

# Sterilizable IR-ATR Probe for Bio-Process Monitoring



art photonics

## FlexiSpec®

With our new design you don't need to take out all the probe from the reactor for the reactor sterilization process.

Just detach the fiber assembly whereas the sensitive tip can remain fixed in the reactor and be sterilized together with it.

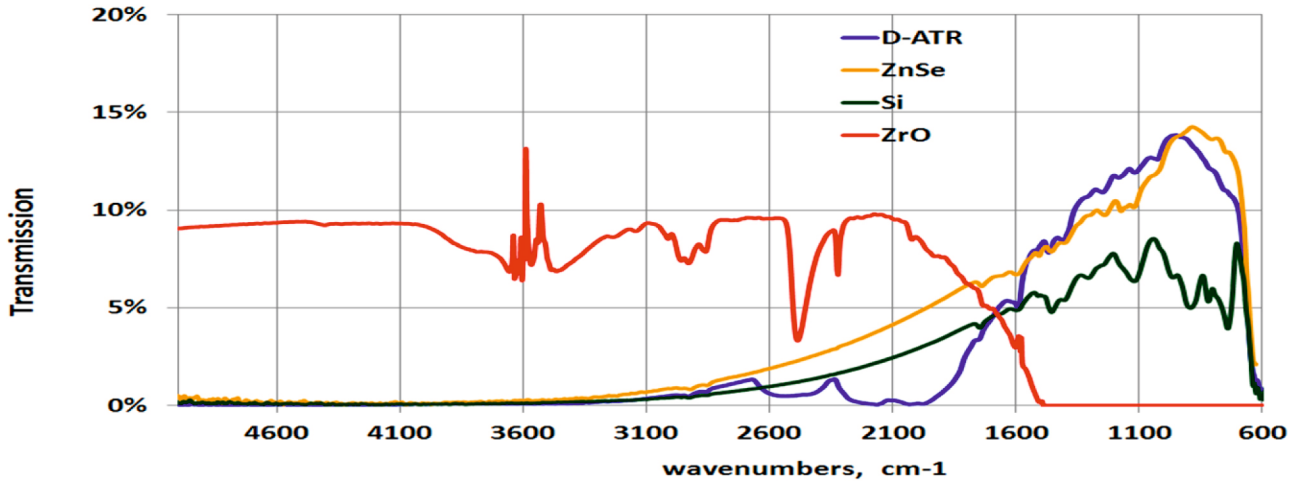
Sterilizable ATR Fiber Probe is a new product of art photonics' **FlexiSpec®** product line. This ATR Probes are produced with any type of ATR element and for any type of FTIR spectrometers.

Unique Shaft-in-Shaft design enables use of **FlexiSpec®** ATR Probe in Bio process where sterilization is required without having to forgo the renowned advantages of Mid-IR FTIR spectroscopy.

### 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

Transmission spectra of ATR probes. Probe length 1.5m

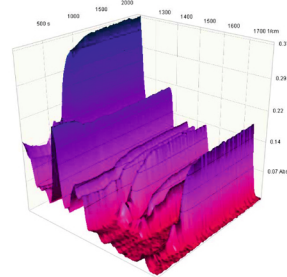


Specification of Fiber Optic Immersion ATR-Probes *FlexiSpec*<sup>®</sup>

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



\*Customized dimensions are available on request.



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