

**HORIBA** JOBIN YVON



## Modular Raman Spectrometers

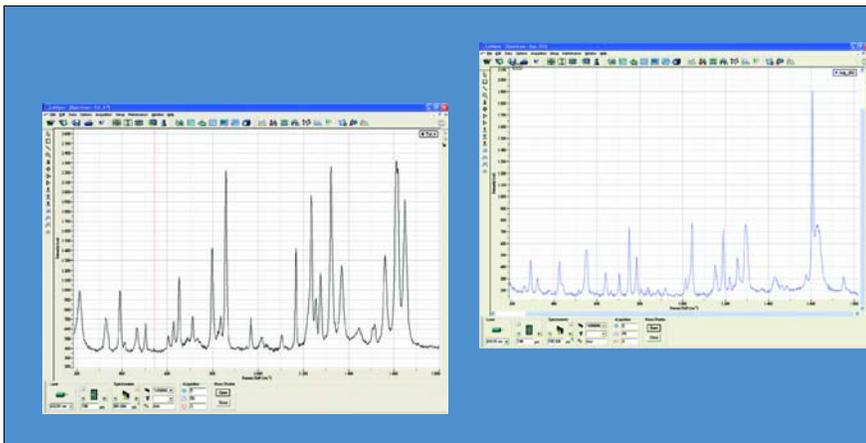
Flexible Raman Spectrometers  
from the Raman Experts

Explore the future

**HORIBA**

## Modular Raman Systems

Raman spectra of acetaminophen (left) and ibuprofen (right) taken with an RMS-320 with fibre-microscope and 633nm laser.



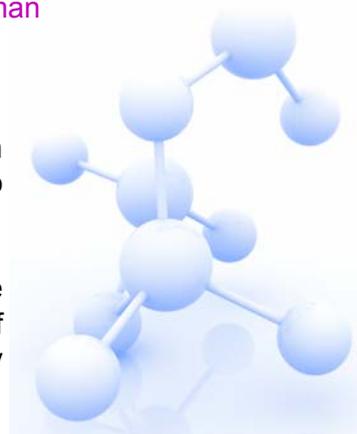
**HORIBA** **JOBIN YVON** are the world leaders in Raman spectroscopy. We design and manufacture state-of-the-art Raman instruments ranging from integrated Raman microscopes to high-end research systems, to modular instruments and industrial monitoring tools.

- IHR modular Raman
- HE Industrial analysers
- LabRAM Raman microscopes
- T64000 research Raman

### Flexible & Affordable Raman Spectrometers

The new range of modular Raman spectrometers from HORIBA Jobin Yvon allows the user to build a Raman experiment from the ground up and to undertake high performance Raman spectroscopy at a price to fit most budgets.

The modular iHR spectrometer is an ideal system for coupling to a fluorescence microscope or to a SNOM head, and can be used with HORIBA's own range of dedicated Raman sampling options to provide a complete Raman spectroscopy system with either a confocal fibre-microscope or fibre-optic sampling probe.



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### Fibre-coupled Confocal Raman Microscope

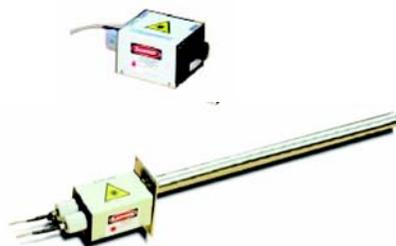
Horiba Jobin Yvon's confocal Raman microscope is coupled via two optical cables to the base iHR spectrometer and to the laser source. The microscope system offers true micro-Raman capabilities and incorporates our novel interchangeable notch filter system, adjustable confocal aperture and options for automated Raman mapped imaging. An integrated colour video camera offers easy sample alignment and digital image capture.



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### Superhead Raman Probes

Horiba Jobin Yvon's modular Raman systems are compatible with the wide range of Superhead fibre-optic Raman probes. They offer robust remote and in-situ sampling capabilities ideal for reaction monitoring, restricted environments (glove boxes), and for portable sampling requirements. They can be supplied with immersion optics, non-contact optics and even with an integrated video camera for capturing sample images.



## iHR Spectrometer

HORIBA Jobin Yvon's modular Raman systems are based around our high sensitivity iHR series spectrometers. A choice of spectrometer focal lengths of 320 mm and 550 mm allows the system resolution to be matched to your experiment.

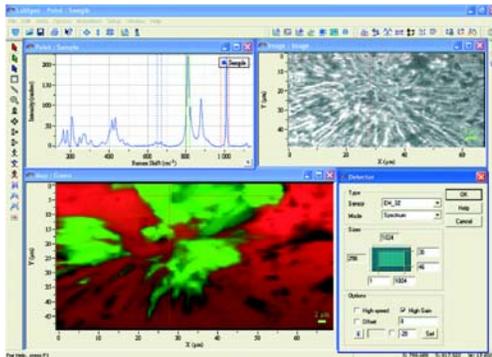
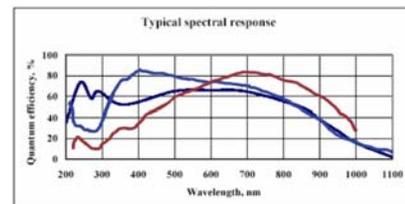
- Low stray light & No re-diffracted light
- Flexible configuration
- CCD and PMT detectors
- Optimised Raman gratings
- Upgradeable spectrometer platform for your Lab (expand to fluorescence, PL, and optical spectroscopy)



## Synapse™ CCD

The Synapse CCD is the latest Hi-Speed CCD detector that provides high sensitivity and low noise for Raman measurements. The Synapse CCD is cooled by high performance TE cooling for maximum sensitivity without the need for liquid nitrogen.

- High sensitivity & low noise
- Excellent linearity
- Hi-Speed USB interface
- Auxiliary signal input
- Various detector chip options, (high QE, UV, NIR enhanced)



## Dedicated Raman Software

The LabSPEC 5 spectral software suite used on all the HJY analytical microscope and research Raman spectrometer systems is now also available for the iHR modular Raman systems. It has been designed and written as a dedicated Raman spectroscopy package and offers many powerful capabilities not found in a basic spectroscopy software.

- Raman specific data analysis
- Spectral databases
- Simple spectrometer control
- Automated XY mapped imaging (optional)
- Raman acquisition modes for improved S:N, cosmic ray removal
- Laser safety shutter control

*The high precision spectrometers, high sensitivity CCD detectors, optimized gratings and sampling optics enable the core spectrometer building blocks to evolve to cover the broadest range of applications. With the modular spectrometer system design, this system can expand to cover any spectroscopic measurement as your experiments evolve.*

*Talk to the experts in Raman spectroscopy about a solution to your Raman applications!*

## RMS package Specifications

All Modular Raman systems include :

- iHR Spectrometer with a set of three Raman optimised gratings in an interchangeable turret
- Synapse CCD, Open Electrode, TE Cooled
- Fibre-optic Interface to spectrometer
- LabSpec Raman software
- 1 set of 2 optical fibres ( 50 & 100 microns, 5m long)
- 1 set of Rayleigh line and interference notch filters (532 nm, 633 nm, or 785 nm. )  
(other laser wavelengths available on request)
- Choice of Fibre-optic Microscope or Raman Probe

Lasers are not included in the base modular Raman systems but can be provided on request.

### RMS-320 Raman System

full Modular Raman Package with iHR320, 1/3 meter focal length spectrometer and CCD

Specification at Laser Wavelength	532 nm	633 nm	785 nm
Recommended Gratings	1800 g/mm 600 g/mm 150 g/mm	1800 g/mm 600 g/mm 300 g/mm	1800 g/mm 600 g/mm 300 g/mm
Spectral Range <sup>a</sup> (cm-1)	100 – 9700	100 – 6700	200 – 3400
Resolution (cm-1/pixel)	1.2	0.79	0.57

*All specifications are typical values based on the recommended grating and a 1024x256 Open Electrode CCD and are subject to change without notice. Systems with different groove density gratings and CCDs will have different performance specifications.*

### RMS-550 Raman System

full Modular Raman Package with iHR550, 1/2 meter focal length spectrometer and CCD

Specification at Laser Wavelength	532 nm	633 nm	785 nm
Recommended Grating	1800 g/mm 600 g/mm 150 g/mm	1800 g/mm 600 g/mm 300 g/mm	1800 g/mm 600 g/mm 300 g/mm
Spectral Range <sup>a</sup> (cm-1)	100 – 9700	100 – 6700	200 – 3400
Resolution (cm-1/pixel)	0.73	0.47	0.41

*All specifications are typical values based on the recommended grating and a 1024x256 Open Electrode CCD and are subject to change without notice. Systems with different groove density gratings and CCDs will have different performance specifications.*

*\*Spectral Range is based on the notch filter's ability to reject the laser line and the usable spectral range of the CCD.*

**HORIBA**JOBIN YVON

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