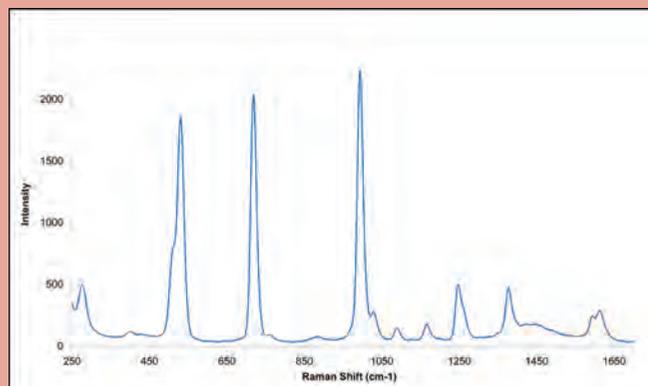


QE65000-Raman

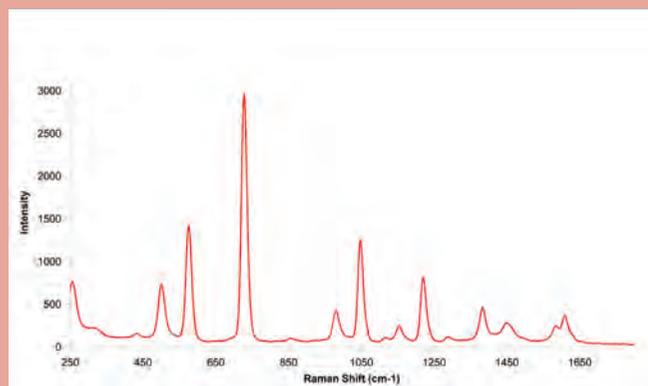
Scientific-Grade Spectrometer for Raman



Raman spectroscopy is easily achieved with the QE65000-Raman setup. This powerful quantitative and qualitative tool is ideal for a wide range of analytical applications, both in the laboratory and in the field.



m-Xylene Raman Spectra with 532-laser



o-Xylene Raman Spectra with 532-laser

Our QE65000-Raman Spectrometer is a scientific-grade, preconfigured combination of detector, optical bench and electronics that provides you a remarkably sensitive system for demanding low-light level Raman applications.

The performance of the QE65000-Raman Spectrometer has been enhanced to provide lower stray light, improved efficiency in the UV and Shortwave NIR and better unit-to-unit reproducibility. The QE65000-Raman also delivers up to 90% quantum efficiency with high signal-to-noise and rapid signal processing speed.

Item Code: QE65000-RAMAN

Physical	
Dimensions:	182 mm x 110 mm x 47 mm
Weight:	1.18 kg (without power supply)
Detector:	Hamamatsu S7031-1006
Detector range:	200-1100 nm
Pixel size:	24 μm^2
Pixel well depth:	300,000 electrons/well, 1.5 m elec/column
Sensitivity:	22 electrons/count all λ ; 26 photons/count @ 250 nm
Sensitivity:	~ 0.065 counts / e-
Quantum efficiency:	90% peak; 65% at 250 nm
Optical Bench	
Design:	f/4, Symmetrical crossed Czerny-Turner
Focal length:	101.6 mm input and output
Entrance aperture:	50 μm wide slit
HC6 grating:	provides 123-170 nm range (bandwidth)
Detector collection lens option:	None
Collimating and focusing mirrors:	Standard only
UV enhanced window:	No
Fiber optic connector:	SMA 905 to 0.22 numerical aperture single-strand optical fiber
Spectroscopic	
Wavelength range:	780 - 1100 nm (Grating dependent)
Optical resolution:	~ 0.14 -7.7 nm FWHM
Signal-to-noise ratio:	1000:1 (at full signal)
A/D resolution:	16 bit
Dark noise:	3 RMS counts
Dynamic range:	7.5×10^9 (system), 25000:1 for a single acquisition
Integration time:	8 ms to 15 minutes
Stray light:	<0.08% at 600 nm; 0.4% at 435 nm
Corrected linearity:	>99.8%
Temperature and Thermoelectric (TE) Cooling	
Temperature limits:	0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$; no condensation
Set point:	Software controlled; lowest set point is 40 $^{\circ}\text{C}$ below ambient
Stability	± 0.1 $^{\circ}\text{C}$ of set temperature in <2 minutes