### HORIBA Scientific



# 1000M Series

Long Focal Length Spectrometer

ELEMENTAL ANALYSIS

FLUORESCENCE

GRATINGS & OEM SPECTROMETER

OPTICAL COMPONENTS

CUSTOM SOLUTIONS

PARTICLE CHARACTERIZATION

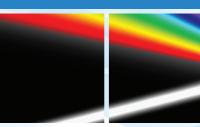
RAMAN / AFM-RAMAN / TERS

SPECTROSCOPIC ELLIPSOMETRY

SPR IMAGING

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 and fluorescence spectroscopy or when ultra high resolution is needed like plasma emission structure analysis, M Series II spectrometers are the solution for your application.

The M Series has long been a proved family of researchgrade 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 included a USB 2.0 computer interface, compatibility with HORIBA Jobin Yvon's complete library of interchangeable gratings, and easy integration of our Synapse™ CCDs, full line of single channel detectors, PMTS and accessories.

#### **Features and Benefits**

- Unmatched spectral resolution down to 0.006 nm
- Accurate drive scanner steps at just 0.00025 nm/step
- Fully automated
- Optional dual entrance and dual exit ports
- Kinematic grating mount
- USB 2.0 interface



## 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 (±0.15 nm) and repeatability (±0.005 nm).

#### **High Precision Slits**

Micrometer controlled slits are continuously adjustable from 3  $\mu$ m to 3 mm with calibration every 2  $\mu$ 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.

#### **Specifications**

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

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

### Your partner for Spectroscopy Solutions



Spectrometers, Monochromators Scientific Cameras, Software and **Custom Solutions** 









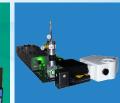














#### info.sci@horiba.com

USA: +1 732 494 8660 UK: +44 (0)1604 542 500 China: +86 (0)21 6289 6060 Taiwan: +886 3 5600606 France: +33 (0)1 69 74 72 00 Italy: +39 06 51 59 22 1 India: +91 80 41273637 Brazil: +55 (0)11 2923 5400

#### www.horiba.com/osd

Germany: +49 (0) 6251 8475 0 Japan: +81(75)313-8121 Singapore: +65 (0)6 745 8300 Other: +33 (0)1 69 74 72 00



