

TECHNICAL OVERVIEW

Spectral Range

UVNSS: 190–700 nm

Core Diameter

100–600 μm

Core / Cladding Ratio

Standard 1:1.06–1:1.4
or customized upon request

Numerical Aperture

0.12 \pm 0.02
0.22 \pm 0.02
0.28 \pm 0.02

OH Content

High (<700 ppm)

Operating Temperature

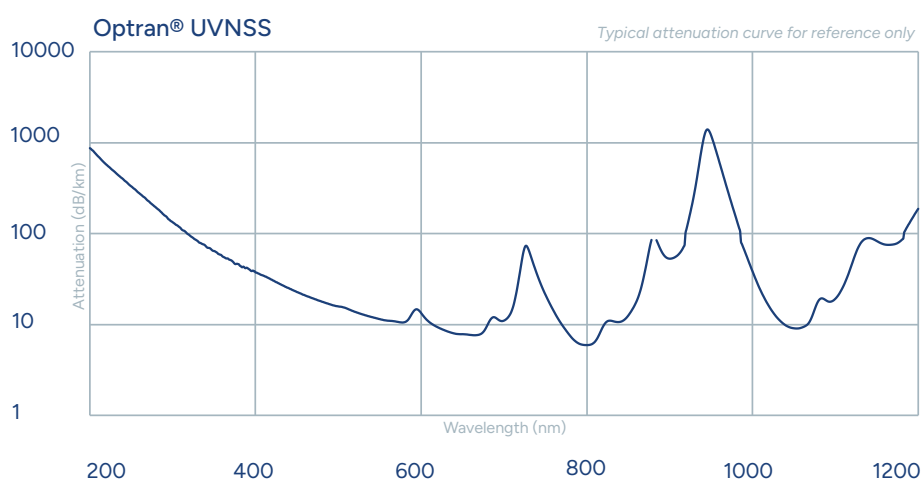
-190 °C to +150 °C

Standard Proofstress

70 kpsi (Polyimide)

Stabilized All-Silica Fibers with Hermetic Layer

Compared to standard UV fiber types, UVNSS fibers with a hermetic carbon layer extend the lifetime under harsh UV or Gamma radiation, enabling high and stable transmission in UV-VIS range. The integrated carbon layer provides additional protection against environmental influences, supporting long-term stability under demanding operating conditions.



PERFORMANCE & INTEGRATION NOTES

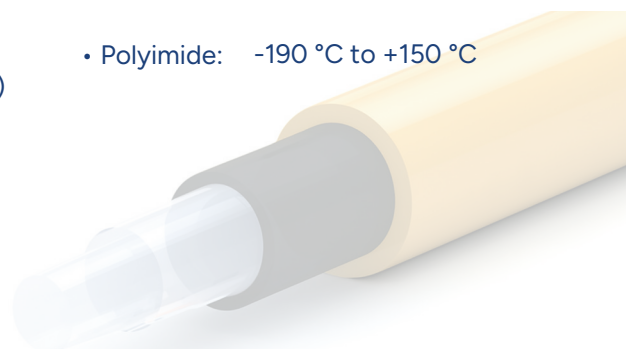
- Hermetic carbon layer acts as a barrier against gaseous species
- Enables hydrogen retention for reduced solarization under UV exposure
- High-OH core composition optimized for deep UV transmission
- Operating temperature limited to 150 °C to maintain stabilization effect

APPLICATIONS

- High-radiation environments
- Plasma diagnostics (e.g. H-alpha)
- UV Spectroscopy
- Fluorescence Excitation
- Semiconductor Processing

MATERIAL OPTIONS

- Polyimide: -190 °C to +150 °C



*In-house preform production and controlled drawing processes.
Reproducible optical and mechanical properties across production batches.*

*Additional specifications, reference data and project-specific qualification information available upon consultation.
Product specifications are subject to change without notice.*