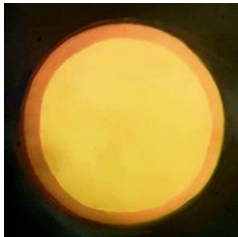




## Discover LVF range of **PIR mid-infrared fibers**:

In the **mid infrared**, our silver halide polycrystalline infrared (PIR) fibers are suitable for coupling to black body sources, LEDs, CO<sub>2</sub> lasers and solid state infrared lasers including Quantum Cascade types.

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

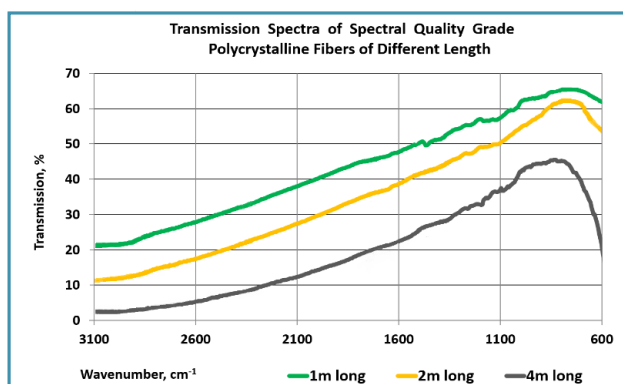
Standard fiber	Type	Core/clad diameter	Numerical aperture	Minimum bend radius
PIR 240/300	Step Index Multimode	240 ± 15 300 +0/-15 μm	0.30 ± 0.03	45 mm
PIR 400/500	Step Index Multimode	410 ± 15 500 +0/-15 μm	0.30 ± 0.03	75 mm
PIR 600/700	Step Index Multimode	600 ± 20 700 +0/-15 μm	0.30 ± 0.03	100 mm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



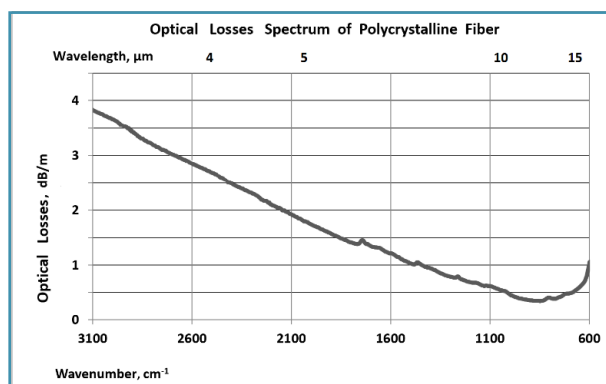


## Discover LVF range of PIR mid-infrared fibers:

### Transmission spectra



### Optical Losses

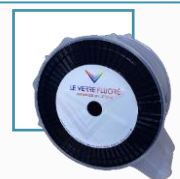


### Applications

- Mid-IR spectroscopy
- Flexible IR pyrometry
- Flexible IR-Imaging systems
- Power delivery for Quantum Cascade Lasers
- Power delivery for CO and CO<sub>2</sub> Lasers

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

### CO and CO<sub>2</sub> power delivery

Attenuation @ 10.6 μm                      0.2 – 0.4 dB/m

Laser damage threshold for CW CO<sub>2</sub> laser                      > 12 kW/cm<sup>2</sup>

