

# M Series II

## High Resolution Research Spectrometers

*Unmatched resolution and superior performance for a wide range of research applications*

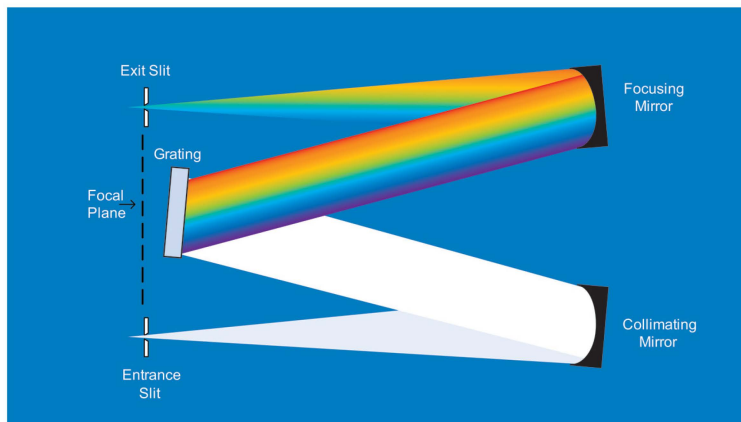


## M Series II: Ultimate Performance Research Spectrometers

When extremely low stray light levels are required, such as in Raman fluorescence excitation or when ultra high resolution is needed for emission structure analysis, M Series II spectrometers are the solution for your application.

The M Series has long been a proven family of research-grade spectrometers, offering a degree of system automation and versatility not found in any comparable focal length spectrometer.

The Series II product line provides the reliability and unchallenged resolution that has come to be associated with M Series spectrometers. Improved features include a USB 2.0 computer interface, compatibility with HORIBA Jobin Yvon's complete library of interchangeable gratings, and easy integration our Synapse™ CCDs, full line of single channel detectors, PMTs and accessories.



Optical Design of M Series II Spectrometers

## An Optical Design that Delivers Unmatched Spectral Resolution

### Scanning Drive System - Accuracy and Repeatability

M Series II spectrometers deliver accurate wavelength positioning and uniform step size throughout the scan range with their precision sine drives. A fine step size of 0.00025 nm allows full resolution to be obtained. Both the 1000M and 1250M deliver superb accuracy ( $\pm 0.15$  nm) and repeatability ( $\pm 0.005$  nm).

### High Precision Slits

Micrometer controlled slits are continuously adjustable from 3  $\mu\text{m}$  to 3 mm with calibration every 2  $\mu\text{m}$ . These bilateral slits maintain the central wavelength position seen by the detector as the slit width is adjusted.

### Automated Four Port Capability

Dual entrance and exit ports, selectable with automated swing mirrors enhance the versatility and flexibility of your M Series II spectroscopy system. The dual exit port option allows you to simultaneously mount two detectors, switching between the detectors during a scan. Likewise, data acquisition can be automated from two different optical setups by toggling between entrance ports.



### Kinematic Grating Mount

All M Series II spectrometers are available with your choice of individually mounted kinematic gratings. The ability to change gratings quickly and easily provides the ultimate flexibility to meet changing experimental needs and the ability to use the spectrometer for multiple applications.

## 1000M and 1250M Specifications<sup>1</sup>

1000M		1250M		
Focal Length (m)	1	Focal Length (m)	1.25	
Aperture	f/8	Aperture	f/9	
Spectral Range	0 - 1500 nm	Spectral Range	0 - 1500 nm	
Grating Size	110 mm x 110 mm	Grating Size	110 mm x 110 mm	
Number of Gratings on Turret	1	Number of Gratings on Turret	1	
Resolution at Exit Slit with PMT	.008 nm	Resolution at Exit Slit with PMT	.006 nm	
Wavelength Accuracy	±0.15	Wavelength Accuracy	±0.15	
Repeatability	±0.005	Repeatability	±0.005	
Spectral Dispersion (@ 500 nm)	0.8 nm/mm	Spectral Dispersion (@ 500 nm)	0.65 nm/mm	
Magnification	1	Magnification	1	
Scan Speed	4000 steps/nm	Scan Speed	4000 steps/nm	
Step Size	0.00025	Step Size	0.00025	
Computer Interface	USB 2.0	Computer Interface	USB 2.0	
Dimensions	Length	109.2 cm (43 in)	Length	134.6 cm (53 in)
	Width	34.9 cm (13.75 in)	Width	45 cm (17.75 in)
	Height	36.8 cm (14.5 in)	Height	36.8 cm (14.5 in)
Weight	72.7 kg (160 lb)	Weight	72.7 kg (160 lb)	

<sup>1</sup> All specifications given for 1200 g/mm grating at 313.183 nm and are subject to change without notice.

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