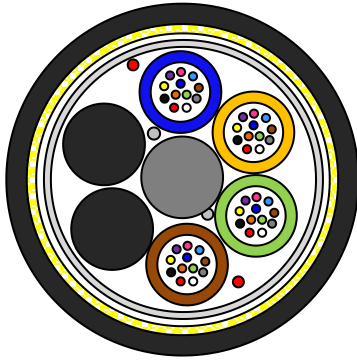


ADSS Cable Specification

Cable Design

Loose Tube Optical Fiber Cable-Single Sheath-Aramid Yarn Protection-G.652D Fiber



- **Central Strength Member (CSM):** FRP with PE sheath covering when needed.
- **Loose Tube:** PBT plastic material, containing 12 fibers and filled with a suitable water tightness compound.
- **Filler Elements:** black PE plastic rods, when needed.
- **Stranding:** elements SZ stranded around the CSM.
- **Longitudinal Water Tightness:** water blocking with cable filling compound.
- **Ripcord(s):** 2 ripcords under sheath if needed.
- **Aramid yarn Protection:** aramid yarns armor provide additional tensile strength & protection.
- **Outer Sheath:** Black HDPE.

Cable Specification

Cable Cores		72	72	72	96	96	144	144
No. of Tubes		6	6	6	8	8	12	12
No. of Fillers		0						
Fiber Counts in Tube		12						
Tube/Filler- Φ	mm	1.9	2.4	2.4	2.4	2.4	2.2	2.4
CSM- Φ	mm	2.0	2.5	2.5	2.3	3.0	3.0	3.3
Coated CSM- Φ	mm	/			4.2	4.2	6.7	7.2
Outer Sheath Thickness	mm	1.5						
Nominal Cable Diameter	mm	9.2	10.5	10.6	12.4	12.4	14.5	15.4
Nominal Cable Weight	kg/km	66	85	87	112	116	158	179
Tensile	N	1400	2700	4000	2700	4000	2700	4000

Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-30~+70°C	Load	20×D
Operation	-30~+70°C	Unload	15×D

Main Mechanical and Environmental Characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	Tensile, 10min	$\Delta\alpha\leq 0.05\text{dB}$, fiber strain $\leq 0.33\%$
Crush	IEC 60794-1-2-E3	2000N/10cm, 5min	$\Delta\alpha\leq 0.05\text{dB}$, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 250N, 20cycles	$\Delta\alpha\leq 0.05\text{dB}$, no damage
Impact	IEC 60794-1-2-E4	5J, R=300mm, 3times	$\Delta\alpha\leq 0.05\text{dB}$, no damage
Bending	IEC 60794-1-2-E6	150N, 20cycles, +/-90°	$\Delta\alpha\leq 0.05\text{dB}$, no damage
Torsion	IEC 60794-1-2-E7	4m, 10cycles, +/-180°	$\Delta\alpha\leq 0.05\text{dB}$, no damage

Temperature Cycling	IEC 60794-1-2-F1	-40°C~+70°C, 2cycles	$\Delta\alpha\leq 0.05\text{dB/km}$, no damage
Water Penetration	IEC 60794-1-2-F5	3m cable, 1m height, 24h	No water leakage

Fiber & Tube Color

Color Identification of Fiber

Number	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

Color Identification of Tube

Number	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	$\leq 0.35\text{dB/km}$
	@1550nm	$\leq 0.22\text{dB/km}$
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	$\leq 18.0\text{ps}/(\text{nm}\cdot\text{km})$
	@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 $\lambda_{cc}(\text{nm})$		$\leq 1260\text{nm}$
Cladding diameter		$125\pm 1.0\mu\text{m}$
Cladding non-circularity		$\leq 0.8\%$
Core/cladding concentricity error		$\leq 0.6\mu\text{m}$
Fiber diameter with coating (uncolored)		$245\pm 10\mu\text{m}$
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

Sheath Marking

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

According to Customer's Requirements

Delivery Lengths

Standard delivery length will be 4km.