

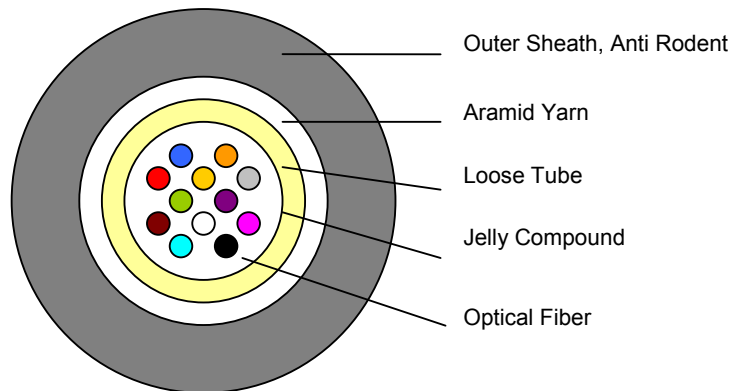
Part No. UNRP09XFI



Cable Description

x is Number of Cores and $x \leq 12$
 SM, 2~12C, Flame-Retardant Jacket, All Dielectric

Cable Cross Section



Application

Indoor

Identification of optical fiber & Loose Tube

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

UNRP09XFI

Optical Fiber Performance

1. Optical & Geometrical Performance

Mode Field Diameter: $9.3 \pm 0.5\mu\text{m}$ at 1310nm
Mode Field Concentricity Error: $\leq 0.8\mu\text{m}$
Cladding Diameter: $125 \pm 1\mu\text{m}$
Cladding Non-Circularity: $\leq 1\%$
Coating Diameter: $245 \pm 10\mu\text{m}$
Coating Non-Circularity Error: $\leq 6\%$
Attenuation Coefficient: $\leq 0.36\text{dB/km}$ at 1310nm, $\leq 0.22\text{dB/km}$ at 1550nm
Chromatic Dispersion: $\leq 3.5\text{ps/nm/km}$ at 1285~1330nm, $\leq 18\text{ps/nm/km}$ at 1550nm
Cut-off Wavelength (λ_{cc}): $\leq 1260\text{nm}$
Zero Dispersion Wavelength: 1300~1322nm
PMD Coefficient: $\leq 0.2\text{ps}/\sqrt{\text{km}}$
Point Discontinuity: $\leq 0.05\text{ dB}$ at 1310 & 1550nm
Effective Group Index of: 1.4677 at 1310nm(Typical)
Refraction (N_{eff}): 1.4682 at 1550nm(Typical)

2. Mechanical & Environmental Performance

Proof Test Level: $\geq 0.69\text{GPa}$ ($\geq 100\text{kpsi}$)
Macro bending (at 75mmdia. x100 turns): $\leq 0.05\text{ dB}$ at 1550nm
Temperature Dependence (-60°C to 85 C) : $\leq 0.05\text{ dB/km}$ at 1550nm
Damp Dependence (+80°C,85%RH for 30Days): $\leq 0.05\text{ dB/km}$ at 1550nm
Water soak Dependence (+20°C for 30Days): $\leq 0.05\text{ dB/km}$ at 1550nm

Cable Description

- **Fiber Coloring:** UV Curable Acrylic Color Ink
- **No. of Tube:** 1Tubes
- **No. of fiber/Tube:** Max. 12 Fibers
- **Loose Tube Material:** PBT
- **Filling compound (Tube):** Thixotropic Jelly
- **Strength Member:** Aramid Yarn
- **Outer Sheath:** Flame-Retardant PVC, Nom. 1.0mm Thick.
- **Cable Marking:** Cable type, Fiber Counts, Name of Manufacturer, Year of Manufacturing, Cable Length in meter
- **Cable Outside Diameter:** Nom. 6.0mm
- **Cable Weight:** Approx. 35kg/km
- **Packing:** Export Wooden Drum
- **Bending Radius:**
 - Static: 10D (Diameter of cable)
 - Dynamic: 20D (Diameter of cable)

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Mechanical & Environmental Performance

Item	Reference	Test Condition	Acceptance Criteria
Tensile Strength	IEC 794-1-E1	Long Term: 300N Short Term: 1000N	Attenuation Increase: ≤ 0.1 dB
Crush	IEC 794-1-E3	Loading: 1000N/100mm	Attenuation Increase: ≤ 0.1 dB
Impact	IEC 794-1-E4	Loading: 1N.m Cycle: 5	Attenuation Increase: ≤ 0.1 dB
Repeated Bend	IEC 794-1-E6	Bending Radius: X 20D Cycle: 30	Attenuation Increase: ≤ 0.1 dB
Torsion	IEC 794-1-E7	Length: 1m Torsion angle: ± 180	Attenuation Increase: ≤ 0.1 dB
Temp. Cycling	IEC 794-1-F1	Step: +20°C- \rightarrow -20°C - \rightarrow +60°C- \rightarrow +20°C, 24Hrs	Attenuation Increase: ≤ 0.1 dB/km