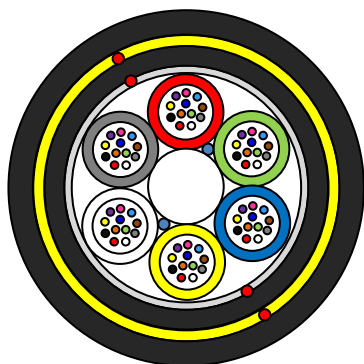


ADSS Optical Fiber Cable 300m span

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).
- **Inner Sheath:** Black HDPE.
- **Aramid yarn:** additional strength member
- **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- Φ	mm	2.4			
CSM- Φ	mm	2.5		2.5	3.3
CSM with Coated- Φ	mm	/		4.2	7.3
Thickness of Inner PE Sheath		0.8			
Thickness of Outer PE Sheath	mm	1.6			
Nominal Cable Diameter	mm	13.4		15.1	18.4
Nominal Cable Weight	Kg/km	135		170	256
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	$\Delta\alpha \leq$ reversible, fiber strain $\leq 0.33\%$
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

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Temperature Cycling	IEC 60794-1-2-F1	-25~+70°C, 2cycles,	$\Delta\alpha\leq 0.05\text{dB/km}$, no damage
Water Penetration	IEC 60794-1-2-F5	3m sample, 1m water, 24h	No water leakage

Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	$\leq 0.35\text{dB/km}$
	@1383nm	$\leq 0.34\text{dB/km}$
	@1550nm	$\leq 0.21\text{dB/km}$
	@1625nm	$\leq 0.23\text{dB/km}$
Mode Field Diameter	@1310nm	$9.2\pm 0.4\ \mu\text{m}$
	@1550nm	$10.4\pm 0.5\ \mu\text{m}$
Dispersion	@1300 +30/-15nm	$\leq 3.5\text{ps}/(\text{nm}\cdot\text{km})$
	@1550nm	$\leq 18\text{ps}/(\text{nm}\cdot\text{km})$
	@1625nm	$\leq 22\text{ps}/(\text{nm}\cdot\text{km})$
Zero-Dispersion wavelength		1300nm ~ 1324nm
Zero-Dispersion slope		$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$
Cable cutoff wavelength $\lambda_{CC}(\text{nm})$		$\leq 1270\text{nm}$
Cladding diameter		$125\pm 1.0\ \mu\text{m}$
Cladding non-circularity		$\leq 0.7\%$
Core/cladding concentricity error		$\leq 0.5\ \mu\text{m}$
Cladding/coating concentricity error		$\leq 12.0\ \mu\text{m}$
Proof stress		$\geq 0.69\text{GPa}(100\text{kpsi})$
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