Miniature Spectrometer

BIM-60 Series

The Miniature spectrometer adopts a compact optical-mechanical platform, with a size as small as a business card, making it highly portable. Its optimized optical design achieves a high resolution of up to 0.35 nm.

The BIM-6002A series features an upgraded circuit, offering a maximum dynamic range of 10,000:1 and a minimum integration time of 0.5 ms. With an improved signal-to-noise ratio (SNR 600:1) and higher sensitivity, it supports RS232 communication and provides enhanced anti-interference performance, making it ideal for industrial and scientific research applications.
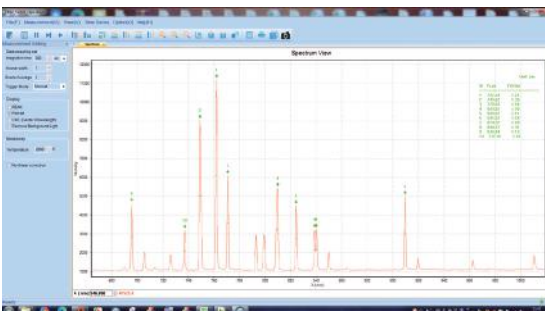
Features

- Compact business-card size for easy handling
- Crossed asymmetric C-T optical path design
- Interference filter eliminates secondary diffraction
- SMA905 fiber connector for convenient optical setup
- Optional wavelength range & optical resolution
- USB 2.0 for data transfer and power supply
- Support RS232 communication
- Multiple trigger modes
- Powerful software capabilities, Automated calculation of peak wavelength & bandwidth
- SDK provided for secondary development
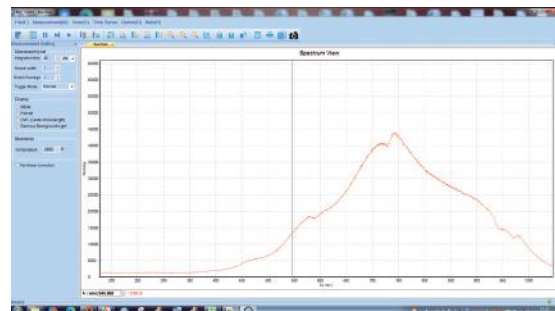- Mounting holes on bottom & side for easy system integration

Applications

- Emission & absorption spectrum measurement
- Transmittance & absorbance testing
- LED characterization and analysis
- Solar energy spectrum testing

- Fluorescence detection
- Color measurement
- Laser spectrum analysis systems

Typical Spectrum

Mercury (Hg) Lamp Spectrum

Tungsten Halogen Lamp Spectrum

Spectrometer

Optical power meter

Light source

LD Driver & TEC Controler

Solution and system

Accessories

Specifications

Model	BIM-6001A Series	BIM-6002A / BIM-6002S Series
Wavelength Range	315nm-1100nm optional	180nm-1100nm optional
Resolution	Optimal ~0.35nm	
Fiber Connector	SMA905	
Detector Type	TCD1304,3648 liner CCD	Hamamatsu S11639 Linear CMOS Array
Detector Pixel	3648 pixel，each pixel 8μm×200μm	2048pixel，each pixel 14μm×200μm
Signal to noise ratio	300:1	600:1
A/D Resolution	16 bit	
Integrating Time	4ms -10s	0.5ms -65 s
Dynamic Range	300:1	10000:1
Trigger Mode	Normal Mode,Software,Hardware,Synchronization Trigger	
Power Consumption	250mA,5VDC	
Operating Temperature	5℃ -35℃ (25℃ recommended)	
Communication Interface	USB2.0(12Mbps) RS232(115200bps)	
Operation system	Win XP,Win7,Win8,Win10	
Mounting Holes	4 × M3 Threaded Holes at bottom, 2 × M3 at side	
Power Supply	USB	
Dimension	94 × 60 × 36.5 mm	
Weight	0.3 Kg	

Dimensions (mm)