



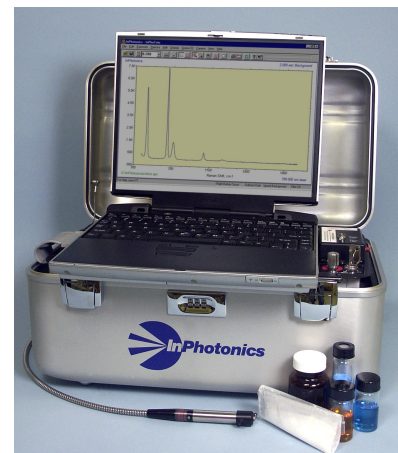
InPhotote™

Portable Chemical Identification System

For military and forensic personnel, the InPhotote™ provides an ideal solution for the identification of unknown samples in sealed containers. Unlike other spectroscopy-based solutions, the patented fiber optic probe enables samples to be interrogated in a *non-contact* fashion through transparent and semi-transparent containers, minimizing risk to personnel and equipment.



Probes can be extended by up to 200 m such that the InPhotote can remain in a "safe" area with only the probe exposed to potential hazardous substances. Immersible probes can be routinely decontaminated when necessary. The InPhotote is capable of identifying bulk explosives, narcotics, pesticides, and other hazardous materials including cyanides. Water-based samples require no additional preparation, and the complete "fingerprint" spectral region is used for identification.



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 cm^{-1} (Stokes) LR version: 250 - 2350 cm^{-1} (Stokes)
Spectral Resolution	SR version: 4 - 5 cm^{-1} (FWHM) LR version: 6 - 8 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	Standard RamanProbe™ with 5 m cable length can be used to measure unknowns through transparent and semi-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 16" x 10" x 9" (406 x 254 x 229 mm), 22 lbs. (10 kg). Spectrometer can be operated at ambient temperatures up to 30°C.
PC Hardware and Software	InPhoTote acquisition software, GRAMS AI manipulation software (from Thermo Electron) operating under Windows XP on an ultra-thin notebook computer.
Optional Software	Chemical identification software, quantitative analysis software, and Forensic Raman Spectral Library of 243 materials.
Power Requirements	110-240V AC using external AC/DC adapter (included), 12V DC, or external battery pack.

*Updated as of 08/30/2006. Specifications and prices are subject to change without notice.