



## Discover LVF range of **ATR fiber probes**:

Our Attenuated Total Reflection (ATR) near & mid-IR fiber probes are 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 are suitable for reaction monitoring in lab, pilot plant and for full automated process control.

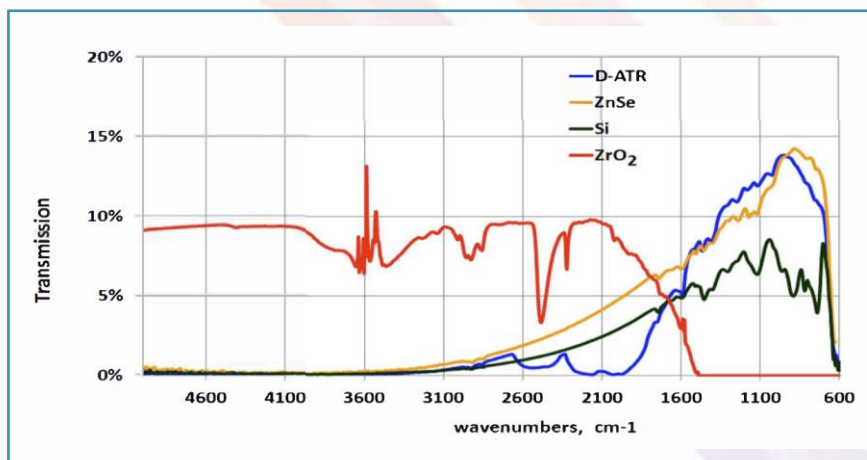
### Applications

- Reaction monitoring in real time
- Process Analytical Technologies (PAT)
- Remote polymerization control
- Crystallization process screening
- In-situ IR-Spectroscopy for PAT in chemical, petrochemical, nuclear, biopharmaceutical & food industries

### Features

- 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 environments
- Compatible with all spectrometers and automated process-interfaces

## Transmission spectra



Transmission spectra of ATR probes. Probe length: 1.5m






## Discover LVF range of ATR fiber probes:

### Specifications

Type of ATR element	Type	Transmission range	Temperature range	Pressure (max)
Di	PIR 900/1000	5.2 – 17 $\mu\text{m}$ 1900-600 $\text{cm}^{-1}$	- 150°C / + 140°C	200 Bar, 300 Bar on request
ZnSe	PIR 900/1000	3.2 – 17 $\mu\text{m}$ 3100-600 $\text{cm}^{-1}$	- 150°C / + 140°C	10 Bar
Si	PIR 900/1000	3.2 – 17 $\mu\text{m}$ 3100-600 $\text{cm}^{-1}$	- 150°C / + 140°C	100 Bar
ZrO <sub>2</sub>	CIR 500/550	1.1 – 6.5 $\mu\text{m}$ 9000-1550 $\text{cm}^{-1}$	- 150°C / + 90°C	100 Bar

### Parameters

	<b>Total length</b>	1.5m (opt.:1m to 5m)*
	<b>Shaft length</b>	300mm (opt.: 100mm to 700 mm)*
	<b>Shaft diameter</b>	12mm, 6.3mm (opt.:3mm)*
	<b>Shaft material</b>	Hastelloy C22
	<b>Length of legs</b>	500mm (opt.: 200mm to 500mm)*
	<b>Protective tube material</b>	Liquid Tight SS-Conduit, KOPEX-Tube
	<b>Minimal bending radius</b>	130mm
	<b>Input/output connectors</b>	Long SMA (opt.: any other type)
	<b>Compatible process-interfaces</b>	Ceramat-FOS or SensoGate-FOS**

\*Customized dimensions are available on request

\*\*Available for 12mm shafts only on request

