

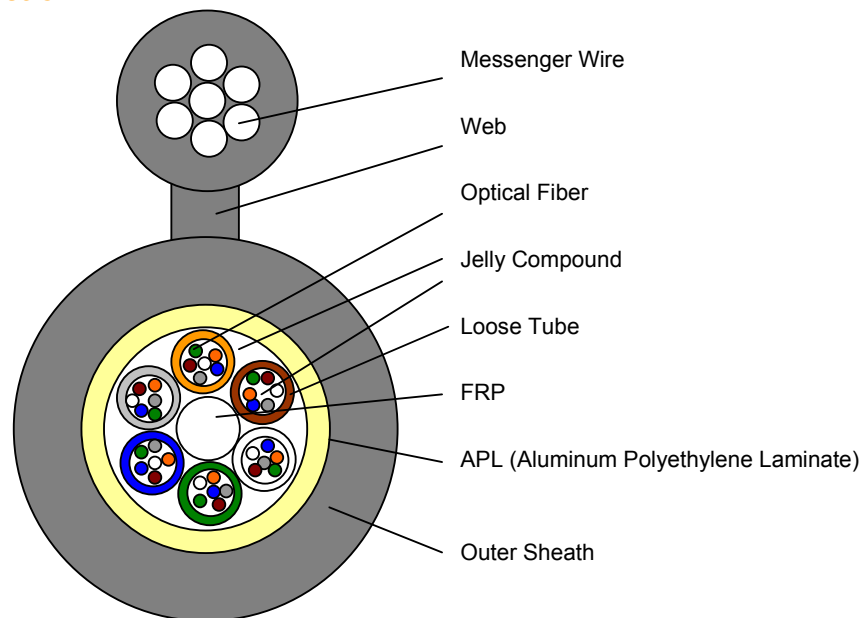
Part No. UFRP-MW-050X

Cable Construction & Description

Loose Tube Fiber Optic Cable

SM, 2~36C, Fig.8, Self-Supporting, Single Jacket, x is Number of Cores & $x \leq 36$

Cable Cross Section



Application

Aerial

UFRP-MW-050X

Cable Information

- Fiber Coloring:** UV Curable Acrylic Color Ink
- No. of Tube:** Max. 6Tubes
- No. of fiber/Tube:** Max. 6 Fibers
- Loose Tube Material:** PBT
- Filling compound (Tube):** Thixotropic Jelly
- Central Strength Member:** FRP (Nom. 2.3mm Dia.)
- Water Blocking (Core):** Water Swell Jelly
- Core Wrap:** Water Swell able Tape
- Messenger Wire:** Gal. Steel Wire(1.2mm*7wires)
- Outer Sheath (Figure-8):** Black MDPE
- Cable Core:** Nom. 2.0mm Thick.
- Web Size:** (2.5W x 3.0H) ± 0.5mm
- Messenger Wire:** Nom. 0.8mm Thick.
- Cable Marking:** Cable type, Fiber Counts, Name of Manufacturer, Year of Manufacturing, Cable Length in meter
- Cable Outside Diameter:** Nom. 21.0 / 11.5mm
- Cable Weight:** Approx. 200kg/km
- Packing:** Export Wooden Drum
- Bending Radius:**
 - Static: 10D (Diameter of cable)
 - Dynamic: 20D (Diameter of cable)

Optical Fiber Performance

1. Optical & Geometrical Performance

- Core Diameter:** 50 ± 2.5µm
- Cladding Diameter:** 125 ± 1µm
- Cladding Non-Circularity:** ≤ 1%
- Coating Diameter :** 245 ± 10µm
- Coat/Clad Concentricity Error:** ≤ 12µm
- Core/Clad Concentricity Error:** ≤ 1.5µm
- Coating Non-Circularity Error:** ≤ 6%
- Attenuation Coefficient:** ≤ 2.7dB/km at 850nm, ≤ 0.8dB/km at 1300nm
- Band Width:** ≥ 400MHz.km at 850nm, ≥ 800MHz.km at 1300nm
- Numerical Aperture:** 0.20 ± 0.015
- PMD Coefficient:** ≤ 0.2ps/√km
- Point Discontinuity:** ≤ 0.1 dB at 850 & 1300nm
- Effective Group Index of:** 1.482 at 850nm
- Refraction (Neff):** 1.477 at 1300nm

2. Mechanical & Environmental Performance

- Proof Test Level:** ≥ 0.69 GPa(≥100kpsi)
- Macro bending (at 75mm dia. x100 turns):** ≤ 0.5 dB at 850&1300nm
- Temperature Dependence (-60°C to 85°C):** ≤ 0.10 dB/km at 850&1300nm
- Damp Dependence (+80°C,85%RH for 30Days):** ≤ 0.20 dB/km at 850&1300nm
- Water soak Dependence (+20°C for 30Days):** ≤ 0.20 dB/km at 850&1300nm

UFRP-MW-050X

Identification of optical fiber & Loose Tube

Optical Fiber		Loose Tube	
1	Blue	1	Blue
2	Orange	2	Orange
3	Green	3	Green
4	Brown	4	Brown
5	Grey	5	Grey
6	White	6	White

Mechanical & Environmental Performance

Item	Reference	Test Condition	Acceptance Criteria
Tensile Strength	IEC 794-1-E1	Long Term: 1000N, Short Term: 3000N	Attenuation Increase: ≤0.05dB
Crush	IEC 794-1-E3	Loading: 5000N/100mm	Attenuation Increase: ≤0.05dB
Impact	IEC 794-1-E4	Loading: 10N.m , Cycle: 5	Attenuation Increase: ≤0.05dB
Repeated Bend	IEC 794-1-E6	Bending Radius: X 20D, Cycle: 30	Attenuation Increase: ≤0.05dB
Torsion	IEC 794-1-E7	Length: 1m, Torsion angle: ±180, Cycle:10	Attenuation Increase: ≤0.05dB
Cable Bend	IEC 794-1-E11	Bending Radius: X 10D, Cycle: 10, Turns:5	Attenuation Increase: ≤0.05dB
Temp. Cycling	IEC 794-1-F1	Step:+20°C->-40°C- >+70°C->+20°C, 24Hrs	Attenuation Increase: ≤0.1dB/km
Water Penetration	IEC 794-1-F5	Length: 1m, Height: 1m, Times: 24Hrs	No Leakage