

**FLEXI ARCH MICRO**

ITU-T G657A1 Single Mode Optical Fiber

Product Description

HFCL's "FLEXI ARCH MICRO" is a low water peak bend insensitive single mode optical fiber, designed for optical networks operating in full spectrum.

"FLEXI ARCH MICRO" provides low bend loss performance, low splice loss, low PMD and supports applications for FTTx, metro, mobile backhaul, drop cables, micro cables and also suitable for use in long haul transmission.

"FLEXI ARCH MICRO" is fully compliant with ITU-T G.657A1/ IEC 60793-2-50 type B-657A1 and is completely compatible with fibers in existing long haul, access networks.

Transmission Characteristic

| Attribute | Unit | Value |
|--|------------------------|--------------------|
| Attenuation @ 1310 nm | dB/km | ≤ 0.34 |
| Attenuation @ 1383 nm* | dB/km | ≤ Value at 1310 nm |
| Attenuation @ 1550 nm | dB/km | ≤ 0.20 |
| Attenuation @ 1625 nm | dB/km | ≤ 0.22 |
| Point Discontinuities at 1310 nm and 1550 nm | dB | ≤ 0.05 |
| Zero Dispersion Wavelength | Nm | 1300 to 1324 |
| Zero Dispersion Slope | ps/nm ² .km | ≤ 0.090 |
| Dispersion @ 1550 nm | ps/nm.km | ≤ 17.5 |
| PMD coefficient Individual Fiber** | ps/√ km | ≤ 0.10 |
| PMD LDV | ps/√ km | ≤ 0.06 |

Geometrical Characteristics

| Attribute | Unit | Value |
|--------------------------------------|------|---|
| Cable Cutoff Wavelength | nm | ≤ 1260 |
| Cladding Diameter | μm | 125 ± 0.7 |
| Mode Field Diameter | μm | 1310 nm: 9.1 ± 0.4 1550 nm: 10.2 ± 0.5 |
| Core-clad concentricity error | μm | ≤ 0.5 |
| Cladding Non Circularity (Ovality) | % | ≤ 0.7 |
| Coating Diameter (Colored) | μm | 190 to 210 |
| Coating-cladding concentricity error | μm | ≤ 10 |
| Coating Non Circularity (Ovality) | % | ≤ 4 |

* After Hydrogen aging according to IEC 60793-2-50 for B 1.3 fiber category.

** Individual Value may change when fiber is cabled.

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Mechanical Characteristics

| Attribute | Unit | Value |
|---|------|-------------------------------|
| Proof stress level | kpsi | ≥ 100 (0.69 Gpa) or 1% strain |
| Dynamic Tensile strength (un-aged) | Gpa | ≥ 3.8 |
| Coating Strip force Peak (Average) | N | 0.4 ≤ F ≤ 8.9 |
| Fiber Curl | m | ≥ 4 |
| Stress corrosion susceptibility parameter (Dynamic Fatigue), Nd | | ≥ 20 |
| Macro Bend Loss | | |
| Change in attenuation when fiber is coiled with 1 turn around 20 mm diameter mandrel | | ≤ 0.20 dB at 1550 nm |
| | | ≤ 0.50 dB at 1625 nm |
| Change in attenuation when fiber is coiled with 10 turn around 30 mm diameter mandrel | | ≤ 0.20 dB at 1550 nm |
| | | ≤ 0.50 dB at 1625 nm |

Environmental Characteristics

| Attribute | Value |
|---|--------------|
| Temperature Cycling Induced Attenuation at 1310nm ,1550 nm ,1625 nm at -60°C to +85°C | ≤ 0.05 dB/Km |
| Temperature-Humidity Cycling Induced attenuation at 1310nm ,1550 nm ,1625 nm at -10° C to +85° C and 95% relative humidity | ≤ 0.05 dB/Km |
| Water Immersion Induced attenuation at 1310nm ,1550 nm ,1625 nm due to water immersion at 23 ± 2° C | ≤ 0.05 dB/Km |
| Accelerated Aging (Temperature) Induced attenuation at 1310nm ,1550 nm ,1625 nm due to Temperature aging at 85 ± 2° C | ≤ 0.05 dB/Km |
| Damp Heat Induced attenuation at 1310nm ,1550 nm ,1625 nm due to Temperature& Humidity aging at +85° C and 85% relative humidity | ≤ 0.05 dB/Km |

Note: Fibers can be supplied based on customer requirements either in Natural / Color.

Inspection Certificate

HFCL shall provide in-house test certificate which include Optical, mechanical parameters as per customer requirements.

Material Properties

Group Refractive Index of Fiber: 1.466 @ 1310 nm
1.467 @ 1550 nm
1.470 @ 1625 nm