Fiber Optic ATR-Probes Overview

art photonics

	PIR fiber 900/1000, 30cm shaft Hastelloy C22, 150cm total, LTP conduit with SMA 905 connectors		PIR fiber 900/1000, 15cm shaft PEEK, 150cm total, PEEK protective tubing with SMA 905 connectors	PIR fiber 900/1000, 30cm shaft Hastelloy C22, 200cm total, LTP conduit with SMA 905 connectors, air flow cooling	PIR fiber 900/1000, 30cm shaft, 150cm total, LTP conduit with SMA 905 connectors, detachable fiber	
Design	**Standard**		**PEEK Lab**	**High Temperature**	**Sterilizable**	
Shaft Ø / ATR crystal	**6,3mm dia**	**12mm dia**	**6,3mm dia**	**12mm dia**	**6,3mm dia**	**12mm dia**
Diamond, 600-1900cm^{-1}	200Bar, -150°C +140°C	200Bar, -150°C +140°C		200Bar, -150°C +250°C	200Bar, -150°C +140°C	200Bar, -150°C +140°C
Si 600-3100cm^{-1}	100Bar, -150°C +140°C	100Bar, -150°C +140°C	7Bar, -100°C +140°C	100Bar, -150°C +250°C	100Bar, -150°C +140°C	100Bar, -150°C +140°C
Ge, 600-3100cm^{-1}	10Bar, -150°C +80°C	10Bar, -150°C +80°C	7Bar, -100°C +80°C		10Bar, -150°C +80°C	10Bar, -150°C +80°C
ZnSe, 600-3100cm^{-1}		10Bar, -150°C +140°C	7Bar, -100°C +140°C	10Bar, -150°C +250°C		
ZrO2 with CIR 500/550 fiber, 1550-9000cm^{-1}	100Bar, -150°C +90°C	100Bar, -150°C +90°C	7Bar, -100°C +90°C	100Bar, -150°C +200°C	100Bar, -150°C +90°C	100Bar, -150°C +90°C
Detachable Loop	PIR fiber 900/1000, 10cm shaft PEEK, 110cm total, PEEK tubing with SMA 905 connectors, 600-2500cm^{-1}, -50°C +90°C Disposable ATR-Loop Tip					
	CIR fiber 500/550, 10cm shaft PEEK, 110cm total, PEEK tubing with SMA 905 connectors, 1550-6500cm^{-1}, -50°C +90°C Disposable ATR-Loop Tip					

Chemical resistance of ATR crystals:

Diamond – any medium, limitations could be because of sealing material PEEK only.

Silizium - pH = -1÷10

Germanium – pH= 1÷14 (without oxidizing agents in alkalies)

ZnSe - pH = 5÷9, can not withstand some complexing agents

ZrO_2 - any medium, limitations could be because of sealing material PEEK only.

Check the chemical compatibility of ATR crystals with medium if you have some doubts.