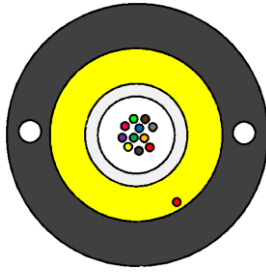


Unitube-aerial Cable Specification

Nesc light, 30m span

Cable Design

Loose Tube Optical Fiber Cable – Single Loose Tube –G.652 Fiber



Loose Tube: PBT plastic material, containing 2~24 fibers and filled with a suitable water tightness compound.

Reinforcement members: aramid yarns

Strength member: FRP inside the outer sheath.

Ripcord: 1 polyester ripcord under sheath.

Water penetration members: water blocking yarns

Outer Sheath: Black HDPE.

Cable Specification

Cable Cores		12
No. of Tubes		1
Fiber Counts in Tube		12
Nominal Cable Diameter	mm	5.2
Nominal Cable Weight	Kg/km	24.5
Installation Tensile	N	1500
Operation Tensile	N	800

Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-30~+60°C	Load	25×D
Operation	-30~+60°C	Unload	12.5×D

Main Mechanical and Environmental Characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	10min	$\Delta\alpha$ reversible, no damage
Crush	IEC 60794-1-2-E3	1500 N/10cm, 1min	$\Delta\alpha$ reversible, no damage
Impact	IEC 60794-1-2-E4	5J, R= 300mm, 3 points	$\Delta\alpha$ reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 25cycles	$\Delta\alpha$ reversible, no damage
Torsion	IEC 60794-1-2-E7	1m, $\pm 180^\circ$, 5cycles	$\Delta\alpha$ 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	Blue	White	Green	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	$\leq 0.35\text{dB/km}$
	@1550nm	$\leq 0.23\text{dB/km}$
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	$\leq 18.0\text{ps}/(\text{nm}\cdot\text{km})$
	@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 Requirement

Delivery Lengths

Standard delivery length could be 4km with $\pm 5\%$ tolerance.