Light ADSS Optical Fiber Cable G.652D

Cable Design

Loose Tube Optical Fiber Cable-Dielectric-Dry Core-Aramid Yarn Reinforcing-G.652D Fiber

- **Central Strength Member (CSM):** glass fiber reinforced plastic rod (GFRP), with PE sheath covering when needed.
- **Loose Tube:** PBT plastic material, containing 12 fibers and filled with a suitable water tightness jelly.
- **Filler Elements:** nature PP plastic rods, when needed.
- **Stranding:** loose tubes & fillers, SZ stranded around the CSM.
- **Longitudinal Water Tightness:** dry core with water swellable elements.
- **Inner Sheath:** Black PE
- **Aramid yarn:** additional strength member
- **Ripcord:** 1 aramid ripcord under outer sheath.
- **Outer Sheath:** Black HDPE.

Cable Specification

Cable Cores		36	48	72
No. of Tubes		3	4	6
No. of Fillers		3	2	0
Fiber Counts in Tube		12		
Tube/Filler-Φ	mm	2.05		
CSM-Φ	mm	2.1		
Coated CSM-Φ	mm	/		
Thickness of Outer PE Sheath	mm	1.2		
Nom. Cable Diameter	mm	8.6		
Nom. Cable Weight	Kg/km	60		
Coefficient of the Thermal Expansion		1.2E-5	1.4E-5	1.6E-5
Modulus of Elasticity	MPa (N/mm^2)	8500		
MAT	N	1100		

Cable Application

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

Main mechanical and Environmental Characteristicion

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	MAT, 5min	△α≤0.05dB, fiber strain≤0.1%
Crush	IEC 60794-1-2-E3	1500N/10cm, 1min	△α reversible, no damage

Impact	IEC 60794-1-2-E4	4J, R=10mm, 3impacts	△α reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D,100N,100cycles	△α reversible, no damage
Torsion	IEC 60794-1-2-E7	100N, 5cycles, +/-180^0	△α reversible, no damage
Temperature Cycling	IEC 60794-1-2-F1	-25~+70℃, 1cycles, 8h	△α≤0.05dB/km, no damage
Water Penetration	IEC 60794-1-2-F5	3m cable, 1m water, 24h	No water leakage

Cable Fiber Performance (G.652D)

Characteristics		Acceptance
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. 5μm
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/(nm2·km)
Cable cutoff wavelength λ_{CC}(nm)		≤1270nm
Cladding diameter		125±1.0μm
Cladding non-circularity		≤0.8%
Core/cladding concentricity error		≤0.6μm
Proof stress		≥0.69GPa(100kp
Dynamic Fatigue		≥20

Fiber & 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
Color	Red	Green	Yellow	Blue	Brown	White

Sheath Marking and 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 or 6km.