



HFCL LTD.

FLEXI BEND

PRODUCT DESCRIPTION

- ▶ HFCL'S "FLEXI BEND" IS A ZERO WATER PEAK, BEND INSENSITIVE LOW LOSS SINGLE MODE OPTICAL FIBER WITH CHARACTERISTICS OF BEND INSENSITIVITY IN ENTIRE BANDWIDTH RANGE FROM 1260nm TO 1625nm.
- ▶ "FLEXI BEND" OFFERS SPECIFICATIONS IN TERMS OF LOW OPTICAL LOSS, SUPERIOR MACRO BEND BEND LOSS PROPERTIES, LOW SPLICE LOSS, LOW PMD LOSS THUS IDEAL FOR USE IN FTTX NETWORKS, AND ALSO SUITABLE FOR ALL LONG HAUL, METRO AND ACCESS NETWORKS.
- ▶ "FLEXI BEND" FIBER COMPLIES WITH OR EXCEEDS THE ITU -T G652D AND ITU-T G657A1 AND THE IEC 60793-2-50 TYPE B-657A1 STANDARD SPECIFICATIONS.

TRANSMISSION CHARACTERISTICS

ATTRIBUTE	UNIT	VALUE
Attenuation @ 1310 nm	dB/km	≤ 0.33
Attenuation @ 1383 nm*	dB/km	≤ 0.31
Attenuation @ 1550 nm	dB/km	≤ 0.19
Attenuation @ 1625 nm	dB/km	≤ 0.21
Point Discontinuities at 1310 nm and 1550 nm	dB	≤ 0.05
Zero Dispersion Wavelength	nm	1300 nm-1324 nm
Zero Dispersion Slope	ps/nm ² .km	≤ 0.092
Max Dispersion 1285 nm-1330	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: 9.2±0.4 1550nm:10.4±0.5
Core clad concentricity error	μm	≤ 0.5
Cladding Non Circularity (Ovality)	%	≤ 0.7
Secondary Coating Diameter	μm	242 ± 5
Coating-cladding concentricity error	μm	≤ 12
Coating Non Circularity (Ovality)	%	≤ 4



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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 20 mm diameter mandrel		≤ 0.05 dB at 1550 nm ≤ 1.50 dB at 1625 nm
Change in attenuation when fiber is coiled with 1 turn around 32 mm diameter mandrel		≤ 0.03 dB at 1550 nm
Change in attenuation with 10 turns on 30 mm diameter mandrel		≤ 0.10 dB at 1550 nm ≤ 0.30 dB at 1625 nm
Change in attenuation with 100 turns on 50 mm diameter madrel		≤ 0.03 dB at 1310 nm ≤ 0.03 dB at 1550 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 / COLOUR.

ENVIRONMENTAL CHARACTERISTICS

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