



# STL Nova 250 Fibre

## ITU-T G.657.A1 Single Mode Optical Fibre

### Product Description

STL NOVA Optical Fibre was one of the first to offer ITU-T G.657.A1 bend performance with a 9.1 micron standard mode field diameter, ensuring complete compatibility with existing networks. The low induced loss of this fibre under tight bends provides installation and operational efficiencies in high density networks. This low bend loss extends to the longer wavelengths required for future system upgrades. Fibres with low bend loss 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 NOVA 250 Optical Fibre is suitable for use in any network where full backward compatibility with deployed fibres is required.

### Product Benefits

- Fully compatible with G.652.D and STL Stellar fibres - due to 9.1 micron standard mode field diameter.
- Increases reach and/or system margin - due to low attenuation.
- Provides installation and operational efficiencies in high density networks - due to 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		
<b>Attenuation Max. (dB/km)</b>		
1310 nm		≤ 0.33
1383 nm <sup>#</sup> # After hydrogen aging according to IEC-60793-2-50 regarding the B-652.D fibre category		≤ 0.31
1550 nm		≤ 0.19
1625 nm		≤ 0.21
<b>Macro bend loss (dB)</b>		
1 turn 10 mm radius	1550nm	≤ 0.5
10 turns 15 mm radius		≤ 0.1
1 turn 16 mm radius		≤ 0.03
1 turn 10 mm radius	1625nm	≤ 1.5
10 turns 15 mm radius		≤ 0.3
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)		≤ 17.5
Zero Dispersion Slope (ps/nm <sup>2</sup> .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 <sup>2</sup> ) (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 <sub>d</sub> )		≥ 20
Effective group index of refraction (Typical Values)		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 (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

01/062023

**For additional information please contact your sales representative.**

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