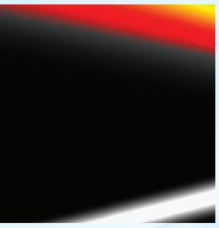
HORIBA Scientific

MacroRAM™

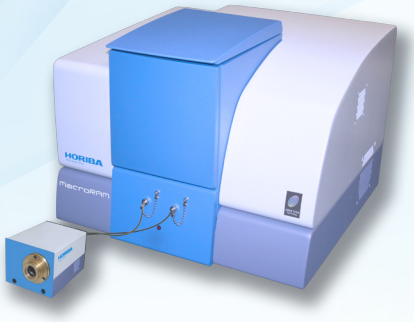
Affordable Bench-top Raman Spectrometer

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




Best in Class Raman Sensitivity and Software, with Class 1 Laser Safety

The new MacroRAM™ Raman spectrometer brings simplicity to Raman measurements without compromising the ability to handle even the most complex samples. Its compact and robust design, including Class 1* laser safety means it's safe for use in most environments, from undergraduate teaching labs to industrial QC applications.



Best in Class Sensitivity

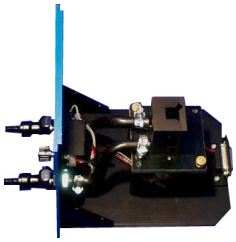
The MacroRAM is based on a 120 mm focal length spectrograph with a single aberration corrected concave grating with a flat field output. The probe head has the highest quality Raman filters and designed to optimize signal collection. Together with HORIBA's back-thinned scientific CCD cooled to -50°C the MacroRAM offers best in class sensitivity in an affordable package.

Versatile Design

The MacroRAM includes a standard interlocked sample compartment for operator safety and holders for cuvette based liquid measurements as well as a solid sample holder. A thermostated cuvette holder is also available for temperature controlled measurements. Furthermore, a fiber port comes standard for probe based Raman measurement outside of the sample compartment to accommodate larger or irregularly shaped samples and immersion probes.


Cuvette Holder


Solid Sample Holder


Theromostated Cuvette Holder


Immersion Probe


Microvolume Cuvette Holder

Compact and Rugged

With a foot print of just 17 x 17 inches, the MacroRAM is compact and fits on most lab bench spaces. With a fiber-based internal optical design, it has the robustness and portability to be moved between measurements and still be accurate.

Industry Leading LabSpec Software

The MacroRAM benefits from HORIBA's full-featured industry leading LabSpec 6 software which presents a simple and intuitive interface enabling logical work flow through experiments. LabSpec's intuitive interface overlays a powerful Raman engine with the most sophisticated data analysis and visualization tools including multivariate analysis and database searching.

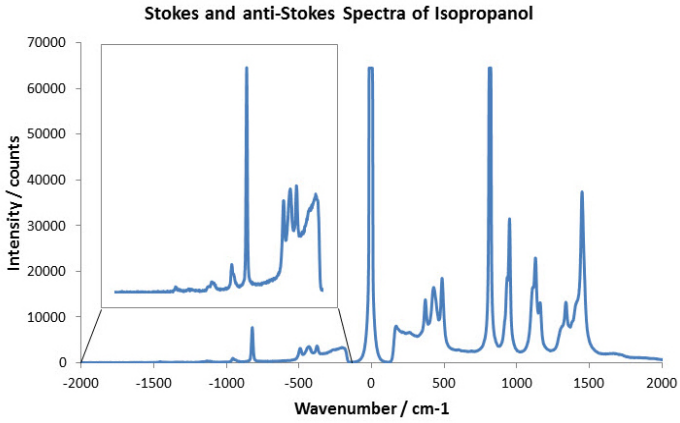
Simple and Safe

The MacroRAM includes a USB port which means it is easy to install and use. In fact, it works right out of the box! So collecting Raman data is as simple as plugging in the power cord, connecting the USB cable to the computer and running LabSpec software! Furthermore, the MacroRAM includes an interlocked sample compartment so that the user is never exposed to the laser, making it a Class 1* instrument and safe for use in most environments – from the undergraduate lab to the factory floor.

Beyond Basic Raman: Stokes and Anti-Stokes*

Sometimes you need to analyze more than just Stokes spectra. MacroRAM lets you measure anti-Stokes shift, for more complete information about your samples.

* The anti-stokes model is optional



Isopropanol, 1 sec integration

Specifications

Laser Wavelength	785 nm
Laser Power	up to 450mW (continuously variable under software control)
Spectral Range	100 to 3400 cm^{-1}, (optional -1700 cm^{-1} to 1700 cm^{-1} for Anti Stokes model)
Spectral Resolution	6 cm^{-1} at 900 nm (Stokes)
Detection	Back thinned CCD, Cooled to -50 oC, 80% QE at 800nm
CCD Dark Current	0.05 e^-/pixel/second (-50°C)
Dynamic Range	42550:1
Fiber Ports	Core diameter 100µm, female FC/PC termination on housing
Fiber Ports (Numeral Aperture)	0.15
Safety	Class 1B laser safety. Fully interlocked sample compartment with remote key switch to activate external laser output port.*
Sample Handling, Internal	Cuvette and solid sample holders (standard), Other accessories available
Sample Handling, External	Optional fiber probe for various external samples
Dimensions (W x D x H)	17 x 17 x 15 inches (432 x 432 x 381 mm)
Weight	45 lbs. (20.4 Kg)

JOBIN YVON Technology

*Instrument not rated Class 1 when using external fiber port.

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