

Fiber Optic Raman Spectrometer



The VERAX™ Raman spectrometer is a comprehensive yet affordable solution for general analysis and reaction-monitoring. Offering ample resolution (4 cm^{-1}) in the fingerprint region, the VERAX is an ideal workhorse for the laboratory. Little sample preparation is required when using the RamanProbe™ for routine analysis through glass vials. When equipped with any of InPhotonics' wide-array of immersible probes, the VERAX is capable of real-time reaction monitoring for research and process development applications using the VizRaman™ software (from Remspec Corp.).

Optical components are permanently-mounted in a compact, benchtop case. The system is maintenance free, and consumable components can be interchanged by the user. A high-throughput spectrograph, low-noise CCD, and stabilized laser result in excellent sensitivity, resolution, and stability.

Features and Specifications*

Optical Design	High-throughput, slitless spectrograph with no moving optical or mechanical parts. Two spectrograph models: short-range (SR) and long-range (LR).
Spectral Range	SR version: $250 - 1800\text{ cm}^{-1}$ (Stokes) LR version: $250 - 2300\text{ cm}^{-1}$ (Stokes)
Spectral Resolution	SR version: $4 - 5\text{ cm}^{-1}$ (FWHM) LR version: $6 - 8\text{ cm}^{-1}$ (FWHM)
Excitation Source	Stabilized 785 nm diode laser with 0.1 nm linewidth, 300 mW output. Other excitation wavelengths available upon request.
Detector	Vacuum-sealed, TE-cooled CCD array, 1024 x 128 pixels, operating at 45° below ambient (-25°C at 20°C ambient temperature)
Sampling Arrangement	Fiber-based spectrometer uses standard RamanProbe™ with 5 m cable length for routine sampling. Reaction-monitoring probes available as options.
Sample Holders	Various sizes of Class I sample holders available as options.
Physical Specifications	Outer dimensions 13.5" x 13.5" x 6" (343 x 343 x 152 mm), ca. 30 lbs. (13 kg). Spectrometer can be operated at ambient temperatures up to 30°C . Requires 110 -240 V AC power.
PC Hardware and Software	System requires desktop or laptop PC with Windows XP or 2000 (optional). Basic system includes InPhoTote data acquisition software for control of spectrometer.
Optional Software	Spectral manipulation software, reaction-monitoring software (from Remspec Corp.), chemical identification software, quantitative analysis software.

*Updated as of 8/30/2006. Specifications and prices are subject to change without notice.