

Outdoor Fiber Cable – Unitube

Product Type: TOXTW



Optical Cable Specifications

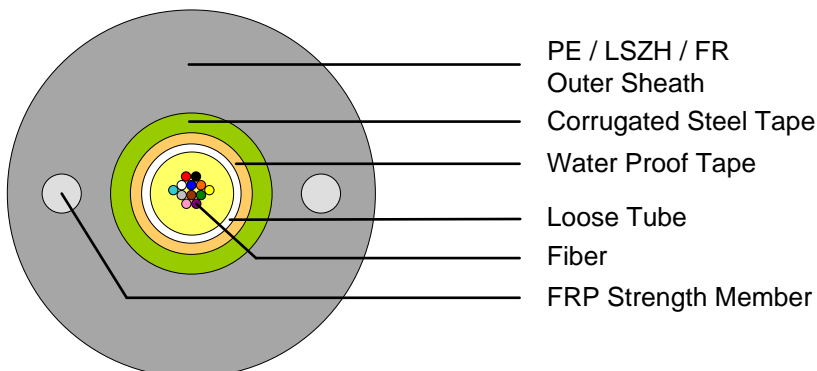
Application

A unitube design is one of the most versatile constructions available. Unitubes can be sheathed and armoured with a wide variety of materials to suit specific applications. Unitube outdoor fiber cables consists of 2 to 12 strains of fibers contained within a single loose tube (or unitube), wrapped using corrugated steel tape and protected with either PE, LSZH or FR material jacket. Two parallel FRPs are placed at the two sides of the steel tape, acting as strength members for the cable structure.

Unitube outdoor fiber cables are robustly designed, prevents water penetration and are rodent-proofed. These cables are ideal for direct burial and duct installation applications.

Cable features

- 2 to 12 fibers
- Singlemode (9/125 μ m) or Multimode (50/125 μ m or 62.5/125 μ m)
- PE / LSZH / FR outer sheath
- Unitube material: Polybutylene Terephthalate (PBT)
- Jelly compound tube filling
- Two parallel FRPs ensure tensile strength for the cable
- Suitable for duct and direct burial applications
- Color coding complies with TIA/EIA-598B



Mechanical Specifications

Fiber Count		2 ~ 12
Outer Diameter (mm)		8.9
Max Weight (kg/km)		100
Min. Bending Radius	Static	10 times cable diameter
	Dynamic	20 times cable diameter
Allowable Tension (N)	Short Term	1500
	Long Term	600
Max. Crush Loading Force (N/100mm)	Short Term	1000
	Long Term	300
Jacket Material		Polyethylene (PE)
Operating Temperature		-30°C to +70°C

Optical fiber specifications – Singlemode

Fiber Code	S9	
Wavelength (nm)	1310	1550
Core/Cladding (μm)	9/125	
Mode-Field Diameter (μm)	(9.3) ± 0.5	(10.5) ± 1.0
Max. Attenuation (dB/km)	≤ 0.35	≤ 0.22
Dispersion Coefficient (ps/km-nm)	λ @ 1285nm~1339nm	λ @ 1550nm
	≤ 3.5	≤ 18
Cutoff wavelength (nm)	λ _c = 1260 ± 70	
Glass concentricity error (μm)	≤ 0.8	
Cladding non-circularity (%)	≤ 1.0	
Proof test (Kpsi)	≥ 100Kpsi (0.7GN/m ²)	
Dynamic fatigue (tensile)	≥ 20	
Compliance	ITU-T G.652 (Categories A, B, C & D)	

Optical fiber specifications – Multimode

Fiber Code	M5		M6	
Wavelength (nm)	850	1300	850	1300
Core/Cladding (μm)	50/125		62.5/125	
Core non-circularity (%)	≤ 6.0			
Cladding non-circularity (%)	≤ 1.0			
Core/Cladding non-concentricity (%)	≤ 6.0			
Numerical Aperture	0.20 ± 0.02		0.275 ± 0.015	
Max. Attenuation (dB/km)	≤2.3	≤0.5	≤2.6	≤0.6
Performance (MHz.km)	≥500	≥1000	≥400	≥1000
Proof test (Kpsi)	≥ 100			
Dynamic fatigue (tensile)	≥ 25			

Notes

- Fiber colors by EIA/TIA-598-B: Blue/Orange/Green/Brown/Slate/White/Red/Black/Yellow/Violet/Rose/Aqua
- Diameter represents a nominal vary and may vary by ±5%