

# OH-LITE® (E)

## Single Mode Optical Fibre ITU-T G.652.D

### Product Description

OH-LITE® (E) Single Mode Optical Fiber is a zero water peak fiber where attenuation at 1380-1390 nm is less than attenuation at 1310 nm.

### Product Application

OH-LITE® (E) is ideal for regional, metropolitan and local access networks using CWDM.

### Product Benefits

OH-LITE® (E) single mode fiber is designed for use over the entire 1260 nm to 1625 nm wavelength range. This gives it much more useable spectrum than conventional single mode fiber.

### Product Specifications

Attenuation (Typical Values)	$\leq 0.33$ dB/km at 1310 nm $\leq 0.31$ dB/km at 1383 nm or less than attenuation at 1310 nm# $\leq 0.19$ dB/km at 1550 nm $\leq 0.21$ dB/km at 1625 nm
Mode field diameter	$9.1 \pm 0.4$ $\mu$ m at 1310 nm $10.3 \pm 0.5$ $\mu$ m at 1550 nm
Cable cutoff wavelength	$\leq 1260$ nm
Zero dispersion wavelength	1300 nm to 1324nm
Zero dispersion slope	$\leq 0.090$ ps/nm <sup>2</sup> .km
Dispersion at 1285nm -1330nm	$\leq 3.5$ ps/nm.km
Dispersion at 1550 nm	$\leq 17.5$ ps/nm.km
Dispersion at 1625 nm	$\leq 22$ ps/nm.km
PMD Individual Fibre*	$\leq 0.1$ ps/ $\sqrt$ km
PMD LDV	$\leq 0.06$ psh/ $\sqrt$ km
Cladding diameter	$125 \pm 0.7$ $\mu$ m
Core-clad concentricity error	$\leq 0.5$ $\mu$ m
Cladding non-circularity	$\leq 0.8$ %
Coating non-circularity	$\leq 4$ %
Coating diameter	$242 \pm 5$ $\mu$ m
Coating-cladding concentricity error	$\leq 12$ $\mu$ m

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

\* Individual Fiber values may change when cabled

### Mechanical Characteristics

Proof Test Levels	$\geq 100$ kpsi (0.7GN/m <sup>2</sup> ). This is equivalent to 1% strain
Coating strip force(Force to mechanically strip the dual coating)	$\geq 1.3$ N (0.3 lbf) and $\leq 5.0$ N (1.1lbf)
Fibre curl	$\geq 4$ m

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

Deployment condition	Wavelength	Induced attenuation
1 turn, 16 mm (0.6 inch) radius	1550 nm	$\leq 0.03$ dB
100 turns, 25 mm radius	1310 nm 1550 nm	$\leq 0.03$ dB $\leq 0.03$ dB
100 turns, 30 mm radius	1625 nm	$\leq 0.03$ dB

## Environmental Characteristics

Temperature dependence Induced attenuation, -60°C to +85°C at 1310, 1550, 1625 nm	$\leq 0.05$ dB/km
Temperature humidity cycling Induced attenuation, -10°C to +85°C and 95% relative humidity at 1310, 1550, 1625 nm	$\leq 0.05$ dB/km
High temperature and humidity aging 85°C at 85% RH, 30 days Induced attenuation at 1310, 1550, 1625 nm due to aging	$\leq 0.05$ dB/km
Water immersion, 30 days Induced attenuation due to water immersion at 23±2°C at 1310, 1550, 1625 nm	$\leq 0.05$ dB/km
Accelerated aging (Temperature), 30days Induced attenuation due to temperature aging at 85±2°C at 1310,1550,1625 nm	$\leq 0.05$ 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	$\leq 0.03$ dB/km
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm	$\leq 0.02$ dB/km
Point discontinuities at 1310 nm & 1550 nm	$\leq 0.05$ dB
Dynamic fatigue parameter (Nd)	$\geq 20$
Shipping Length: Standard length per reel available up to 50.4 km	

\*Typical values

## Manufacturing Process

STL controls every stage of the manufacturing process so that quality is built in to every meter of fibre, 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 OH-LITE® (E) complies with or exceeds ITU recommendation G.652.C/D and IEC 60793-2-50. B1.3 fiber category.

## Service USP's

- Complete range of optical fibre 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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