

## Back Illuminated Spectrometer (200-1100nm)

### M-series

The core component of the SIMTRUM M-series which adopts a surface back-illuminated CCD, is a professional spectrometer for research-grade applications. It has a small size, easy operation, and excellent performance.

### Features

- GPIO support
- Batch consistency control
- High signal to noise ratio, low stray light
- High quantum efficiency, high UV response
- Symmetrical cross CT optical path, incident focal length 100mm



### Technical Advantages

#### 1. High sensitivity, high dynamic range

The M-series spectrometer adopts Hamamatsu's FFT-CCD array back-illuminated detector, which enables the detector to have a lower noise level and is more conducive to low light detection. The pixel merging process of the array CCD greatly improves the sensitivity and signal-to-noise ratio (>800:1) and increases the processing speed. The system uses an asymmetrical cross CT optical path design, low noise circuit design, and its equipment dynamic range can reach more than 5000:1, for fluorescence detection and absorbance detection, extending the detection limit and increasing the concentration detection range.

#### 2. Powerful PC software

PC software provided with the spectrometer: FLAVOR is powerful software. In addition to the basic spectrum acquisition control functions, it also has functions such as saturation and automatic adjustment of the integration time, recording of the real integration time, and automatic peak finding. At the same time, the software also includes characteristic functions such as wavelet smoothing with patented technology. SDK supports Windows, Android, and Linux operating systems, and can provide secondary development packages in C#, C++, Java, Python, and other languages.

#### 3. High stability

0~40°C, the spectral resolution remains unchanged, which is the best choice for industrial applications.

#### 4. Simple to use

No configuration, preheating, plug and play

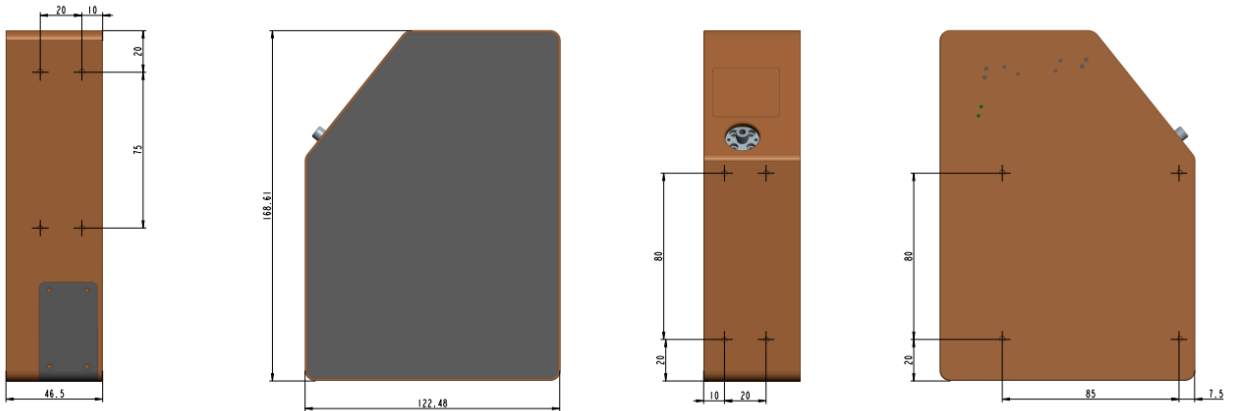
## Product Specifications\*

Model	Wavelength Range	Grating Scribe / Blaze Wavelength	Slit Width				
			10 um	25 um	50 um	100 um	200 um
M/200-1100	200-1100nm	300/300nm & 550nm	1nm	1.3nm	1.8nm	3nm	6nm
M/400-1000	400-1000nm	400 /500nm	1.4nm	1.5nm	1.6nm	2.6nm	5nm
M/350-800	350-800nm	600 /500nm	0.8nm	1nm	1.2nm	1.6nm	3nm
M/530-640	530-640nm	1800 /500nm	0.2nm	0.3nm	0.4nm	0.5nm	1nm
M/710-1100	710-1100nm	600 /800nm	0.8nm	1nm	1.2nm	1.6nm	3nm
M/780-1060	785-1060nm	830 /900nm	0.38nm	0.45nm	0.6nm	0.95nm	1.8nm

## Product Parameters

Size	168.61*122.48*46.5mm
Weight	1.048 kg
Slit	10um , 25um , 50um , 100um , 200um optional
Fiber Holder	SMA905 or FC/PC optional
Resolution	0.1nm FWHM or above
Signal to Noise Ratio	800:1
Integration Time	10mS ~ 120S

## Product Size

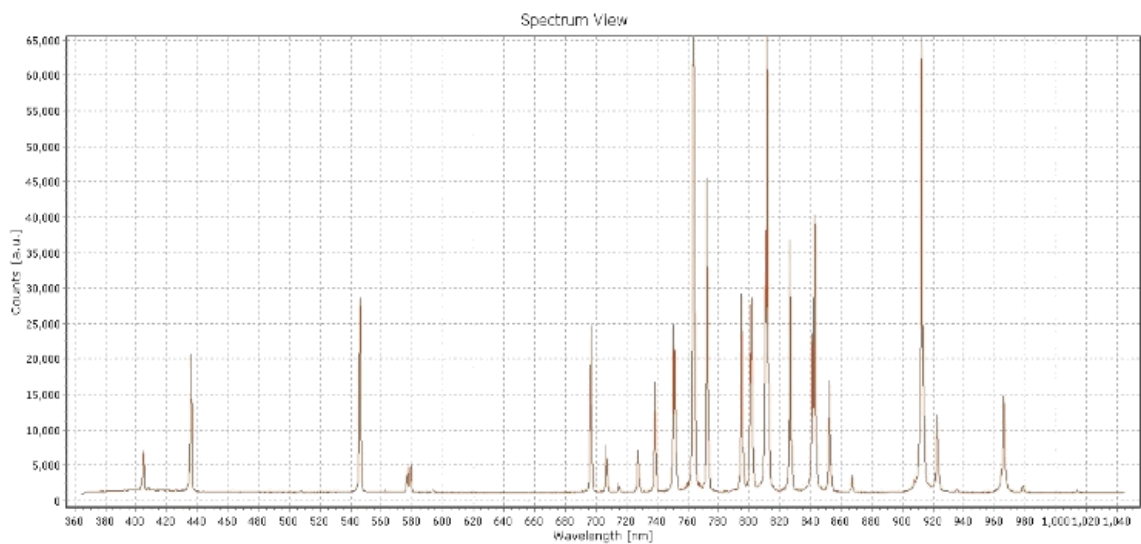


## Applications

- LED testing
- Fruit sorting
- Ground Spectrometer
- Handheld/Portable Raman Spectrometer
- Handheld/Portable Laser-induced breakdown spectroscopy (LIBS)
- Handheld/Portable Fluorescence Spectrometer

## Configuration Example

- 364.87 ~ 1044.91 nm / Slit 25  $\mu\text{m}$  / FWHM 0.66 nm @ 794 nm



\*Due to ongoing continuous product improvement, specifications are subject to change without notice.