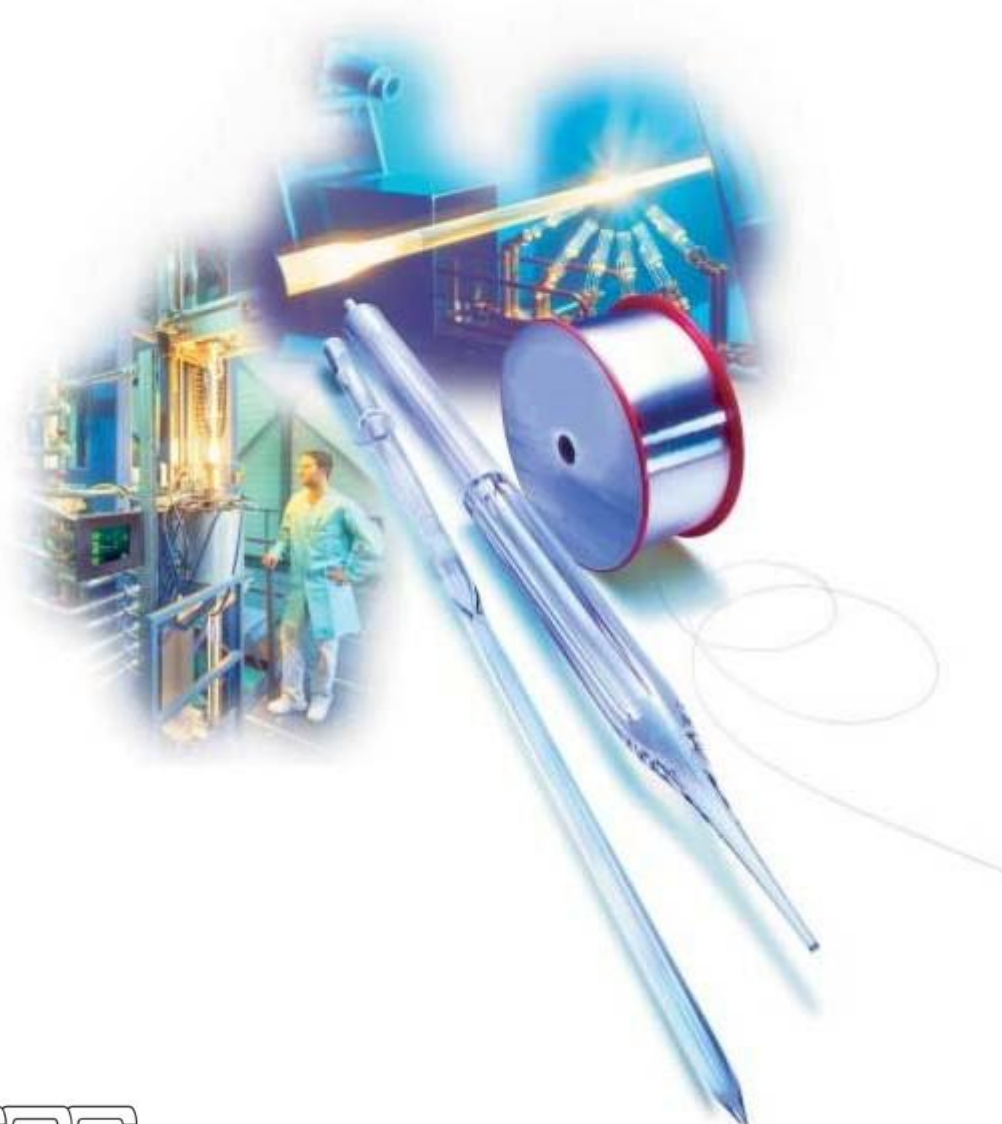


Silitec Fibers SILIBEND High Bend Resistance Optical Fiber ITU-T G.657.B



PRODUCT INFORMATION

The Silitec Fibers SILIBEND G.657.B fiber is a high bend-resistant fiber, specially designed for FTTx and access networks, in which the fiber is subject to multiple bends over small diameters of curvature. The G.657.B fiber is designed for a reduced mode field diameter, making it the fiber of choice for the tightest bends, for the applications in the home or access networks.



ISO 9001 : 2000 / ISO 14001 : 2004

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OPTICAL SPECIFICATIONS & CHARACTERISTICS

Attenuation

at 1310 nm	≤ 0.43 dB/km
at 1550 nm	≤ 0.27 dB/km
at 1625 nm	≤ 0.4 dB/km

Point Discontinuities

at 1550 nm	≤ 0.1 dB
at 1625 nm	≤ 0.1 dB

Attenuation Uniformity

at 1550 nm	≤ 0.1 dB/km
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Bending Loss

Radius	Nb of turns	Wavelength	Induced Attenuation
15 mm	10	1550 nm	≤ 0.03 dB
15 mm	10	1625 nm	≤ 0.1 dB
10 mm	1	1550 nm	≤ 0.1 dB
10 mm	1	1625 nm	≤ 0.2 dB
7.5 mm	1	1550 nm	≤ 0.5 dB
7.5 mm	1	1625 nm	≤ 1 dB

Opto-Geometrical Specifications

Mode Field Diameter at 1310nm	7.0 ± 0.3 μm
Mode Field Diameter at 1550nm	-
Cut-Off Wavelength	≤ 1350 nm

Chromatic Dispersion

Wavelength	Minimum	Maximum
Zero dispersion wavelength	1300 nm	1390 nm
at 1550 nm	-	18 ps/(nm.km)
at 1625 nm	-	-

Polarization Mode Dispersion (PMD)

PMD Link Design Value	≤ 0.04 ps/km ^{1/2}
Individual Fiber (1310-1550nm)	≤ 0.1 ps/km ^{1/2}

Rayleigh Backscattering Coefficient

at 1550 nm	< -81 dB
at 1625 nm	< -82 dB

Group Refractive Index

at 1550 nm	1.470 (typ.)
at 1625 nm	1.471 (typ.)

PHYSICAL CHARACTERISTICS

Glass Geometry

Cladding Diameter	125.0 ± 1.0 μm
Cladding Non-Circularity	≤ 1 %
Core-Clad Concentricity Error	≤ 1 μm
Fiber Curl	> 4 m

Coating Geometry

Coating Diameter	245 ± 5 μm
Coating Non-Circularity	≤ 5 %
Coating-Cladding Concentricity Error	≤ 12.5 μm

MECHANICAL SPECIFICATIONS

Proof Test Level	≥ 100 kpsi
Dynamic tensile Strength	≥ 4 GPa
Coating Strip Force	≤ 2 N
Dynamic Fatigue Parameter	n ≥ 20

ENVIRONMENTAL SPECIFICATIONS

Attenuation

Temperature Dependence (-60°C to +85°C)	≤ 0.05 dB/km
Temperature-Humidity Cycling (-10°C to +85°C, 08%rh)	≤ 0.05 dB/km
Water Immersion (40 days at 23±2°C)	≤ 0.05 dB/km
Dry Heat Aging (85°C)	≤ 0.05 dB/km

Coating Strip Force Stability

After 40 days at ambient	≤ 2 N (no change)
After 40 days in water	≤ 2 N (no change)
After 6 thermal cycles (-25°C to +70°C)	≤ 2 N (no change)

Dynamic Tensile Strength Stability

After 3 months in water at 70°C	Max change ≤ 23% (Recommended loss in strength < 25%)
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