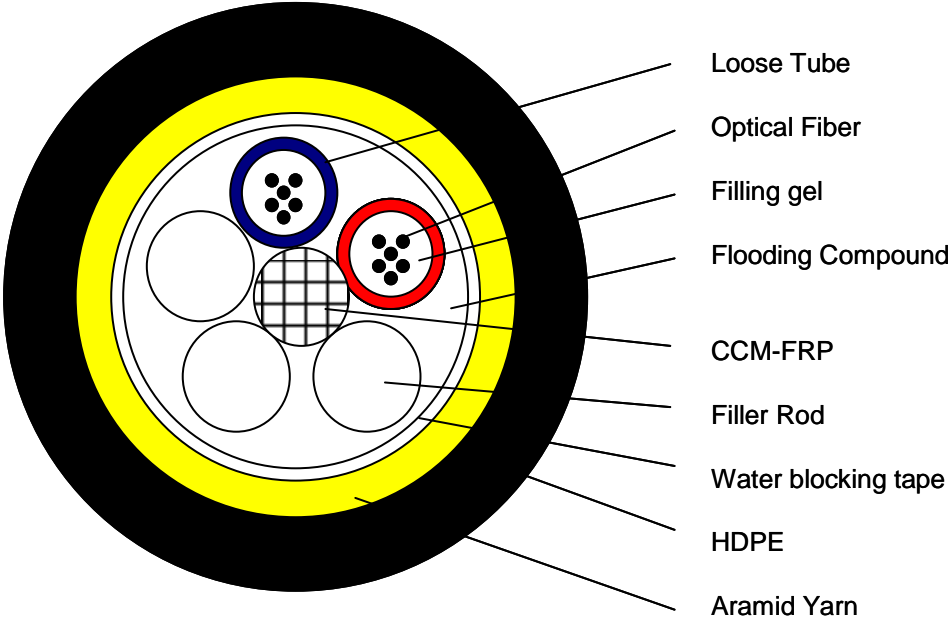


**6/12-Fiber ADSS Single mode**



- Features:**
- ADSS (nonmetallic Cable)
  - Applications: Aerial and Duct installations
  - Singlemode

**Product Description:**

Technical specifications for Aerial and Duct Application Non-Metallic type cable. This specification covers the general requirements and performance of cable, which FOC offered including optical characteristics, mechanical characteristics and geometrical characteristics.

**Optical fiber characteristics (FPC G.652 FIBER)**

Item	Specification
Type of Fiber	Single mode
Fiber Material	Dope Silica
Attenuation Coefficient:	<ul style="list-style-type: none"> <li>• ≤ 0.36 dB/km</li> <li>• ≤ 0.36 dB/km</li> <li>• ≤ 0.22 dB/km</li> <li>• ≤ 0.30 dB/km</li> </ul>

Point Discontinuity:	≤ 0.05 dB
Cable Cut-off wavelength:	≤ 1260 nm
Zero-dispersion slope:	≤ 0.093 ps/(nm <sup>2</sup> .km)
Chromatic dispersion <ul style="list-style-type: none"> <li>• @ 1288 ~ 1339 nm</li> <li>• @ 1271 ~ 1360 nm</li> <li>• @ 1550 nm</li> <li>• @ 1625 nm</li> </ul>	<ul style="list-style-type: none"> <li>• ≤3.5 ps/(nm. Km)</li> <li>• ≤5.3 ps/(nm. km)</li> <li>• ≤18 ps/(nm. km)</li> <li>• ≤22 ps/(nm. km)</li> </ul>
PMDQ (Quadrature average*)	≤0.2 ps/km <sup>1/2</sup>
Mode field diameter @ 1310 nm	9.2±0.4 μm
Core / Cladding concentricity error	≤ 0.5 μm
Cladding diameter	125.0 ± 0.7 μm
Cladding non-circularity	≤1.0%
Primary coating diameter	245 ± 10 μm
Proof test level	100 kpsi (=0.69 Gpa), 1%
Temperature dependence 0oC~ +70oC @ 1310 & 1550nm	≤ 0.1 dB/km

*PMDQ is a link of 20 cable sections (M) and a probability level of 0.01%*

### Performance of Optical Cable

Cable bending radius:

- 10 x cable diameter (static)
- 20 x cable diameter (dynamic)

Application temperature range:

- Operating temperature range :-40oC to +70oC
- Storage / Transport temperature range :-50oC to +70oC
- Installation temperature range :-30oC to +50oC

### Fiber coding

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

Loose Tube (LT) & filler rod (FR) color code

Fiber No.	Element No.							
	1	2	3	4	5	6	7	8
6	LT	FR	FR	FR	FR	-	-	-
12	LT	LT	FR	FR	FR	-	-	-

Cable Structure and Parameter

No. of Fibers	Max. fiber number per tube	Total unit number (LT + FR)	Sheath thickness (nominal*)	Outer Diameter (nominal*)	Weight (approx.)
			mm	mm	Kg/km
6	6	5 (1LT + 4FR)	2.0	10.6	88
12	6	5 (2LT + 3FR)	2.0	10.6	89

FRP Diameter	Loose Tube Diameter	Loose Tube Thickness	Filler Rod Diameter
mm	mm	mm	mm
1.8	2.2	0.38	2.2
1.8	2.2	0.38	2.2

### Test Requirements

No	Item	Test standard	Method	Acceptance criteria
1	Tensile test	IEC-794-1-E1	- Load: Short term: 1,500 N - Length of cable under load: 50 m	- Loss change $\leq$ 0.1 dB @1550 nm - No fiber break and no sheath damage.
2	Crush test	IEC-794-1-E3	- Load: 1,000 N/100 mm - Load time: $\geq$ 1min.	- Loss change $\leq$ 0.1 dB @1550 nm - No fiber break and no sheath damage.
3	Impact Resistance	IEC-794-1-E4	- Points of impact: 5 - Times of per point: 5 - Impact energy: 4.5 N.m	- Loss change $\leq$ 0.1 dB @1550 nm - No fiber break and no sheath

			<ul style="list-style-type: none"> <li>- Radius of hammer head: 12.5mm</li> <li>- Impact rate: 2 sec/cycle</li> </ul>	damage.
4	Repeated bending	IEC-794-1-E6	<ul style="list-style-type: none"> <li>- Bending radius: 20 x cable diameter</li> <li>- Load: 150 N</li> <li>- Flexing rate: 3 sec/cycle</li> <li>- No. of cycle: 30</li> </ul>	<ul style="list-style-type: none"> <li>- Loss change <math>\leq</math> 0.1 dB @1550 nm</li> <li>- No fiber break and no sheath damage.</li> </ul>
5	Torsion test	IEC-794-1-E7	<ul style="list-style-type: none"> <li>- Length: 1 m</li> <li>- Load: 150 N</li> <li>- Twist rate: 1 min/cycle</li> <li>- Twist angle: <math>\pm 180^\circ</math></li> <li>- No. of cycle: 10</li> </ul>	<ul style="list-style-type: none"> <li>- Loss change <math>\leq</math> 0.1 dB @1550 nm</li> <li>- No fiber break and no sheath damage.</li> </ul>
6	Water penetration test	IEC-794-1-F5	<ul style="list-style-type: none"> <li>- Height of water: 1 m</li> <li>- Sample length: 3 m</li> <li>- Test time: 24 hours</li> </ul>	- No water shall have leaked from the opposite end of cable.
7	Temperature cycling test	IEC-794-1-F1	<ul style="list-style-type: none"> <li>- Temperature step: <math>+20^\circ\text{C} \rightarrow -40^\circ\text{C} \rightarrow +70^\circ\text{C} \rightarrow +20^\circ\text{C}</math></li> <li>- Time per each step: 12 hrs</li> <li>- Number of cycle: 2</li> </ul>	<ul style="list-style-type: none"> <li>- Loss change <math>\leq</math> 0.05 dB/km @1550 nm</li> <li>- No fiber break and no sheath damage.</li> </ul>
8	Compound Flow	IEC 794-1-E14	<ul style="list-style-type: none"> <li>- Sample length: 30 cm</li> <li>- Temp: <math>70^\circ\text{C} \pm 2^\circ\text{C}</math></li> <li>- Time: 24 hours</li> </ul>	- No compound flow
9	Sheath High Voltage Test		<ul style="list-style-type: none"> <li>- On line test</li> <li>- 9t KV (t-sheath thickness)</li> </ul>	-No sheath breakdown

#### Ordering Information:

Part Number	Description
NEW-9440006	6-Fiber ADSS Singlemode Span = 100 meters (sells in 2Km reels only)
NEW-9440012	12-Fiber ADSS Singlemode Span = 100 meters (sells in 2Km reels only)