

TOP® MID-IR Silver-halide Fiber

Specification Datasheet · TopRays Optical Fiber

This unique fiber is made of photosensitive compounds (AgCl, AgBr) and has extremely low attenuation in the mid-infrared (MIR) band.



Attenuation

Right-hand scale shows transmittance per metre

Technical Parameters

Parameter	Value
Operating Temperature	-273 to +140 °C
Standard Diameter	Core/cladding (µm): 240/300 600/700 900/1000
Laser Damage Threshold	Continuous CO2 laser > 12 kW/cm²
Refractive Index (core)	2.1
Reflection Loss @ 10.6 µm	25%

Specifications

Parameter	Value
Wavelength	3 – 17 µm
Numerical Aperture (NA)	Low 0.13 ± 0.02 Standard 0.25 ± 0.02 High 0.35 ± 0.02

Advantages

- Optimized for CO and CO2 laser applications
- Low attenuation in the mid-infrared (MIR) band
- Robust and flexible
- Non-hygroscopic, non-toxic material
- Available as core/cladding structure or pure-core version

Structure

Mixed silver-halide core · mixed silver-halide cladding · PEEK tube