



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

In the **mid infrared**, our chalcogenide infrared (CIR) fibers have optical transmission to match the output from LEDs and solid state infrared lasers including Quantum Cascade types.



### Specifications

Operating wavelength	1.1 – 6.5 $\mu\text{m}$
Typical optical loss in 9-13 $\mu\text{m}$ range	0.2 – 0.4 dB/m
Core refractive index	2.43
Fresnel loss (backwards reflection)	31% per face (air)
Core / cladding material	As <sub>2</sub> S <sub>3</sub>
Protective jacket	Fluoro polymer + PVC
Operating temperature	– 273 to 90 °C

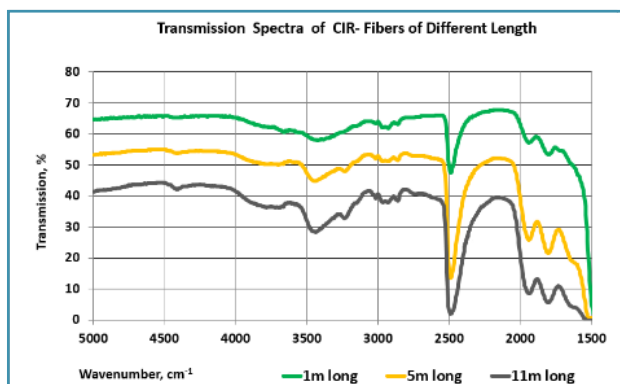
Standard fiber	Type	Core/clad diameter	Protective jacket diameter	Numerical aperture	Minimum bend radius
CIR 8/300	Step Index Single mode	8 $\pm$ 1 300 $\pm$ 15 $\mu\text{m}$	400 $\pm$ 20 $\mu\text{m}$	0.25 $\pm$ 0.02	60 mm
CIR 50/250	Step Index Few-mode	50 $\pm$ 3 250 $\pm$ 10 $\mu\text{m}$	410 $\pm$ 20 $\mu\text{m}$	0.13 $\pm$ 0.02	50 mm
CIR 250/300	Step Index Multimode	250 $\pm$ 10 300 $\pm$ 15 $\mu\text{m}$	400 $\pm$ 30 $\mu\text{m}$	0.30 $\pm$ 0.03	60 mm
CIR 340/400	Step Index Multimode	340 $\pm$ 10 400 $\pm$ 15 $\mu\text{m}$	510 $\pm$ 30 $\mu\text{m}$	0.30 $\pm$ 0.03	80 mm
CIR 500/550	Step Index Multimode	500 $\pm$ 1 550 $\pm$ 15 $\mu\text{m}$	700 $\pm$ 30 $\mu\text{m}$	0.30 $\pm$ 0.03	100 mm



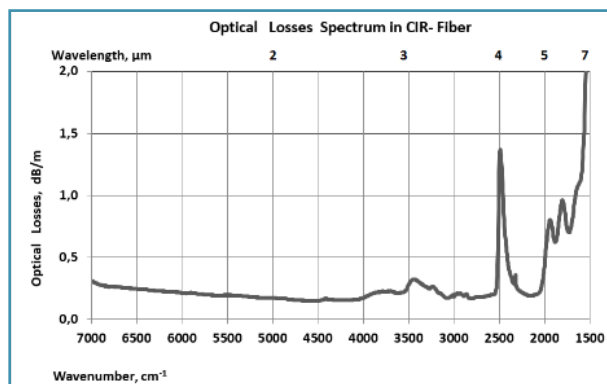


## Discover LVF range of PIR mid-infrared fibers:

### Transmission spectra



### Optical Losses

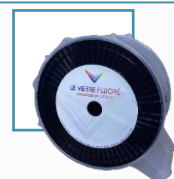


### Applications

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

All CIR 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

