



STL Stellar 250 Fibre

ITU-T G.657.A2 Single Mode Optical Fibre

Product Description

STL Stellar 250 Fibre is the first to offer ITU-T G.657.A2 bend performance with a 9.1 micron standard mode field diameter, ensuring complete compatibility with existing networks. The induced loss of this fibre at the tightest bends is a factor of two lower than the ITU-T G.657.A2 standard providing installation and operational efficiencies in high density (HD) networks. This low bend loss extends to the longer wavelengths required for future system upgrades. Fibres with low bend loss fibres allow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to improve network installation and operational efficiencies has led to wider application of bend-insensitive fibres. STL Stellar 250 Optical Fibre is suitable for use in any network where full backward compatibility with deployed fibres is required.

Product Benefits

- Fully compatible with existing networks built with G.652.D and G.657.A1 fibres - due to 9.1 micron standard mode field diameter.
- Provides installation and operational efficiencies in high density networks - due to very low bend loss.
- Future system ready - in that low bend loss extends to longer wavelengths

Standard Compliance

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.

Product Specifications

| Optical Parameters | | |
|--|--------------------------|--|
| Attenuation Max. (dB/km) | | |
| 1310 nm | | ≤ 0.33 |
| 1383 nm | | ≤ 0.31 |
| 1550 nm | | ≤ 0.19 |
| 1625 nm | | ≤ 0.21 |
| Macro bend loss (dB) | | |
| 1 turn 7.5 mm radius | 1550nm | ≤ 0.2 |
| 1 turn 10 mm radius | | ≤ 0.1 |
| 10 turns 15 mm radius | | ≤ 0.03 |
| 1 turn 7.5 mm radius | 1625nm | ≤ 0.5 |
| 1 turn 10 mm radius | | ≤ 0.2 |
| 10 turns 15 mm radius | | ≤ 0.1 |
| Mode Field Diameter (µm) at 1310 nm | | 9.1 ± 0.4 |
| Mode Field Diameter (µm) at 1550 nm | | 10.3 ± 0.5 |
| Cable cut-off wavelength (nm) | | ≤ 1260 |
| Zero dispersion wavelength (nm) | | 1300 to 1324 |
| Dispersion at 1550nm (ps/nm.km) | | ≤ 18 |
| Zero Dispersion Slope (ps/nm ² .km) | | ≤ 0.092 |
| PMD LDV (ps/√ km) | | ≤ 0.06 |
| Individual Fibre PMD* (ps/√ km) * Individual PMD values may change when cabled | | ≤ 0.1 |
| Point of discontinuities 1310nm & 1550nm (dB) | | ≤ 0.05 |
| Geometrical Parameters | | |
| Cladding Diameter (µm) | | 125 ± 0.7 |
| Core Clad Concentricity error (µm) | | ≤ 0.5 |
| Cladding Non-circularity (%) | | ≤ 0.7 |
| Coating Diameter (uncoloured) (µm) | | 242 ± 5 |
| Coating Cladding Concentricity error (µm) | | ≤ 12 |
| Mechanical & Environmental Characteristics | | |
| Temperature dependence | -60°C to +85°C | ≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)) |
| Temperature humidity cycling | -10°C to +85°C, 95% RH | |
| Water Immersion | 30 days, 23 ± 2°C | |
| High temperature and humidity aging | 30 days 85 ± 2°C, 85% RH | |
| Accelerated Aging (Temperature) | 30 days, 85 ± 2°C | |
| Proof Testing | | ≥ 125 (kpsi) (0.86GN/m ²) (This is equivalent to 1.2% strain) |
| Fibre Curl (m) | | ≥ 4 |
| Performance Characteristics | | |
| Coating strip force | | ≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf) |
| Dynamic fatigue parameter (N _d) | | ≥ 20 |
| Effective group index of refraction (Typical Values) | | 1.4672 at 1310 nm 1.4679 at 1550 nm 1.4684 at 1625 nm |
| Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km) | | ≤ 0.03 |
| Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km) | | ≤ 0.02 |

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For additional information please contact your sales representative.

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

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