

TOP® UV-SRC Hermetic Carbon-coated Fiber

Hermetic Carbon-coated Quartz/Quartz Fiber

TOPRAYS has introduced a new product designed specifically for the UVC range. UV-SRC fiber offers stronger solarization resistance (UV-aging resistance) and higher stability, expanding its possible applications in many scenarios.



Wavelength

TOP® UV-SRC	180 – 2100 nm
TOP® UV-SR	190 – 2100 nm

Numerical Aperture (NA)

Low	0.12 ± 0.02 0.15 ± 0.02
Standard	0.22 ± 0.02
High	0.26 ± 0.02 0.28 ± 0.02

Advantages

- Significantly improved deep-UV solarization resistance (UV-aging resistance)
- Hermetic coating
- Custom numerical aperture (NA) on request, range 0.12 to 0.30
- Extremely low NA expansion
- Biocompatible materials
- Produced in facilities compliant with GMP and ISO 9001

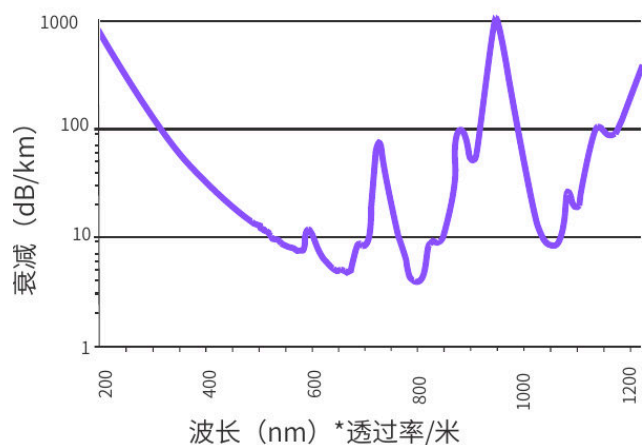
Technical Parameters

Operating Temperature	-190 to +150 °C
Core Diameter	Available 90 to 1000 μm
Standard Core/Cladding Ratio	1 : 1.06 1 : 1.1 1 : 1.2 1 : 1.4 or custom
OH Content	High (> 700 ppm)
Standard Proof Test	70 kpsi (polyimide jacket)
Minimum Bending Radius	50 × cladding diameter (short-term mechanical stress); 300 × core diameter (for high-power laser use)

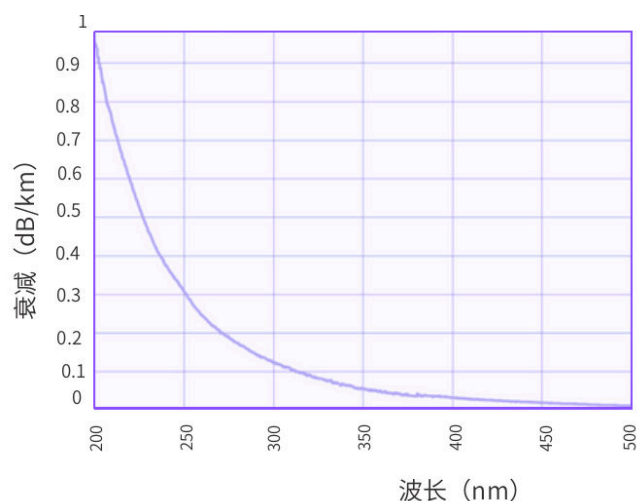
Attenuation

The chart below outlines the attenuation at different wavelengths:

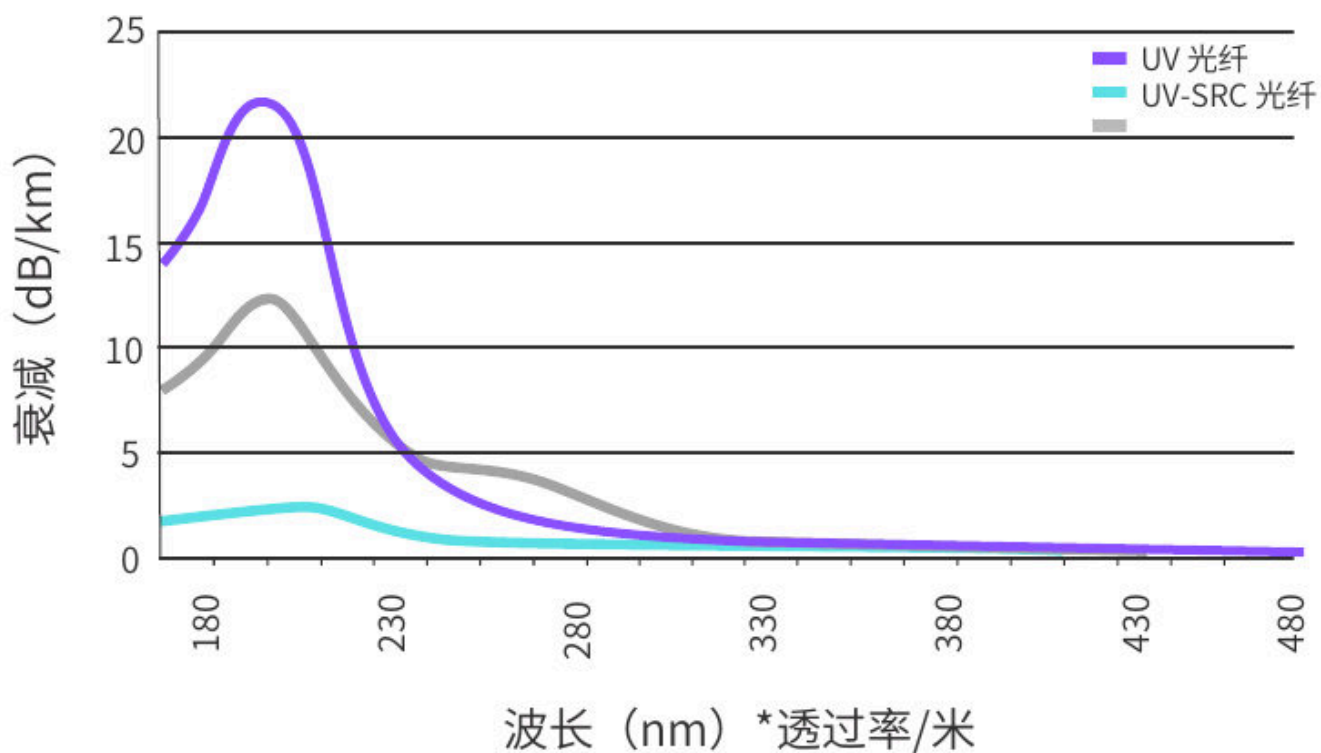
TOP® UV-SRC



TOP® UV-SR



Solarization (UV-aging) resistance comparison

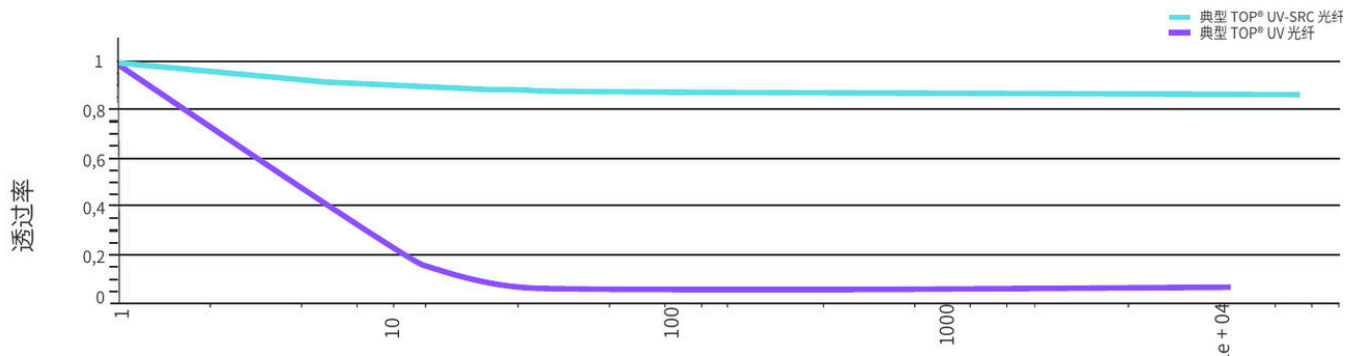


Applications

The preferred choice for applications such as spectroscopic analysis, medical diagnosis, medical technology and laser delivery systems.

Transmission comparison

Attenuation caused by ArF laser irradiation (1000 J/cm²)



Transmission change of a 2 m fiber at 214 nm.Irradiated with a D2 lamp and CaF2 lens, with maximum intensity at 180 to 240 nm.The chart above compares the solarization behaviour of TOP® UV and TOP® UV-SRC at 214 nm.