

Polycrystalline IR-Fibers & Cables

optromix



FlexiRay®

- High transmittance from 4 μm up to 18 μm
- High flexibility and no toxicity
- Suitable for CO₂- laser power delivery up to 50W
- Low attenuation at 10.6 μm (0.1-0.5 dB/m)
- Standard fiber diameters from 0.3 to 1.0mm
- No aging effect

art photonics development of unique extrusion technology for the Mid-Infrared fibers has resulted in a production of Core / Clad Polycrystalline Infra-Red (PIR-) fibers. The PIR-fibers are non-toxic, very flexible and transparent across a broad spectral range 3 -18 μm and capable for operating over the wide temperature range from 4K to 420K.

Applications:

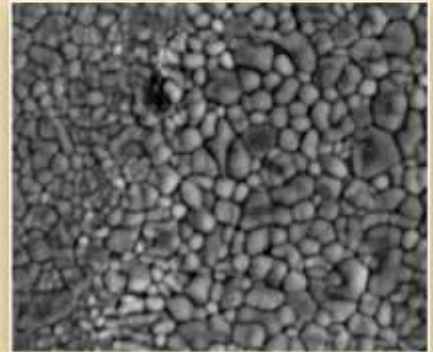
- Spectroscopy Probes for Liquids, Gases & Solids
- Flexible Pirometry in Mid-IR
- Flexible IR-imaging Systems
- Power delivery for CO & CO₂ - Lasers
- Fiber Coupled QCL

Fiber Specification

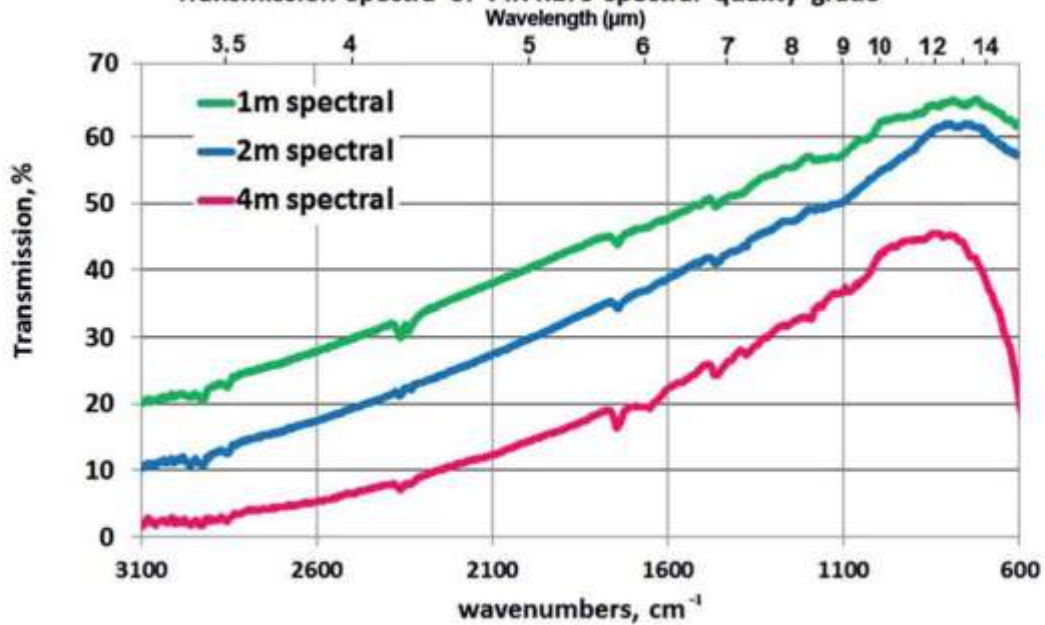
Standard Fibers	PIR-240/300	PIR-400/500	PIR-630/700	PIR-900/1000
Core diameter, μm	240	400	630	900
Cladding diameter, μm	300	500	700	1000

*other diameters are available on request

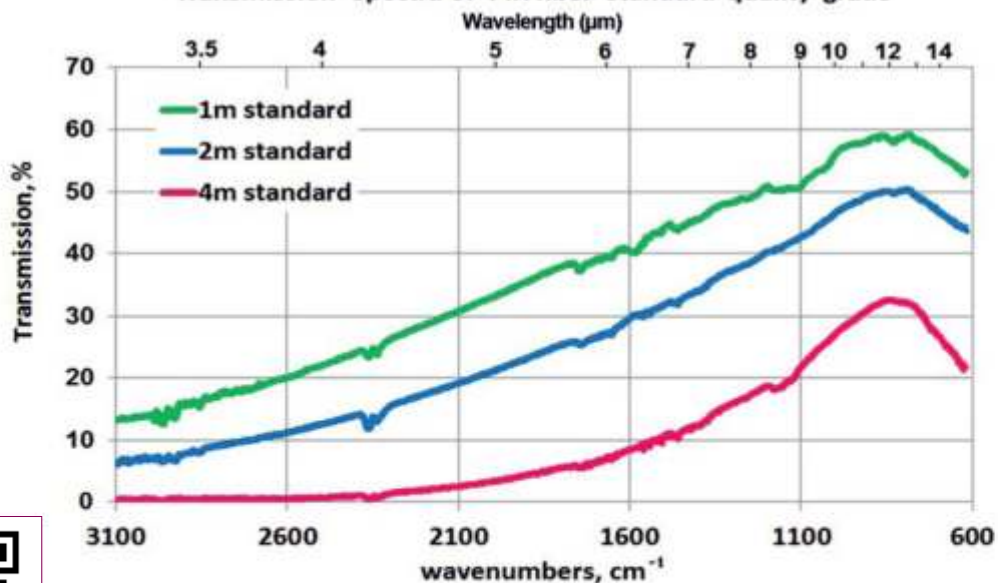
Transmission Range	3 – 18 μm
Core material	$\text{AgCl}_{0.25} \text{Br}_{0.75}$
Cladding material	$\text{AgCl}_{0.50} \text{Br}_{0.50}$
Protective tubing	PEEK
Core Refractive Index	2.15
Effective NA	0.3
Minimum bend radius	100 x Fiber diameter
Operating temperature, $^{\circ}\text{C}$	$-270 < T < 150$
Maximum transmitted Power, W	40 (CW)



Transmission Spectra of PIR fibre spectral quality grade



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