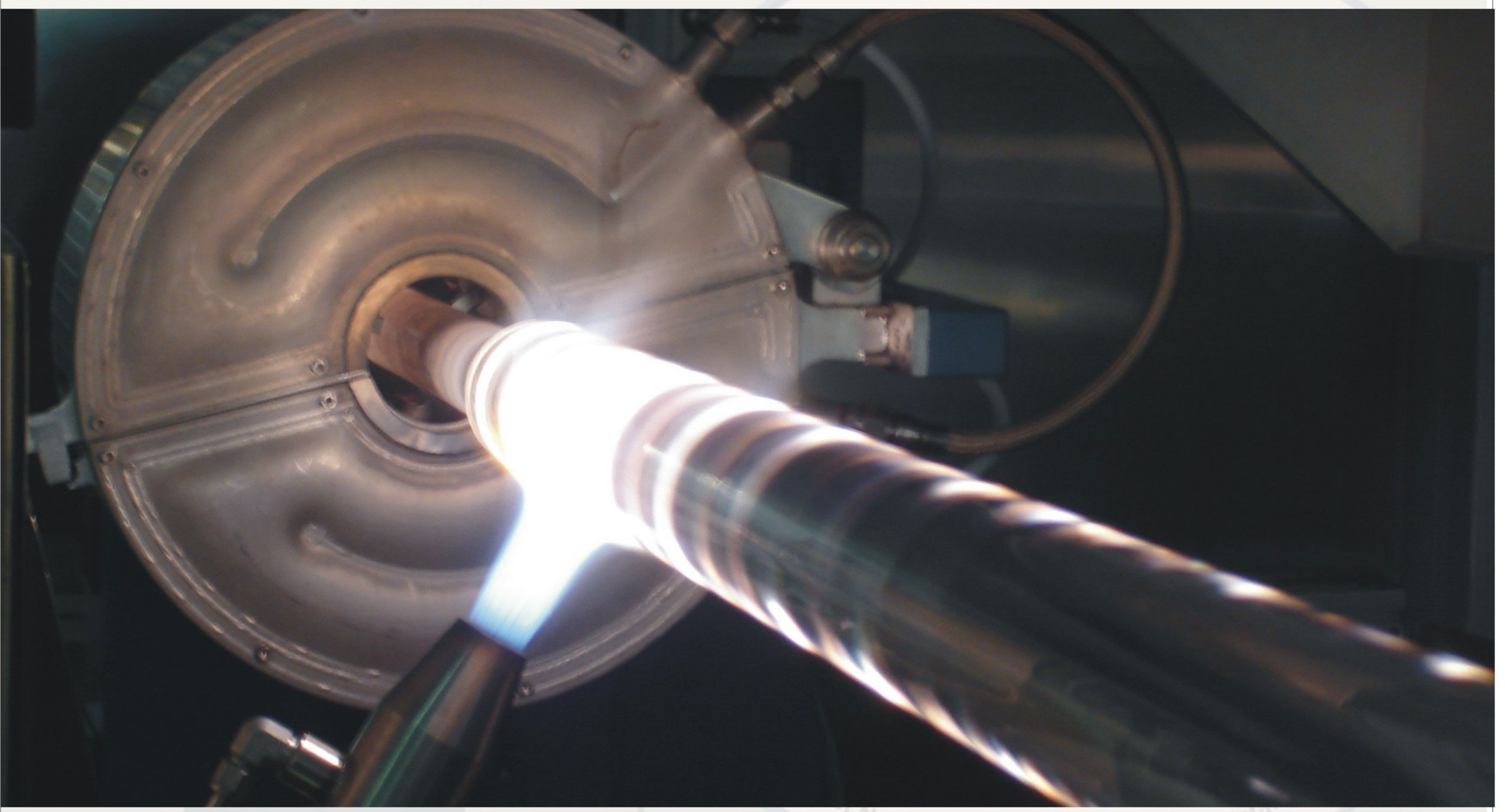
OPTIC FIBRE GOA

(A Unit of Universal Cables Limited)



Technical Specification for Single Mode Optical Fibre ITU-T G.652B OFG / SMF/01

General Design

Optic Fibre Goa (OFG) offers a Single Mode Optical Fibre which enables customers to construct high capacity, low-cost transmission in Metropolitan and WDM network. These single mode optical fibres are step index and matched clad type complied with the latest ITU-T G.652.B recommendations.

Technical Specification

Core	Germanium doped Silica
Cladding	Silica
Coating	Dual layer of UV-Cured Acrylate

Mode Field Diameter	9.2 ± 0.4 µm at 1310nm
	10.4 ± 0.5 µm at1550nm
Core Concentricity Error	≤ 0.50 µm
Cladding Diameter	125 ± 0.7 µm
Cladding Non-Circularity	≤ 0.8%
Fiber Curl Radius	≥ 4 m
Coating Diameter	245 ± 5 µm (Uncolored)

Attenuation in1285-1330nm	≤ 0.370dB/km
Attenuation at 1310nm	≤ 0.340dB/km
Attenuation at 1550nm	≤ 0.210dB/km
Attenuation between 1525 to 1625nm	≤ 0.220dB/km
Point Discontinuity at 1310/1550 nm	≤ 0.05dB/km
Fiber Cut-off Wavelength	between 1190-1320nm
Cable Cut-off Wavelength	≤ 1240nm
Zero Dispersion Wavelength	≤1302-1322nm
Zero Dispersion Slope	≤ 0.090ps/nm^2.km
Dispersion in 1285-1330 nm	≤ 3.5ps/nm.km
Dispersion in 1270-1340 nm	≤ 5.3ps/nm.km
Dispersion at 1550 nm	≤18.0ps/nm.km
Polarization Mode Dispersion (PMD)	≤ 0.15ps/$\sqrt{km}$

1) Sudden irregularities in Attenuation are less than 0.1dB.
2) The Spectral Attenuation is measured on Uncabled Fibre.
3) The Spectral Attenuation in the 1250nm-1625nm band at an interval of 10nm are measured.

Mechanical Characteristics

Fibre Proof stress level	1.05% (0.75 Gpa)
Coating Strip Force (F)	1.3 < F < 5.0 N
Bending Induced Attenuation at 1550 nm	
1) 100 turns on 30 mm radius	≤0.05dB
2) 1 turn on 32 mm diameter	≤0.05dB
Dynamic Tensile Strength	
1) Un-aged	≥ 550Kpsi or >3.8 Gpa
2) Aged	≥ 440Kpsi or >3.0 Gpa
Dynamic fatigue	≥ 20
Static fatigue	≥ 20

Environmental Characteristics

Induced Attenuation at 1310nm & 1550 nm at 10 °C to +85° C and 95% RH	≤ 0.05 dB/km
Induced attenuation at 1550nm At -60 °C to +85 °C	≤ 0.05dB/km
Induced attenuation at1550nm due to Temperature Ageing 852 °C	≤ 0.05dB/km
Induced Attenuation at 1550nm due to Water immersion at 23 °C 2 °C	≤ 0.05dB/km

Coated Fibre shows no discernible Change in color when aged for Relative humidity
(30 days at 85 °C and 95% Humidity 20 days in dry 85 °C)

Packaging

Fibre Length	upto 50.4km

Performance Characteristics

Characterized parameters are typical values:-

Core Diameter	8.30 µm
Zero dispersion wavelength	1314 nm
Zero dispersion Slope	0.085ps/nm^2 km
Fatigue Resistance Parameter	>20
Effective Group index of refraction	1.4670 @ 1310nm
	1.4680 @ 1550nm
	1.4690 @ 1625nm

Test Certification and Documentation

Fibre ID & Length
Attenuation at 1310nm and 1550nm
Chromatic dispersion at 1285 to 1330nm and 1550nm
Cut-off Wavelength
Mode field diameter at 1310nm
Geometry of Fibre and Coating.

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