

Aerial Unitube Cable Specification

Cable Design

Central Loose Tube-Dielectric-Single Sheath- 45m span G.652D Fiber



Central loose tube: Loose tube , filled with a suitable water tightness compound, containing 24 fibers.

Laminated Aramid yarns: reinforcement members

Ripcord: 1 ripcord under outer sheath.

FRP Rod: additional strength member

Outer Sheath: Black HDPE

Cable Specification

Cable Cores		24
No. of Fibers		24
Tube- Φ	mm	2.8
FRP- Φ	mm	0.58
The Thickness of outer sheath	mm	1.0
Nominal. Cable Diameter	mm	5.9
Nominal Cable Weight	Kg/km	37
Span	M	45
Tensile Force	N	800

Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-40~+70°C	Load	20×D
Operation	-30~+60°C	Unload	10×D

Main Mechanical and Environmental Characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	Tensile Force, 5min	$\Delta\alpha$ reversible, fiber strain \leq 0.33%
Crush	IEC 60794-1-2-E3	1500N, 1min, 3times	$\Delta\alpha$ reversible, no damage
Impact	IEC 60794-1-2-E4	5J, R=300mm, 3times	$\Delta\alpha$ reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 100N, 100cycles	$\Delta\alpha$ reversible, no damage
Torsion	IEC 60794-1-2-E7	100N, 5cycles, +/-180°	$\Delta\alpha$ reversible, no damage
Temperature Cycling	IEC 60794-1-2-F1	-30~+60°C, 2cycles, 4h	$\Delta\alpha\leq$ 0.1dB/km, no damage

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

* if the color number is more than 12, the tube color code will be repeated again.

Color Identification of Tube

Number	1
Color	Natural

Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤ 0.35 dB/km
	@1550nm	≤ 0.21 dB/km
Mode Field Diameter	@1310nm	9.2 ± 0.4 μ m
	@1550nm	10.4 ± 0.5 μ m
Dispersion	@1300 +30/-15nm	≤ 3.5 ps/(nm·km)
	@1550nm	≤ 18.0 ps/(nm·km)
	@1625nm	≤ 22 ps/(nm·km)
Zero-Dispersion wavelength		1300nm ~ 1324nm
Zero-Dispersion slope		≤ 0.092 ps/(nm ² ·km)
Cable cutoff wavelength λ_{cc} (nm)		≤ 1260 nm
Cladding diameter		125 ± 1.0 μ m
Cladding non-circularity		$\leq 0.8\%$
Core/cladding concentricity error		≤ 0.6 μ m
Fiber diameter with coating (uncolored)		245 ± 10 μ m
Cladding/coating concentricity error		≤ 12.0 μ m
Proof stress		≥ 0.69 GPa(100kpsi)
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 requirement

Delivery Lengths

Standard delivery length will be 2km with -1%/+3% tolerance