HORIBA Scientific

# MacroRAM™

## Affordable Bench-top Raman Spectrometer

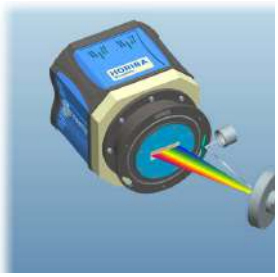
ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
CUSTOM SOLUTIONS
PARTICLE CHARACTERIZATION
RAMAN / AFM-RAMAN / TERS
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING


Best in Class Raman Sensitivity and Software

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 makes it ideal for many 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 is designed to optimize signal collection. Together with HORIBA's back-illuminated 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 thermostatted cuvette holder is also available for temperature controlled measurements. Furthermore, a fiber port comes standard for probe-based Raman measurements outside of the sample compartment to accommodate larger, or irregularly shaped, samples and immersion probes.

Cuvette Holder

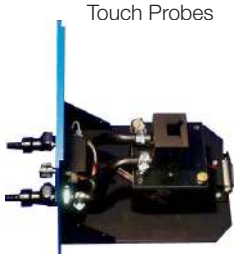
Solid Sample Holder


Superhead

Immersion and Touch Probes

HPLC Flow Cell

Reduced Volume Cuvette and Adapter



Theromostatted Cuvette Holder

## Compact and Rugged

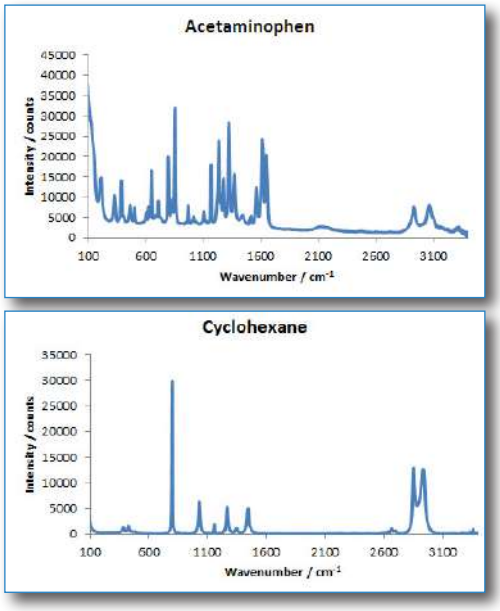
With a footprint of just 17 x 17 inches, the MacroRAM is compact and fits on most lab bench spaces. With a fiber-based internal optical design, it has the robustness and portability to be moved between measurements and still be accurate.

## 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 so it is easy to install and use. In fact, it works right out of the box! 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 the user is never exposed to the laser, making it safe for use in most environments – from undergraduate labs to the factory floor.




## Specifications

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|---|---|
| **Laser Wavelength** | 785 nm |
| **Laser Power** | Up to 450 mW (continuously variable under software control) |
| **Spectral Range** | 100 to 3400 $cm^{-1}$ |
| **Spectral Resolution** | 8 $cm^{-1}$ at 914 nm (Stokes) |
| **Detection** | Back-illuminated NIR CCD, cooled to -50°C, 80% QE at 800 nm |
| **CCD Dark Current** | 0.05 $e^-$/pixel/second (-50°C) |
| **Dynamic Range** | 42550:1 |
| **Fiber Ports** | Core diameter 100 µm, female FC/PC termination on housing |
| **Fiber Ports (Numeral Aperture)** | 0.22 |
| **Safety** | Class 3B. 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


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