

TOP® UV-HC / NIR-HC Hard-polymer-clad Fiber

Specification Datasheet · TopRays Optical Fiber

Our hard-polymer-clad fibers have a high numerical aperture and suit a wide range of applications, from remote illumination to photodynamic therapy. This premium fiber is a cost-effective alternative to quartz/quartz fibers. Discover our range of jacket types and sizes, including options precisely customized to your specifications.



Technical Parameters

- Operating temperature: -40 to +150 °C
- Core diameter: 100 to 2000 μm available
- OH content: TOP® UV-HC: high (< 700 ppm); TOP® NIR-HC: low (< 1 ppm)
- Standard proof test: 100 kpsi
- Minimum bending radius: 50 × cladding diameter (short-term mechanical stress); 150 × core diameter (when used with high-power lasers)

Item	TOP® UV-HC	TOP® NIR-HC
Wavelength	300 – 1100 nm	400 – 2200 nm

Numerical Aperture (NA)	Value
Low	0.37 ± 0.02
High	0.48 0.50 0.52 ± 0.02 0.57 0.62 ± 0.02

Advantages

- High cost-effectiveness (compared with quartz/quartz fibers)
- High concentricity
- All-dielectric, non-magnetic design
- Step-index profile
- Biocompatible materials
- Sterilization by ethylene oxide (ETO) and similar methods is possible

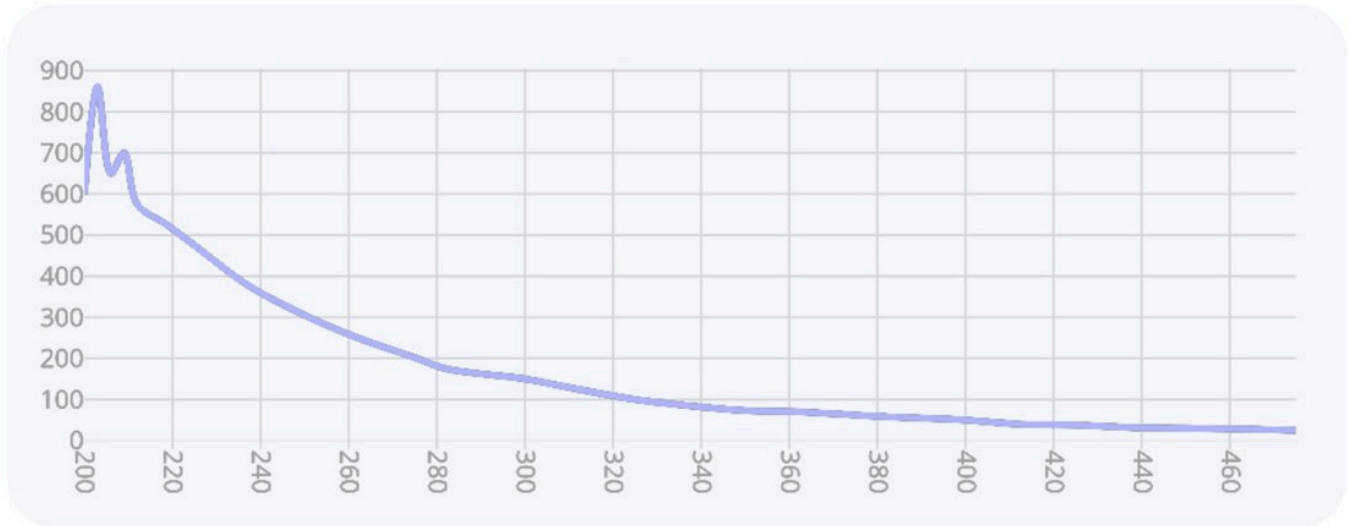
Construction: quartz glass core · hard-polymer cladding · jacket

Jacket Options

Jacket	Operating Temperature
ETFE (Tefzel®)	-40 to +150 °C

Jacket	Operating Temperature
Nylon	-40 to +100 °C
Acrylate	-40 to +85 °C
Acrylate DeSolite® DF-0009	-40 to +150 °C

Attenuation



The chart below summarizes attenuation at different wavelengths.

Applications

A preferred solution for multiple applications such as remote illumination and photodynamic therapy.