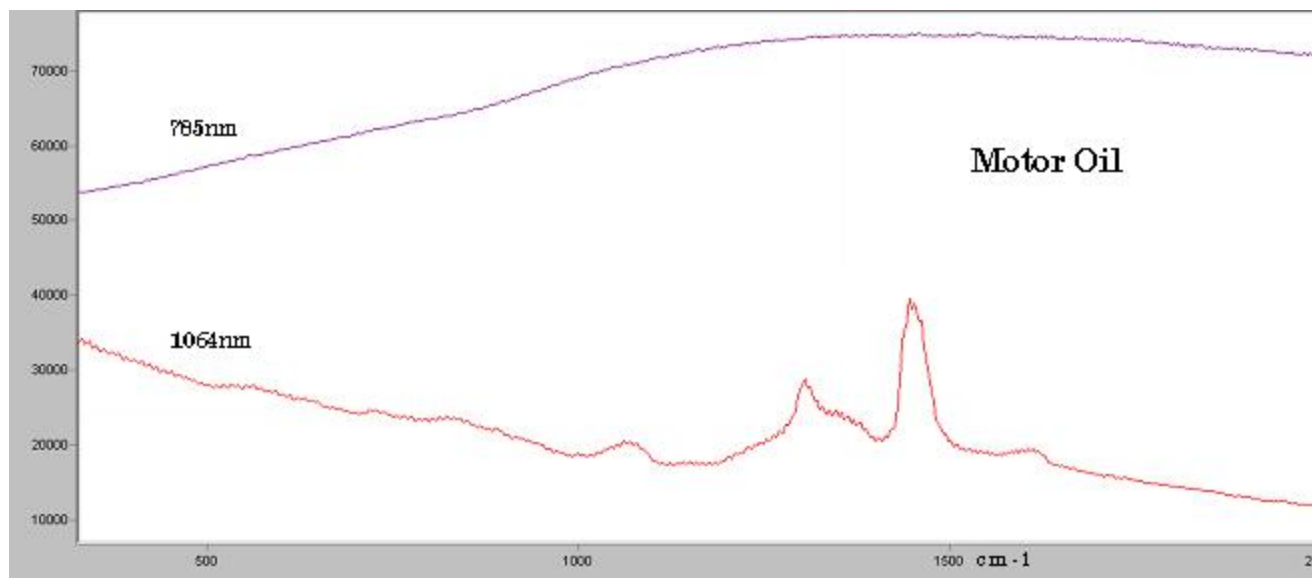


InPhotote1064™ Portable Raman System NEW

When detecting Raman scattering, the sample's fluorescence can be a large non-Raman signal source. Since the fluorescence signal is also shifted from the laser frequency, it can be difficult to filter it out. Fortunately, fluorescence can be reduced by using a longer wavelength laser as the excitation source. 785nm laser has been the main excitation source for Raman spectroscopy, because it produces relatively low fluorescence and the photodetector array is widely available in this wavelength range. Recently, the InGaAs photodetector array has been commercialized which extends the range of wavelength detection to 1-2μm. Coupling the InGaAs photodetector with a 1064nm laser excitation source reduces interference from fluorescence. The following shows the Raman spectrum of motor oil with 785 and 1064 nm laser respectively.



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 - 1000 cm^{-1} LR version: 250 - 1800 cm^{-1}
Spectral Resolution	SR version: 6- 8 cm^{-1} (FWHM) LR version: 10-14 cm^{-1} (FWHM)
Excitation Source	DPSS, 600 mW, 1064nm laser
Detector	Vacuum-sealed, TE-cooled InGaAs array, 512 pixels, operating at -50°C for low background noise.
Sampling Arrangement	Standard RamanProbe™ fiber optic sampling probe with 5 m cable length can be used to measure unknowns through transparent containers (glass, plastic). Options: probe extension cables (up to 200 m), immersible probe capable of withstanding chemical decontamination. Contact InPhotonics regarding surface enhanced Raman (SERS) substrates for trace-level detection.
Sample Holders	Various sizes of Class I sample holders available as options.
Physical Specifications	Optical components are shock-mounted in a rugged, water-resistant case. Outer dimensions 21" x 12" x 8" (533 x 305 x 203 mm), 29 lbs. (13 kg). Spectrometer can be operated at temperatures up to 30°C.
PC Hardware and Software	InPhotote acquisition software and GRAMS/32® manipulation software operating under Windows XP on an ultra-light notebook computer.
Optional Software	Chemical identification software, quantitative analysis software, and Forensic Raman Spectral Library of 243 materials.
Power Requirements	110V/220V-AC using external AC/DC adapter (included), or 12V-DC.

Specifications and prices are subject to change without notice.



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