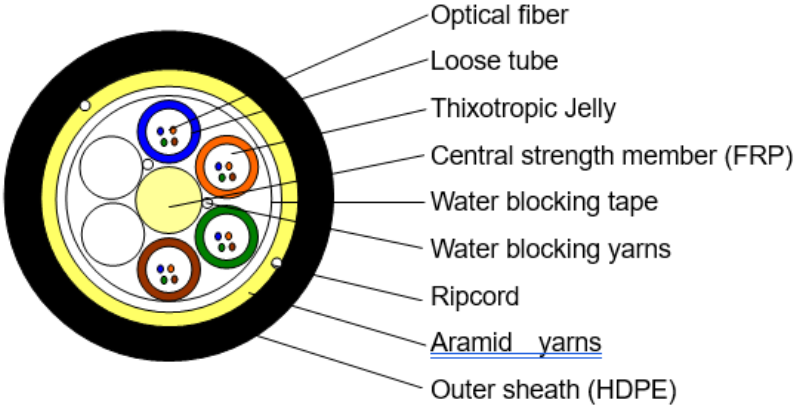


### Fiber Optic Cable - ADSS



**Optical fiber characteristics:**

Category	Description		Specifications
			G.652D
Optical Specifications	Attenuation	@1310nm	≤0.36dB/km
		@1550nm	≤0.22dB/km
	Attenuation discontinuity		≤0.05 dB
	Attenuation vs. Wavelength	@1285~1330nm	≤0.04 dB/km
		@1525~1575nm	≤0.03 dB/km
	Zero Dispersion Wavelength		1300~1324nm
	Zero Dispersion Slope ps/(nm <sup>2</sup> .km)		0.073~0.092
	Dispersion ps/nm.km	@1310nm	≤3.5
		@1550nm	13.3~18.6
		@1625nm	17.2~23.7
Cable Cutoff Wavelength(λ <sub>cc</sub> )		≤1260nm	
PMD		≤0.20ps/km <sup>1/2</sup>	
Effective Group Index of Refraction	@1310nm	1.4675	
	@1550nm	1.4681	
Geometric	Mode Field Diameter	@1310nm	9.2±0.4μm

Specifications		@1550nm	10.4±0.8µm
	Cladding Diameter		125±0.7µm
	Cladding Non-Circularity		≤1.0%
	Coating Diameter		243±7µm
	Coating/Cladding Concentricity Error		≤12µm
	Core/Cladding Concentricity Error		≤0.6µm
Mechanical Specifications	Proof Test level		≥1.0%
	Fiber Curl Radius		≥4.0m
	Fiber tensile strength		Proof-tested, at least 0.69 Gpa (100 kpsi)

Cable type	--	24/48
element	--	6
Central Strength Member	Material	FRP
Loose Tube	Material	Polybutelene Terephthalate (PBT)
	Fibers/Tube	12
Filling compound in loose tube	Material	Thixotropic jelly
Water blocking	Material	Water blocking yarns and tape
Strength Member	Material	Aramid yarns
Outer Sheath	Material	Black HDPE
	Thickness	Norminal: 1.6mm
Outer Diameter	mm (±5%)	11.0
Cable Weight	kg/km(Approx.)	96
Operating Temperature	°C	-30 --- +70
Max tensile strength	N	3400
Crush resistance	N/10cm	1000
Span	m	150

Fiber coding, The color coding of the optical fiber shall be in accordance with:

No. of fiber	1	2	3	4	5	6
Color of fiber	Blue	Orange	Green	Brown	Grey	White
No. of fiber	7	8	9	10	11	12
Color of fiber	Red	Black	Yellow	Violet	Pink	Aqua

Identification of loose tube

No. of tube	1	2	3	4
Color of tube	Blue	Orange	Green	Brown

Make-up of cable, No. of Fibers in each Tube

No. of Fibers		1	2	3	4	5	6
24	Tube color	Blue	Orange	F	F	F	F
	No. of fiber	12	12				
48	Tube color	Blue	Orange	Green	Brown	F	F
	No. of fiber	12	12	12	12		

Note: "F" means the filler

#### Test Requirements:

No	Item	Test standard	Method	Acceptance criteria
1	Tensile test	IEC-60794-1-E1	-Max. Tensile strength -Sample length:50 meters -Time: 10minutes;	-Attenuation increase $\leq$ 0.10dB
2	Crush test	IEC-60794-1-E3	-Load:1000N -Time: 5minutes -Length: 100mm - Position: One point and one time	-No splits or cracks in the outer jacket; -Attenuation increase $<$ 0.10dB
3	Impact test	IEC-60794-1-E4	-Impact energy: 450g - Height:1 meter -Impact points: 1	-No splits or cracks in the outer jacket -Attenuation

			--Number of impacts: 5	increase≤0.10dB(after the test)
4	Torsion test	IEC-60794-1-E7	-1m cable length with 150N weight -±180°, 10 cycles	- No splits or cracks in the outer jacket -Attenuation increase ≤0.10dB(after the test)
5	Repeated bending	IEC-60794-1-E6	-Radius=25×cable outer diameter -1m cable length with 150N weight,25 cycles	- No splits or cracks in the outer jacket -Attenuation increase ≤0.10dB(after the test)
6	Temperature cycling test	IEC-60794-1-F1	-Temperature step: +20°C→-30°C→+70°C→-30°C→+70°C→+20°C -Time per each step: 12 hrs -Number of cycles: 2 cycles	-Attenuation variation for reference value(the attenuation to be measured before test at +20±3°C) ≤0.10dB/km,
7	Cable bending test	IEC 60794-1-E11B	-Diameter of mandrel : 25×diameter of cable - Number of cycles:1 cycle	Change of attenuation shall not be greater than 0.1dB. No fiber break and no cable damage.
8	Water penetration test	IEC-60794-1-F5	-Water height: 1m -Sample length:3m -Duration of test: 24hrs	-No water leakage at the end of the sample
9	Drip test	IEC-60794-1-E14	-Five 0.3m samples suspended vertically in a climate chamber, raised temperature to +70°C	-No filling compound shall drip from tubes after 24 hr

#### Ordering Information:

Part Number	Description
NEW-9440024-150	Fiber Optic Cable – ADSS 24-fiber 150m span
NEW-9440048-150	Fiber Optic Cable – ADSS 48-fiber 150m span