

DESCRIPTION

IRphotonics Mid Infrared Fiber has an extremely low hydroxyl ion content providing high transmission efficiency from the UV through mid infrared wavelengths (up to 4.5 μm).

IRphotonics careful choice of materials and its patented manufacturing process gives this fiber outstanding optical, mechanical and environmental properties compared to other infrared fiber technologies.

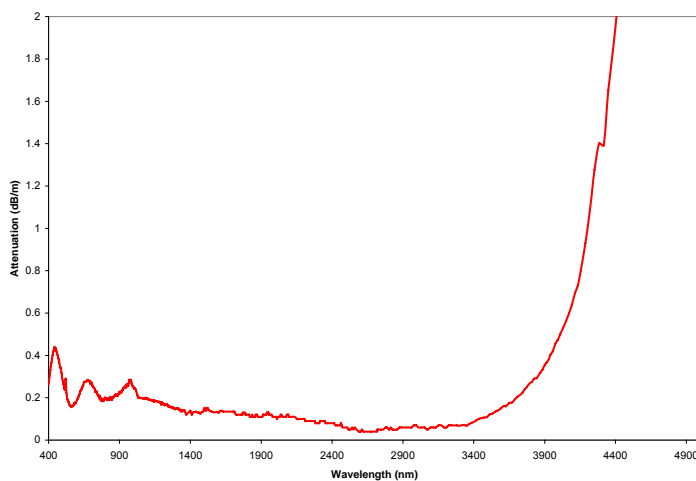
FEATURES

- Transparent in UV, VIS, NIR, MID-IR
- Flat Spectral Attenuation
- Very low Fresnel Losses of 4%
- High Mechanical Flexibility

APPLICATIONS

- Chemical sensing
- Industrial / Scientific Diagnostic
- Spectroscopy

TYPICAL SPECTRAL ATTENUATION



Multimode Mid-IR Fiber



FIBER SPECIFICATIONS

- Spectral Transmission from 0.3 to 4.5 μm
- Fiber Core Diameter from 85 μm to 600 μm
- Operating Temperature: -20°C to 150°C
- Standard Numerical Aperture: 0.2 ± 0.02
- Breaking Bend Radius ≤ 4 mm (125 μm cladding fiber)
- Two point bending test > 150 kpsi
- Proof Test Level > 50 kpsi
- Low Attenuation: < 0.2 dB/m in 1.3 to 3.8 μm range

SPECIFICATIONS

SPECIFICATION	M085	M100	M200	M300	M450	M600
Core Diameter	85 $\mu\text{m} \pm 7$	100 $\mu\text{m} \pm 7$	200 $\mu\text{m} \pm 7$	300 $\mu\text{m} \pm 10$	450 $\mu\text{m} \pm 15$	600 $\mu\text{m} \pm 15$
Cladding Diameter	125 $\mu\text{m} \pm 2$	150 $\mu\text{m} \pm 5$	250 $\mu\text{m} \pm 7$	350 $\mu\text{m} \pm 10$	520 $\mu\text{m} \pm 15$	700 $\mu\text{m} \pm 15$
Acrylate Buffer Diameter	260 $\mu\text{m} \pm 15$	270 $\mu\text{m} \pm 15$	355 $\mu\text{m} \pm 15$	470 $\mu\text{m} \pm 20$	620 $\mu\text{m} \pm 25$	770 $\mu\text{m} \pm 30$
Breaking Bend Radius	4 mm	7 mm	10 mm	15 mm	25 mm	45 mm
Numerical Aperture	0.2	0.2	0.2	0.2	0.2	0.2

ORDERING INFORMATION

1st) Indicate the product code:

M	YYY
	Core Diameter
	085
	100
	200
	300
	450
	600

2nd) Indicate the desired fiber length in meters: **L = xx m** (00 to 99 meters)

Examples:

M085 with L = 1 m for a 1m long 85/125um fiber
M200 with L = 10 m for a 10 m long 200/250um fiber

IRPHOTONICS CUSTOMIZATION PROGRAM

If you have any unique requirements, please contact us to discuss tailoring a product or design to optimize optical performance for your specific application. Custom NA's, fiber diameters and other specifications can be adapted to your requirements.

Contact IRphotonics for prices and availability or to obtain the name of your local representative.

IRphotonics Inc operating under ISO 9001-2000 Quality Management System.

IRphotonics has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation.