

Micro-Module Multi-Purpose Fiber Optic Cable

Type: MMMP 72/M6 G657A2 60m 4SFRP SJ HDPE CO



Application & Standards

- ~ For aerial or duct installation;
- ~ Fully dielectric cable;
- ~ Easy strippable micro-modules without any tools needed;
- ~ IEC 60794-1-2 - Basic optical cable test procedures;
- ~ XP C 93-850-3-25 - Color code of fiber optic cables;
- ~ ITU-T G.657A2 - Characteristics of a bending-loss insensitive single-mode optical fibre and cable

Cable Construction

- ~ Optical Fibres
- ~ Jelly
- ~ Easy strippable micromodule
- ~ Aramid Yarns
- ~ Waterproof Yarns
- ~ Strength Member (2x2 side FRP)
- ~ Outer Sheath (Black HDPE)

Technical Characteristics

Optical Fiber Performance	
Characteristic	Specified Value
Attenuation Coefficient:	
at 1310nm :	≤ 0.36 dB/km
at 1550nm :	≤ 0.22 dB/km
Mode Field Diameter:	
at 1310nm	$8.6 \pm 0.4 \mu\text{m}$
Chromatic Dispersion:	
at 1330nm	≤ 3.5 ps/(nm.km)

at 1550nm	≤ 18 ps/(nm.km)	
at 1625nm	≤ 22 ps/(nm.km)	
Zero Dispersion Wavelength	1300 ~ 1324 nm	
Zero Dispersion Slope	≤ 0.092 ps/(nm ² .km)	
Cable Cut off Wavelength (λ_{cc})	≤ 1260 nm	
Macro Bending Loss	10 cycles \varnothing 15mm at 1550	≤ 0.03 dB
	10 cycles \varnothing 15mm at 1625	≤ 0.10 dB
	1 cycle \varnothing 10mm at 1550	≤ 0.10 dB
	1 cycle \varnothing 10mm at 1625	≤ 0.20 dB
	1 cycle \varnothing 7.5mm at 1550	≤ 0.50 dB
	1 cycle \varnothing 7.5mm at 1625	≤ 1.0 dB
Cladding Diameter	125 ± 1 μ m	
Cladding Non-Circularity	$\leq 1.0\%$	
Core-Cladding Concentricity error	≤ 0.6 μ m	
Proof Test	≥ 0.69 GPa (100kpsi)	
Dynamic Fatigue	≥ 20	

Fiber Optic Cable Parameters		
Fiber Type **	G.657A2	
Fiber Count	72	
Module Count	12	
Average Outer Sheath Thickness (mm)	2.0	
Approximate Cable Diameter (mm)	10.5	
Approximate Cable Weight (kg/km)	86	
Tensile Strength (Short Term) - Fiber Strain $\leq 0.33\%$	2500 N	For 60 m span*** / Duct
Tensile Strength (Long Term) - Fiber Strain $\leq 0.1\%$	800 N	For 60 m span*** / Duct
Crush (Short Term)	2000 N/10 cm	
Impact	5J, R=300mm, 3 impacts	
Torsion	40N, 20 cycles, $\pm 90^\circ$	
Water Penetration	3m sample, 1m height, 24h	
Minimum Bending Radius (Installing)	25 x D	
Minimum Bending Radius (Operating)	15 x D	
Temperature (Operation)	$-30^\circ\text{C} \sim +70^\circ\text{C}$	
Temperature (Transportation and Storage)	$-40^\circ\text{C} \sim +70^\circ\text{C}$	
Packing	Wooden drum with protection	
Delivery Lengths	To be confirmed, $\pm 5\%$ tolerance	

Marking	<OPTIVINE> + <MICROMODULE> + <fiber count and type> + <DUCT AND AERIAL> + <manufacturing date> + <length marking>
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Fiber Color Identification												
No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Red	Blue	Green	Yellow	Violet	White	Orange	Grey	Brown	Black	Aqua	Pink

Module Color Identification****												
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* Drawing it's for indicative purpose only.

** Other fiber types can be used upon request.

*** A span of 60 m can be reached under NESC medium conditions (wind speed 17.7m/s, ice thickness 6.5mm).

**** If more than 12 tubes are used, the color code will be repeated again containing black rings

***** Customized solutions can be offered upon request.