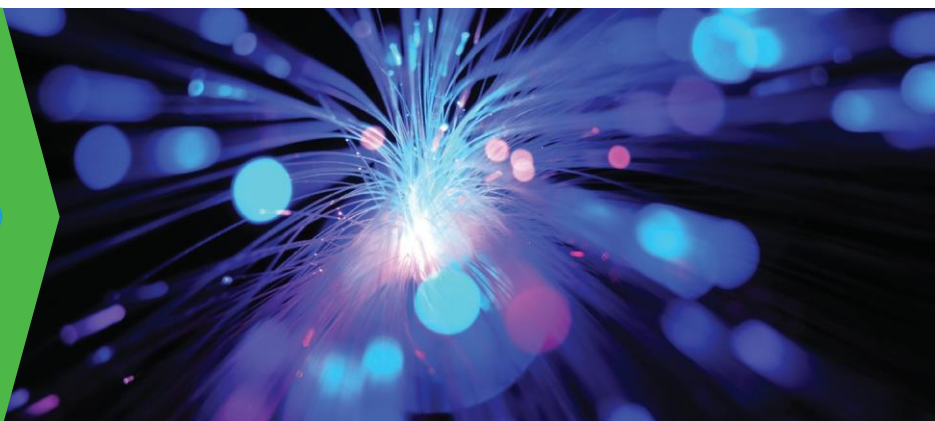


# ITU-T G.657.A1 Fiber- Sterlite® MICRO BOW-LITE™ Single Mode Optical Fiber



## Product Description

Sterlite® MICRO BOW-LITE™ Single Mode Optical Fiber is a reduced coating diameter optical fiber with low bend sensitivity and low water peak attenuation.

## Product Application

Sterlite® MICRO BOW-LITE™ is ideal for use in access and Fiber To The Home (FTTH) applications, including full spectrum CWDM. Especially for use in cables with high fiber counts and lower diameter micro cable.

## Product Benefits

Sterlite® MICRO BOW-LITE™ has special characteristics of low bend sensitivity across the O, E, S, C & L-bands(1260-1625 nm) in addition to low water peak, characterized by the attenuation at 1380-1390 nm being less than the attenuation at 1310 nm.

## Product Specifications

Attenuation	$\leq 0.34$ dB/km at 1310nm $\leq 0.34$ dB/km at 1383 nm or less than attenuation at 1310 nm# $\leq 0.20$ dB/km at 1550nm $\leq 0.22$ dB/km at 1625nm
Mode field diameter	$8.8 \pm 0.4$ $\mu$ m at 1310 nm ; $10.0 \pm 0.5$ $\mu$ m at 1550 nm
Cable cutoff wavelength	$\leq 1260$ nm
Zero dispersion wavelength	1300 nm to 1324 nm
Zero dispersion slope	$\leq 0.090$ ps/nm <sup>2</sup> .km
Dispersion at 1550 nm	$\leq 17.5$ ps/nm.km
PMD Individual Fiber*	$\leq 0.1$ ps/ $\sqrt$ km
PMD LDV	$\leq 0.06$ ps/ $\sqrt$ km
Cladding diameter	$125.0 \pm 0.7$ $\mu$ m
Core-clad concentricity error	$\leq 0.5$ $\mu$ m
Cladding non-circularity	$\leq 0.7$ %
Coating diameter	$190 \pm 10$ $\mu$ m (uncoloured) ; $200 \pm 10$ $\mu$ m (coloured)
Coating-cladding concentricity error	$\leq 10$ $\mu$ m

\* Individual PMD values may change when cabled

# After hydrogen aging according to IEC-60793-2-50 regarding the B1.3 fiber category

## Mechanical Characteristics

Proof Test Levels	$\geq 100$ kpsi (0.7 GN/m <sup>2</sup> ). This is equivalent to 1% strain
Coating strip force (Force to mechanically strip the dual coating)	$\geq 1.0$ N (0.2 lbf) and $\leq 5.0$ N (1.1 lbf)
Fiber curl	$\geq 4$ m

Macrobend loss: The maximum attenuation with bending does not exceed the specified values with the following deployment conditions

Deployment condition	Wavelength	Induced attenuation
1 turn, 10 mm radius	1550 nm	$\leq 0.20$ dB
	1625 nm	$\leq 0.50$ dB
10 turns, 15 mm radius	1550 nm	$\leq 0.20$ dB
	1625 nm	$\leq 0.50$ dB



## Environmental Characteristics

Temperature dependence Induced attenuation, -60°C to +85°C at 1310, 1550, 1625 nm	≤ 0.05 dB/km
Temperature humidity cycling Induced attenuation, -10°C to +85°C and 95% relative humidity at 1310, 1550, 1625 nm	≤ 0.05 dB/km
High temperature and humidity aging 85°C at 85% RH, 30 days Induced attenuation at 1310, 1550, 1625 nm due to aging	≤ 0.05 dB/km
Water immersion, 30 days Induced attenuation due to water immersion at 23±2°C at 1310, 1550, 1625 nm	≤ 0.05 dB/km
Accelerated aging (Temperature), 30 days Induced attenuation due to temperature aging at 85±2°C at 1310, 1550 1625 nm	≤ 0.05 dB/km

## Other Performance Characteristics\*

Effective group index of refraction	1.4670 at 1310 nm 1.4675 at 1550 nm 1.4680 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm	≤ 0.03 dB/km
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm	≤ 0.02 dB/km
Point discontinuities at 1310 nm & 1550 nm	≤ 0.05 dB
Dynamic fatigue parameter (N <sub>d</sub> )	≥ 20
Shipping Length: Standard length per reel available up to 25.2 km	

\*Typical values

## Manufacturing Process

Sterlite® controls every stage of the manufacturing process so that quality is built in to every meter of fiber, rather than selected out at the end through testing. To ensure the accuracy and precision of the manufacturing process, Sterlite routinely calibrates and recertifies process equipment and measurement benches against internationally traceable standards from NPL/NIST, and follow test methods compliant with EIA/TIA, CEI-IEC and ITU standards.

## International Standards

Sterlite® MICRO BOW-LITE™ complies or exceeds the ITU Recommendation G.652.D and G.657.A1.

## Service USP's

- Complete range of optical fiber for terrestrial networks
- World-wide sales support
- Web-based order tracking & customer support
- Specialized technical support

## Disclaimer

Sterlite® is policy of continuous improvement may result in a change in specifications without prior notice. Any warranty of any nature relating to any Sterlite® product is only contained in the written agreement between Sterlite® Technologies Limited and the direct purchaser of such product(s).



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