

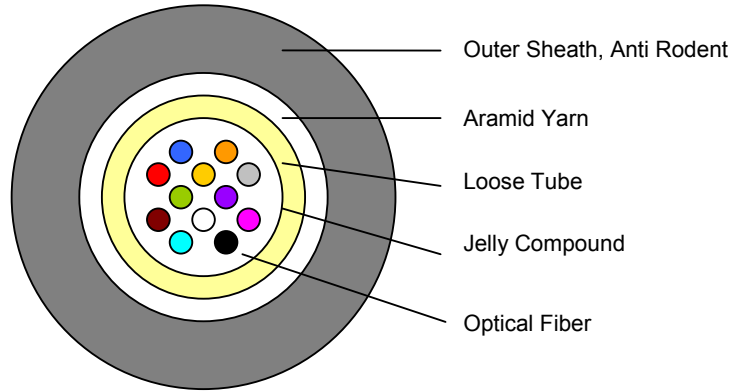
# Part No. URP050XFIO



### Cable Description

X is number of cores and  $x \leq 12$   
 50/125, SM, 2~12C, Flame-Retardant Jacket, Rodent protect, All Dielectric

### Cable Cross Section



### Application

Indoor/Outdoor

### 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	

# URP050XFIO

## Optical Fiber Performance

### 1. Optical & Geometrical Performance

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**Core Diameter:**  $50 \pm 2.5\mu\text{m}$   
**Cladding Diameter:**  $125 \pm 1\mu\text{m}$   
**Cladding Non-Circularity:**  $\leq 1\%$   
**Coating Diameter :**  $245 \pm 10\mu\text{m}$   
**Coating Dia. Non-Circularity Error:**  $\leq 6\%$   
**Coat/Clad Concentricity Error:**  $\leq 12\mu\text{m}$   
**Core/Clad Concentricity Error:**  $\leq 1.5\mu\text{m}$   
**Attenuation Coefficient:**  $\leq 2.7\text{dB/km}$  at 850nm,  $\leq 0.8\text{dB/km}$  at 1300nm  
**Bandwidth:**  $\geq 400\text{MHz.km}$  at 850nm,  $\geq 800\text{MHz.km}$  at 1300nm  
**Numerical Aperture:**  $0.20 \pm 0.015$   
**Point Discontinuity:**  $\leq 0.1 \text{ dB}$  at 850 & 1300nm  
**Effective Group Index of:** 1.482 at 850nm  
**Refraction (Neff):** 1.477 at 1300nm

### 2. Mechanical & Environmental Performance

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**Proof Test Level:**  $\geq 0.69\text{GPa}$  ( $\geq 100\text{kpsi}$ )  
**Macro bending (at 75mmdia. x100 turns):**  $\leq 0.5\text{dB}$  at 1550nm  
**Temperature Dependence (-60°C to 85 C) :**  $\leq 0.10\text{dB/km}$  at 1550nm  
**Damp Dependence (+80°C,85%RH for 30Days):**  $\leq 0.20\text{dB/km}$  at 1550nm  
**Water soak Dependence (+20°C for 30Days):**  $\leq 0.205\text{dB/km}$  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)

# URP050XFIO

## Mechanical & Environmental Performance

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