



HFCL LTD.

FLEXI ARCH PLUS

PRODUCT DESCRIPTION

- ▶ HFCL'S "FLEXI ARCH PLUS" IS A SINGLE MODE OPTICAL FIBER WITH CHARACTERISTICS OF BEND INSENSITIVE WITH ENTIRE BANDWIDTH RANGING FROM 1260nm TO 1625nm.
- ▶ HFCL'S "FLEXI ARCH PLUS" PROVIDES SUPERIOR MACRO BEND, REDUCED PMD LOSSES. THIS BEND-OPTIMIZED FIBER RESULTS IN LOW ATTENUATION LOSSES AFTER CABLING.
- ▶ "FLEXI ARCH PLUS" IS FULLY COMPLIANT OR EXCEEDS WITH ITU-T G.657A2 AND G.652D RECOMMENDATIONS.

TRANSMISSION CHARACTERISTICS

ATTRIBUTE	UNIT	VALUE
Attenuation @ 1310 nm	dB/km	≤ 0.35
Attenuation @ 1383 nm*	dB/km	≤ 0.35
Attenuation @ 1550 nm	dB/km	≤ 0.21
Attenuation @ 1625 nm	dB/km	≤ 0.23
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	≤ 0.092
Max Dispersion 1285 nm-1330 nm	ps/nm.km	≤ 3.5
Dispersion @ 1550 nm	ps/nm.km	≤ 18
Dispersion @ 1625 nm	ps/nm.km	≤ 22
PMD coefficient Individual Fiber	ps/√km	≤ 0.1
PMD LDV	ps/√km	≤ 0.06

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

GEOMETRICAL CHARACTERISTICS

ATTRIBUTE	UNIT	VALUE
Cable Cutoff Wavelength	nm	≤ 1260
Cladding Diameter	μm	125 ± 0.7
Mode Field Diameter	μm	1310 nm: 8.6±0.4 1550 nm:9.6±0.5
Core-clad concentricity error	μm	≤ 0.5
Cladding Non Circularity (Ovality)	%	≤ 0.8
Secondary Coating Diameter	μm	242 ± 5
Coating-cladding concentricity error	μm	≤ 12
Coating Non Circularity (Ovality)	%	≤ 6



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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)	N	1.3 ≤ 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 15 mm diameter mandrel		≤ 0.20 dB at 1550 nm ≤ 0.50 dB at 1625 nm
Change in attenuation when fiber is coiled with 1 turn around 20 mm diameter mandrel		≤ 0.10 dB at 1550 nm ≤ 0.20 dB at 1625 nm
Change in attenuation when fiber is coiled with 10 turn around 30 mm diameter mandrel		≤ 0.03 dB at 1550 nm ≤ 0.10 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 upto 98% 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

ISO 9001 | TL9000 CERTIFIED