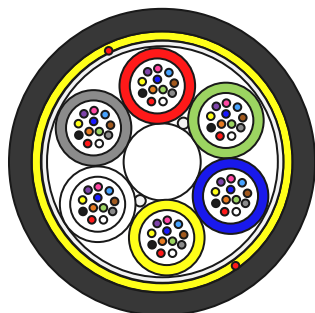


# ADSS Optical Fiber Cable 150m span

## Cable Design

### Loose Tube Optical Fiber Cable- Non-Armored -Dielectric-Dry Core-G.652D Fiber



- **Central Strength Member (CSM):** glass fiber reinforced plastic rod (FRP), with PE sheath covering when needed.
- **Loose Tube:** PBT plastic material, containing 12 fibers and filled with a suitable water tightness jelly.
- **Filler Elements:** PP plastic rods, when needed.
- **Stranding:** loose tube & filler stranded around the CSM.
- **Longitudinal Water Tightness:** dry core with water swellable elements (water blocking tape and yarn).
- **Ripcord:** 2 polyester ripcords under outer sheath.
- **Outer Sheath:** Black HDPE.

## Cable Specification

Cable Cores		48	72	96	144
No. of Tubes		4	6	8	12
No. of Fillers		2		0	
Fiber Counts in Tube		12			
Tube/Filler- $\Phi$	mm	2.4			
CSM- $\Phi$	mm	2.5		2.5	3.3
CSM with Coated- $\Phi$	mm	/		4.2	7.3
Thickness of Outer PE Sheath	mm	1.6			
Nominal Cable Diameter	mm	11.1		12.8	15.9
Nominal Cable Weight	Kg/km	92		120	189
MAT	N	configured to customer needs			

## Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-25~+70°C	Load	20×D
Operation	-25~+70°C	Unload	10×D

## Main Mechanical and Environmental Characteristic

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	MAT, 5min	$\Delta\alpha$ ≤reversible, fiber strain≤0.33%
Crush	IEC 60794-1-2-E3	2000N/10cm, 5min 3 times	$\Delta\alpha$ reversible, no damage
Impact	IEC 60794-1-2-E4	3J, R=300mm, 3 times	$\Delta\alpha$ reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 250N, 20cycles	$\Delta\alpha$ reversible, no damage
Bending	IEC 60794-1-2-E6	150N, 10cycles, +/-90°	$\Delta\alpha$ reversible, no damage
Torsion	IEC 60794-1-2-E7	1m, 10cycles, +/-180°	$\Delta\alpha$ reversible, no damage
Temperature Cycling	IEC 60794-1-2-F1	-25~+70°C, 2cycles,	$\Delta\alpha$ ≤0.05dB/km, no damage
Water Penetration	IEC 60794-1-2-F5	3m sample, 1m water, 24h	No water leakage

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## Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.35dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.21dB/km
	@1625nm	≤0.23dB/km
Mode Field Diameter	@1310nm	9.2±0.4 μm
	@1550nm	10.4±0.5 μm
Dispersion	@1300 +30/-15nm	≤3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm <sup>2</sup> ·km)
Cable cutoff wavelength λ <sub>cc</sub> (nm)		≤1270nm
Cladding diameter		125±1.0μm
Cladding non-circularity		≤0.7%
Core/cladding concentricity error		≤0.5μm
Cladding/coating concentricity error		≤12.0μm
Proof stress		≥0.69GPa(100kpsi)
Dynamic stress corrosion susceptibility parameter (typical value)		≥20

## Fiber and Tube Color

### Color Identification of Fiber

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

### Color Identification of Tube

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

## Sheath Marking, Delivery Length

The outer sheath is marked in 1 meter intervals as follows:

**In Accordance with Custom's Requirement**

Standard delivery length will be 4 km. with -1/+3% tolerance