HORIBA Scientific

MicOS Raman

An Affordable Modular Raman Spectroscopy Solution

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

The MicOS microscope optical spectrometer can be used for more than just photoluminescence measurements.

Overview

The MicOS microscope optical spectrometer is a versatile and high performance tool for a variety of applications. While the most common application is photoluminescence, high quality Raman spectra may also be acquired using the MicOS.

Because the MicOS microscope head is coupled directly to the spectrometer, the MicOS system does not suffer from losses like other traditional fiber-coupled microscope based systems. In fact, in a comparison measurement, the MicOS resulted in a Raman signal more than ten times greater than that obtained with a fiber-coupled system.

In addition, the MicOS does not suffer from degradation of performance in the near-IR as most microscopes do. This means that a user can record a Raman spectrum in the visible wavelength region with a CCD, and then switch seamlessly to a photoluminescence experiment in the near-IR region with a linear InGaAs array.

Features and Benefits

- Affordable micro Raman solution
- Direct coupled microscope for enhanced throughput
- Large selection of excitation lasers from UV to near-IR
- Choice of spectrometer to satisfy the most demanding spectral resolution requirements

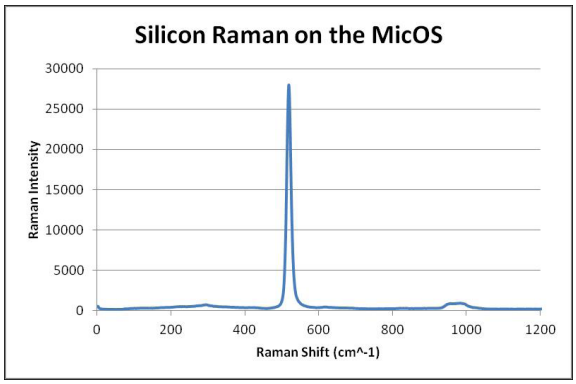

Image (top), Raman spectral map (middle), and silicon Raman spectrum showing distribution of Silicon Raman signal (at 520cm^{-1}) of a silicon sample with gold letter etchings.

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Specifications

Excitation Wavelength (nm)[a]		532 nm	633 nm	785 nm
Recommended Gratings		1800 gr/mm 600 gr/mm 150 gr/mm	1800 gr/mm 600 gr/mm 300 gr/mm	1800 gr/mm 600 gr/mm 300 gr/mm
Spectral Range (cm^{-1})[b]		150 – 9700 cm^{-1}	150 – 8780 cm^{-1}	150 – 6900 cm^{-1}
Resolution (cm^{-1})[c]	**iHR320**	1.2 cm^{-1}	1.1 cm^{-1}	0.9 cm^{-1}
	iHR550	0.73 cm^{-1}	0.67 cm^{-1}	0.55 cm^{-1}

a Other wavelengths available upon request.
b Specifications are values based on the laser filter cut-on and the usable spectral range of the CCD.
c Using an 1800 gr/mm grating and specified at the laser wavelength.

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