STL G654E 125 Fibre

Provisional specification

Product Description

STL G654E 125 Fibre is low loss cut-off shifted and large effective area single mode optical fibre. This fiber is compliant with recommendation ITU-T G654E

Product Application

STL G654E 125 Fibre is ideal for long distance digital transmission applications such as long-haul terrestrial systems.

Product Benefits

STL G654E 125 Fibre is low loss fibre optimized to use 1530-1625 nm region. It has large effective area which helps in reduced non-linear effects and makes it suitable for long-haul high-capacity optical communication systems.

Product Specifications

Attenuation	≤ 0.16 dB/km at 1550 nm
	≤ 0.18 dB/km at 1625 nm
Mode Field Diameter	12.5 ± 0.5 µm at 1550 nm
Effective Area	125 µm² typical
Cable Cutoff wavelength	≤ 1530 nm
Zero Dispersion slope at 1550 nm	0.05 - 0.07 ps/nm².km
Dispersion at 1550 nm	≤ 23 ps/nm.km
Dispersion at 1625 nm	≤ 29 ps/nm.km
PMD LDV	≤ 0.06 ps/√km
Cladding diameter	125.0 ± 0.7 µm
Core-clad concentricity error	≤ 0.4 %
Cladding non-circularity	≤ 0.7 µm
Coating diameter	242 ± 5 µm (uncolored)
Coating-cladding concentricity error	≤ 12 µm

* Individual PMD values may change when cabled

Deployment Conditions

Macro bend	Induced Attenuation
100 turn, 30 mm radius	≤ 0.03 dB at 1550 nm
	≤ 0.1 dB at 1625 nm

Mechanical Characteristics	
Proof Test Levels	≥ 100 kpsi (0.7GN/m²). This is equivalent to 1% strain
Coating strip force (Force to mechanically strip the dual coating)	≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Fiber curl	≥ 4 m

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

Environmental Characteristics

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

Other Performance Characteristics*

Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm	≤ 0.02 dB/km
Point discontinuities at 1550 nm	≤ 0.05 dB
Dynamic fatigue parameter (Nd)	≥ 20

* 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 G654E 125 Fibre complies or exceeds the recommendation of ITU-T G.654.E.

Service USP's

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

For additional information please contact your sales representative.

You can also visit our website at **www.stl.tech**