



# STL DOF-Lite 655 Fibre

## ITU-T G.655.C and D Single Mode Optical Fibre

### Product Description

STL DOF-Lite 655 Single Mode Optical Fibre is a Non-Zero Dispersion Shifted Fibre (NZ-DSF) with large effective area.

### Product Application

STL DOF-Lite 655 fibre is ideal for high data-rate, multi-wavelength long haul transmission. It has a large effective area for improved power handling plus dispersion optimized for dense wavelength division multiplexing (DWDM). It is suitable for transmission in the conventional C-band (1530-1565 nm) and L-band (1565- 1625 nm). STL DOF-Lite 655 Fibre exceeds the requirements of today's high- channel-count 2.5 Gb/s and 10 Gb/s systems and supports migration to next generation 40 Gb/s data rates.

### Product Benefits

STL DOF-Lite 655 fibre has a large effective area for improved power handling plus dispersion optimized for dense wavelength division multiplexing (DWDM). This combination reduces the onset of non-linear transmission effects such as four-wave mixing and self-phase modulation, whilst also reducing the cost and complexity of dispersion compensation.

### 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.

## Parameters

Optical Parameters		
Attenuation Max. (dB/km)		
1550 nm		≤ 0.22
1625 nm		≤ 0.24
Macro bend loss (dB)		
100 turns 30 mm radius	1550nm	≤ 0.05
1 turn 16 mm radius	1625nm	≤ 0.5
100 turns 30 mm radius		≤ 0.1
Mode Field Diameter (μm) at 1550 nm		9.6 ± 0.4
Cable cutoff wavelength (nm)		≤ 1450
Dispersion at 1460 nm (ps/nm.km)		-4.02 to 0.15
Dispersion at 1530 nm (ps/nm.km)		2.00 to 4.00
Dispersion at 1550nm (ps/nm.km)		3.00 to 5.00
Dispersion at 1565 nm (ps/nm.km)		4.00 to 6.00
Dispersion at 1625 nm (ps/nm.km)		5.77 to 11.26
Individual fibre PMD and PMD LDV (ps/√ km)		≤ 0.15
Point of discontinuities 1550nm & 1625nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (μm)		125 ± 0.7
Core Clad Concentricity error (μm)		≤ 0.5
Cladding Non-circularity (%)		≤ 1.0
Coating Diameter (uncoloured) (μm)		242 ± 5
Coating Cladding Concentricity error (μm)		≤ 12
Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 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	
Mechanical Characteristics		
Proof Testing		≥ 125 (kpsi) (0.86GN/m²) (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)		1.470 at 1550 nm
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.05
Effective area μm² (Typical Value)		70

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

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