

# MICRO BOW-LITE™ (E)

## 200 μm ITU-T G.657.A2 Single Mode Optical Fiber

### Product Description

MICRO BOW-LITE™ (E) Single Mode Optical Fiber is a reduced coating diameter optical fiber with ultra- low bend sensitivity.

### Product Application

MICRO BOW-LITE™ (E) fibre is designed to substantially reduce bend losses and hence deliver better performance in tight bend scenarios and efficient functioning at higher wavelengths. It finds use in Optical fibre cable designs that have high fibre density and lower diameter micro cables.

### Product Benefits

MICRO BOW-LITE™ (E) fibre changes the paradigm of optical networks by combining enhanced macro bend performance with a score of functional benefits like, optimised power budgets, hardware miniaturisation and installation agility. This high performance optical fibre can be seamlessly integrated with the legacy network built on G.652.D fibre. Extensive experiments prove that by using MICRO BOW-LITE™ (E), tangible benefits accrue in terms of enhanced network longevity by a minimum of 10+ years especially in emerging markets

### Product Specifications

Attenuation	$\leq 0.35$ dB/km at 1310 nm $\leq 0.35$ dB/km at 1383 nm # $\leq 0.21$ dB/km at 1550 nm $\leq 0.23$ dB/km at 1625 nm
Mode field diameter	$8.6 \pm 0.4$ μm at 1310 nm
Cable cutoff wavelength	$\leq 1260$ nm
Zero dispersion wavelength	1300 nm to 1324nm
Zero dispersion slope	$\leq 0.092$ ps/nm <sup>2</sup> .km
Dispersion at 1550 nm	$\leq 18.0$ ps/nm.km
PMD Individual Fibre*	$\leq 0.1$ ps/√km
PMD LDV	$\leq 0.06$ ps/√km
Cladding diameter	$125 \pm 0.7$ μm
Core-clad concentricity error	$\leq 0.5$ μm
Cladding non-circularity	$\leq 0.7$ %
Coating diameter	$190 \pm 10$ μm (uncoloured) , $200 \pm 10$ (coloured)
Coating-cladding concentricity error	$\leq 10$ μm

\* Individual PMD values may change when cabled

# After hydrogen aging according to IEC-60793-2-50 regarding the B-652.D fiber category

### Mechanical Characteristics

Proof Test Levels	$\geq 100$ kpsi (0.7 GN/m <sup>2</sup> ). This is equivalent to 1%
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)
Fibre 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
10 turns, 15 mm radius	1550 nm	$\leq 0.03$ dB
	1625 nm	$\leq 0.10$ dB
1 turn, 10 mm radius	1550 nm	$\leq 0.10$ dB
	1625 nm	$\leq 0.20$ dB
1 turn, 7.5 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), 30days 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	1.4678 at 1310 nm 1.4685 at 1550 nm 1.4689 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 (Nd)	≥ 20
Shipping Length: Standard length per reel available up to 25.2 km	

\*Typical values

## Manufacturing Process

STL 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, STL 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

STL MICRO BOW-LITE™ (E) complies or exceeds the ITU Recommendation G.652.D and G.657.A2.

## 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

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

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