

# Fiber Optic ATR-Probes



art photonics



## FlexiSpec<sup>®</sup>

High throughput in any part  
of Near & Mid InfraRed-spectrum

ATR-tip shaped for immersion  
in liquid flow without dead zone

Flexible and robust for industrial  
applications in harsh environment

Compatible with all spectrometers  
and automated process-interfaces

**FlexiSpec<sup>®</sup>** product line from **art photonics** is the latest generation of Attenuated Total Reflection Near & Mid IR-fiber ATR-Probes produced for any type of FT-NIR, FT-IR and other IR-spectrometers, photometers and IR-LED or QCL spectral sensors. ATR immersion fiber optic probes with patented design are suitable for reaction monitoring in lab, pilot plant and for full automated process control.

### Applications:

- Reaction Monitoring in real time
- Process Analytical Technologies (PAT)
- Remote Polymerization Control
- Crystallization Process Screening
- In-situ IR-Spectroscopy for PAT  
in Chemical, Petrochemical, Atomic,  
Biopharmaceutical & Food Industry



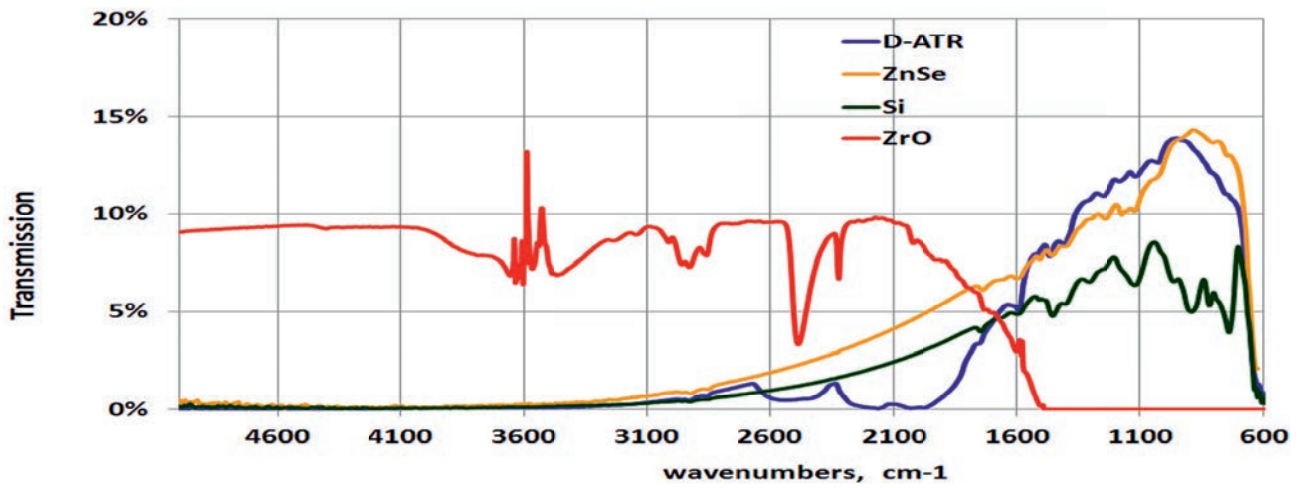
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Transmission spectra of ATR probes. Probe length 1.5m



### Specification of Fiber Optic Immersion ATR-Probes *FlexiSpec*<sup>®</sup>

Probe type	Diamond ATR	ZnSe ATR	Silicon ATR	Cubic Zirconium ATR
Transmission range	5.2-17 $\mu$ m (600-1900cm <sup>-1</sup> )	3.2-17 $\mu$ m (600-3100cm <sup>-1</sup> )	3.2-17 $\mu$ m (600-3100cm <sup>-1</sup> )	1.1-6.5 $\mu$ m (650-9000cm <sup>-1</sup> )
Fiber type	PIR-900/1000	PIR-900/1000	PIR-900/1000	CIR-500/550
Temperature range	-150°C / + 140°C	-150°C / + 140°C	-150°C / + 140°C	-150°C / + 90°C
Pressure (max)	200Bar, 300 Bar on request	10Bar	100Bar	100Bar

### Common Parameters of Fiber Optic ATR-Probes *FlexiSpec*<sup>®</sup>

Total Length	1.5m (opt.: 1m to 5m)*
Shaft Length	300mm (opt.: 100mm to 700mm)*
Shaft Diameter	12mm, 6.3mm (opt.: 3mm)*
Shaft Material	Hastelloy C22
Length of Legs	500mm (opt.: 200mm to 500mm)
Protective Tube Material	Liquid Tight SS-Conduit, KOPEX-Tube
Minimal Bending Radius	130mm
Input / Output Connectors	Long SMA (opt.: any other type)
Compatible Process-Interfaces	Ceramart-FOS** or SensoGate-FOS**



\*Customized dimensions are available on request \*\*Available for 12mm shafts only on request

