

InPhochelle High Resolution, Wide Range, High throughput, Compact Raman System



The "InPhochelle" is a compact Raman instrument offering high resolution (down to 2 cm^{-1}) across the full spectral range (200-3500 cm^{-1}). The design uses fast f/2.8 optics for excellent throughput. Spectral acquisition is fast and highly reproducible. Since the only moving part is the shutter, the instrument is very rugged.

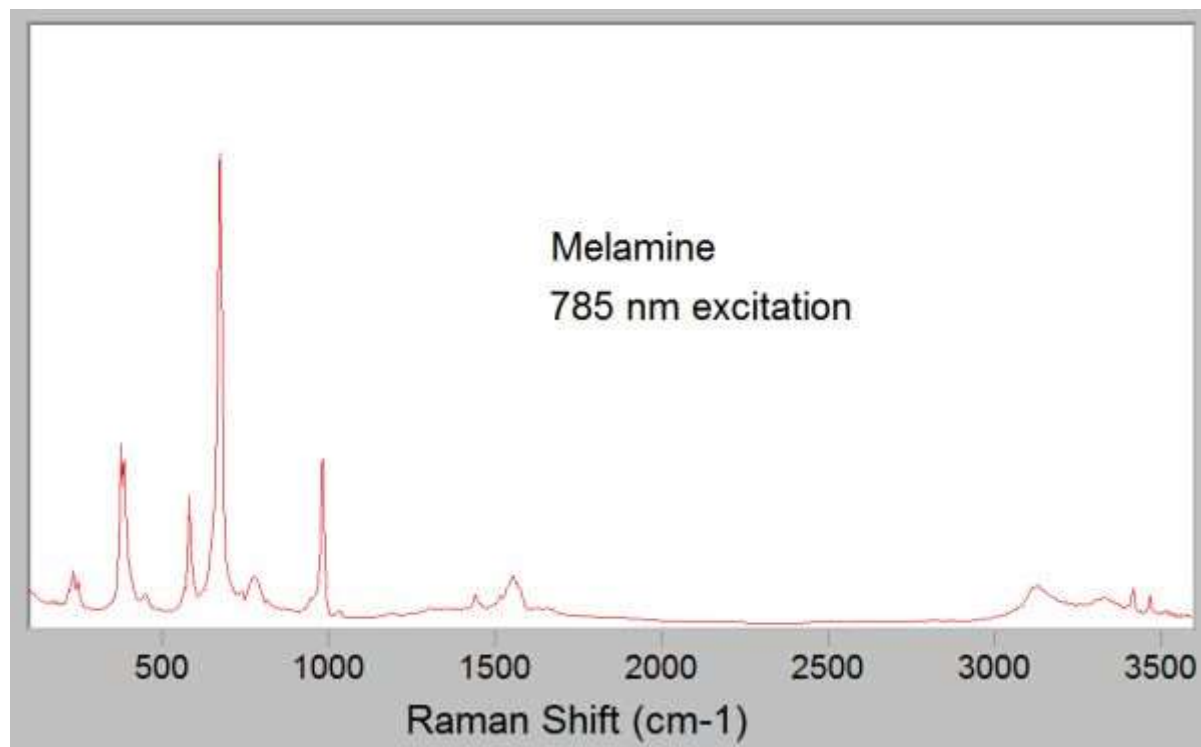
The 3-stage cooled CCD operates at -55°C , providing excellent sensitivity, spectral stability, and low background noise.

The "InPhochelle" is available in two standard configurations distinguished by the laser choice, 670 or 785 nm excitation. The

system includes InPhotonics' data acquisition package and GRAMS AI manipulation software operating on a PC, laptop, or netbook. The simplest configuration utilizes an InPhotonics Raman Probe for normal chemical characterization. More complex applications are supported by a variety of optical fiber Raman probes for process control and high-temperature applications.

For pricing information and custom applications please contact us at 781-440-0202 or via info@inphotonics.com.

InPhochelle 785 spectra



Features and Specifications

	InPhochelle 670	InPhochelle 785
Optical Design	Echelle spectrograph incorporating aluminum-coated echelle grating and transmission grating for cross dispersion in a fixed configuration	Echelle spectrograph incorporating gold-coated echelle grating and transmission grating for cross dispersion in a fixed configuration
Excitation Source	50 mW, 670 nm Nd:YAG laser (high power	300 mW, frequency-stabilized 785 nm diode

	available upon request	laser (0.1 nm linewidth)
Spectral Resolution and Range	2 cm ⁻¹ spectral resolution from 100 - 3500 cm ⁻¹ measured in a single exposure (measured as FWHH)*	2 cm ⁻¹ spectral resolution from 100 - 3500 cm ⁻¹ measured in a single exposure (measured as FWHH)*
Calibration Method	Fixed optics provide permanent calibration under normal operating conditions. Intensity correction performed automatically through software.	
Rayleigh Filter	None required (10 ⁸ optical filtering incorporated into RamanProbe)	
Detector	Three-stage TE-cooled CCD array, 1024 x 256 pixels, operating at -55°C for very low dark noise	
Sampling Accessory	RamanProbe™ product line suitable for a variety of applications. Class I sample holders also available.	
Physical Dimensions (spectrograph)	21" x 10.5" x 5" with external laser source; approximately 17lbs. total weight	
Acquisition Hardware and Software	Basic system includes data acquisition software for control of spectrometer. PC data station running Windows XP or Windows 7 required for operation.	
Packaging Options	system carrying case is available	
Base Price	\$45,000 USD	

*2 cm⁻¹ is specified with 100 μm input fiber (available as an option). Spectral resolution of 3cm⁻¹ is achievable with standard RamanProbe.

Specifications subject to change without notice.

