

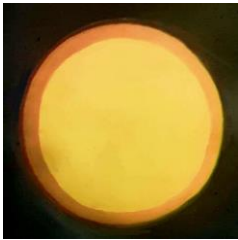
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Discover art photonics range of **PIR mid-infrared fibers**:

In the **mid infrared**, silver halide polycrystalline infrared (PIR) fibers are suitable for coupling to black body sources, LEDs, CO₂ lasers and solid state infrared lasers including Quantum Cascade types.

Specifications	
Operating wavelength	3 – 17 μm
Typical optical loss in 9-13 μm range	0.2 – 0.3 dB/m
Core refractive index	2.15
Fresnel loss (backwards reflection)	25% per face (air)
Core / cladding material	AgCl : AgBr
Protective jacket	no
Operating temperature	– 273 to 140 °C



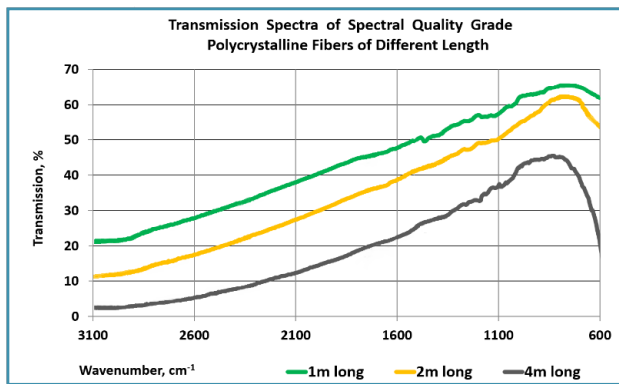
Standard fiber	Type	Core/clad diameter	Numerical aperture	Minimum bend radius
PIR 240/300	Step Index Multimode	240 \pm 15 300 +0/-15 μm	0.30 \pm 0.03	45 mm
PIR 400/500	Step Index Multimode	410 \pm 15 500 +0/-15 μm	0.30 \pm 0.03	75 mm
PIR 600/700	Step Index Multimode	600 \pm 20 700 +0/-15 μm	0.30 \pm 0.03	100 mm
PIR 900/1000	Step Index Multimode	860 \pm 20 1000 +0/-20 μm	0.30 \pm 0.03	150 mm

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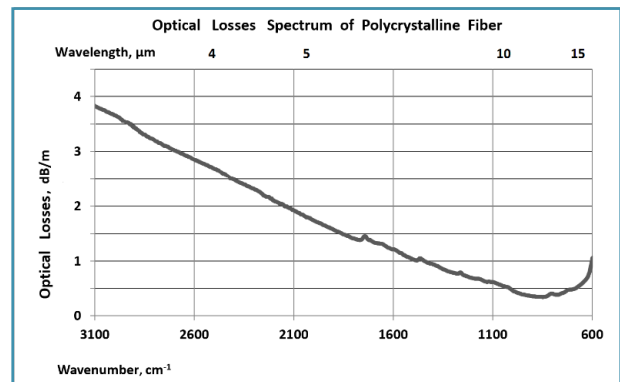


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Transmission spectra



Optical Losses



Applications

- Mid-IR spectroscopy
- Flexible IR pyrometry
- Flexible IR-Imaging systems
- Power delivery for Quantum Cascade Lasers
- Power delivery for CO and CO₂ Lasers

CO and CO₂ power delivery

Attenuation @ 10.6 μm 0.2 – 0.4 dB/m

Laser damage threshold for CW CO₂ laser > 12 kW/cm²

All PIR fibers are available as *fiber patch cables*

CUSTOMIZE
your protective tubing
and connectors



Protective tubing

- Peek (130 mm min. bending radius)
- Metal PVC coated (80 mm min. bending radius)

Connectors

- SMA 905, FC/PC, FC/APC with Titanium ferrule

