

Polycrystalline IR-Fibers & Cables



art photonics

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 -13 μm (0.2 - 0.3 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 410K.

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

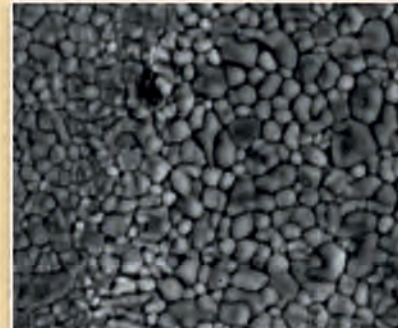
broad spectra fiber solutions

www.artphotonics.com

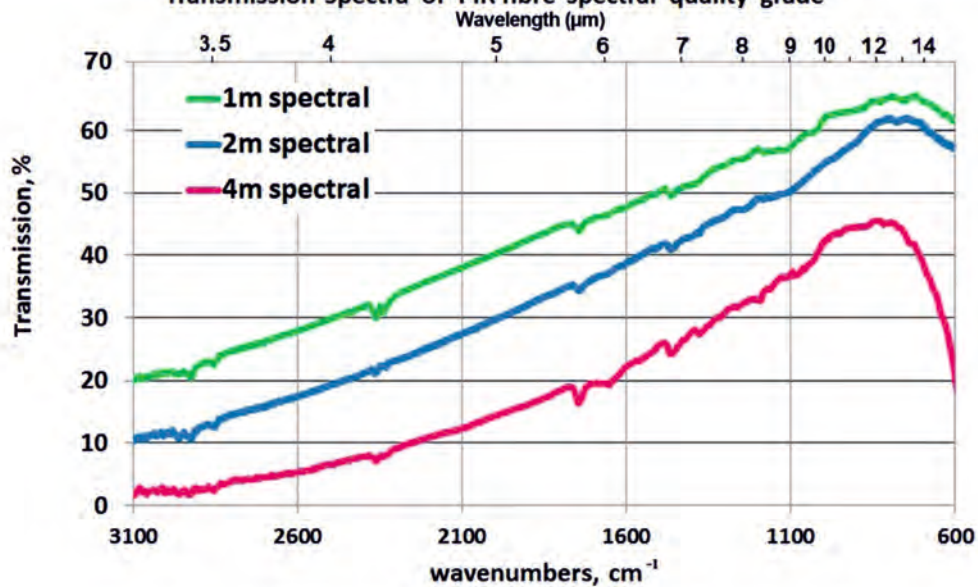
Fiber Specification

Standard Fibers	PIR-240/300	PIR-400/500	PIR-630/700	PIR-900/1000
Core diameter, μm , $\pm 5\%$	240	400	630	900
Cladding diameter, μm , $\pm 2\%$	300	500	700	1000
Minimum bend radius, mm	50	70	100	130

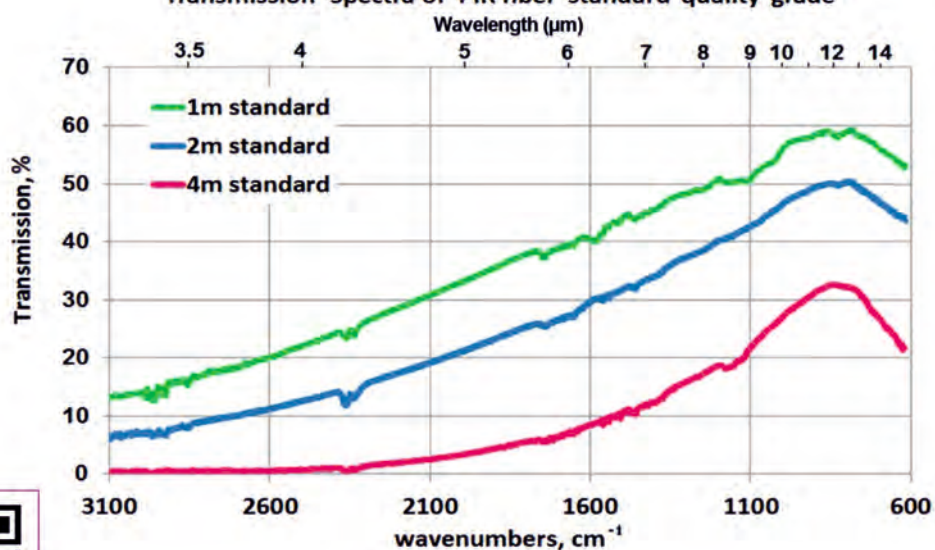
Transmission Range	3 – 18 μm
Core material	AgCl _{0.25} Br _{0.75}
Cladding material	AgCl _{0.50} Br _{0.50}
Protective tubing	PEEK
Core Refractive Index	2.15
Effective NA	0.3
Operating temperature, °C	-270 < T < 140
Maximum transmitted Power, W	40 (CW)



Transmission Spectra of PIR fibre spectral quality grade



Transmission Spectra of PIR fiber standard quality grade



artphotonics.com

art photonics GmbH
Rudower Chaussee 46
12489 Berlin Germany

Phone + 49 (0) 30-6779 887-0
sales@artphotonics.com
www.artphotonics.com

QAS Int. - certified
DIN EN ISO 9001:2008
Zertifikat Nr. A1887GER

