



RPR1064

Reaction Monitoring via FT-Raman



The RPR1064 is the only FT-Raman fiber optic probe that can be used at elevated temperatures and up to 1500 psi. It is comparable to our Reaction RamanProbe™ for dispersive Raman instruments. The outer sleeve is constructed with 316 stainless-steel with a sapphire window. For optimum resistance to corrosive chemicals, the probe sleeve is also available in Hastelloy C construction with a gold gasket.

The RPR1064 can be used to measure reactions in situ in batch reactors or process lines. The adjustable working distance enables focusing on solids through solution media as well as measurement of dissolved species.

Features and Specifications

Sampling Head	Stainless-steel, cylindrical probe, 5/8" diameter (15.9 mm) x 13" length (330 mm), with integrated fibers
Spectral Range	200 - 3200 cm ⁻¹ (Stokes), depending on spectrograph limits
Excitation Wavelengths	1064 nm (see Reaction RamanProbe™ data sheet for other wavelengths in the visible and NIR)
Working Distance	User adjustable between 5 and <1 mm to optimize measurement of clear and opaque solutions
Fiber Configuration	Permanently-aligned combination of two single fibers (100 μm excitation fiber, 500 μm collection fiber) with filtering and steering micro-optics, N.A. 0.22, in stainless-steel jacket. Options: Fiber sizes ranging from 50 μm to 500 μm
Filter Efficiency	Patented design for complete filtering of the laser line and quartz spectral contributions from both input and output fibers (O.D. > 5 at laser wavelength). Option: O.D. > 8 at laser wavelength.
Physical Resistance	Pressure sleeve specified to 1500 psi and up to 200°C
Chemical Resistance	Stainless-steel sleeve, sapphire window and Kalrez o-ring are resistant to many chemical environments; Hastelloy-C sleeve (with gold gasket) available as option for corrosive environments.
Cable Length/ Coupling System	5 m with FC (std.) or SMA 905 connectors
Safety Features	Emission indicator (std.), Class I sample holders available. SAFETY WARNING: When coupled to an FT-Raman spectrometer including 1064 nm laser, the RPS1064 enables invisible laser radiation to be emitted outside of the standard sample compartment, potentially bypassing laser safety interlocks installed by the spectrometer manufacturer. Operation protocols should be designed to avoid laser exposure to the skin and eyes. A written safety plan must be provided to InPhotonics prior to delivery of this product. InPhotonics assumes no liability for direct or consequential damages caused by the use of their products.
Retail Price	\$ 9,125 USD (Hastelloy C version \$ 10,125)

Specifications and prices are subject to change without notice.