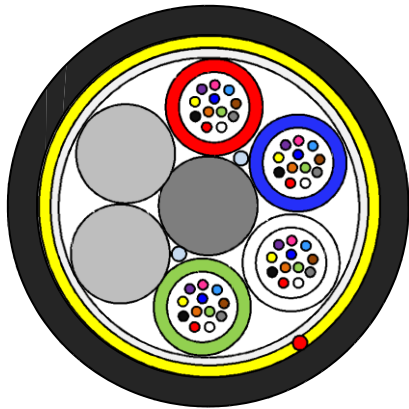


ADSS Cable Specification

NESC heavy, 80m span

Cable Design

Loose Tube Optical Fiber Cable-Dielectric-Aramid Yarn Reinforcing-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 compound.

Filler Elements: nature PP plastic rods, when needed.

Stranding: loose tubes (and fillers), SZ stranded around the CSM.

Longitudinal Water Tightness: dry core with water swellable elements.

Aramid yarn Additional strength member

Ripcord(s): 1 polyester ripcord under sheath.

Outer Sheath: Black HDPE.

Cable Specification

Cable Cores		12	24	48	72	96	144
No. of Tubes		1	2	4	6	8	12
No. of Fillers		5	4	2	0		
Fiber Counts in Tube		12					
Tube/Filler- Φ	mm	2.2					
CSM- Φ	mm	2.3			3.0	2.8	
Coated CSM- Φ	mm	/			3.8	5.8	
Thickness of Outer PE Sheath	mm	1.5					
Nominal Cable Diameter	mm	10.2			11.6	13.8	
Nominal Cable Weight	Kg/km	79			104	148	
Tensile	N	2700			3000	4000	

Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-40~+70°C	Load	20×D
Operation	-30~+70°C	Unload	10×D

Main Mechanical and Environmental Characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	Tensile, 10min	$\Delta\alpha \leq 0.1\text{dB}$, fiber strain $\leq 0.33\%$
Crush	IEC 60794-1-2-E3	2200N/10cm, 1min, 3points	$\Delta\alpha$ reversible, no damage
Impact	IEC 60794-1-2-E4	5J, R=10mm, 3impacts	$\Delta\alpha$ reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 100N, 30cycles	$\Delta\alpha$ reversible, no damage
Torsion	IEC 60794-1-2-E7	40N, 5cycles, +/-90°	$\Delta\alpha$ reversible, no damage
Temperature Cycling	IEC 60794-1-2-F1	-30~+70°C, 2cycles, 12h	$\Delta\alpha$ reversible, no damage
Water Penetration	IEC 60794-1-2-F5	3m sample, 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	Red	Green	Blue	White	Violet	Orange	Grey	Yellow	Brown	Pink	Black	Aqua

Color Identification of Tube

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

Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.35dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.22dB/km
	@1625nm	≤0.23dB/km
Mode Field Diameter	@1310nm	9.2±0.4μm
	@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/(nm ² ·km)
Cable Cutoff Wavelength λ _{cc} (nm)		≤1260nm
Cladding Diameter		125±1.0μm
Cladding Non-circularity		≤0.8%
Core/Cladding Concentricity Error		≤0.6μm
Coating Diameter (Uncolored)		245±10μm
Proof Test		≥0.69GPa (100kpsi)
Dynamic Fatigue		≥20

Sheath Marking

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

According to Customer's Requirement

Delivery Lengths

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