

High-Sensitivity Spectrometer

BIM-67 Series

The BIM-67 Series Spectrometer is developed based on Hamamatsu's back-illuminated area CCD sensor. With its exceptional sensor performance and optimized optical path design, the spectrometer achieves significantly enhanced sensitivity, delivering a dynamic range of up to 50000:1 (typical). The spectrometer supports Multiple trigger modes, Secondary development (SDK support), and Comprehensive deep-customization services if our standard version cannot meet your requirement.



The BIM-6703 Series Spectrometer is developed

based on Hamamatsu's S16010 back-illuminated area CCD sensor. It delivers exceptional performance in the 800nm–1100nm wavelength range, making it ideally suited for Raman spectroscopy and other weak near-infrared spectral measurements.

This BIM-6704 Series Spectrometer is developed based on Hamamatsu's S10420-01 back-illuminated area CCD sensor. It delivers exceptional performance in the 200nm–500nm wavelength range, making it ideally suited for weak ultraviolet (UV) spectral measurements.

The two detectors offer a response wavelength range of 200nm–1100nm, allowing customizable wavelength ranges and optical resolutions through interchangeable slits, gratings, and other optical components.

Features

- Signal-to-Noise Ratio: 800:1
- Dynamic Range: 50000:1 (typical)
- Detector: Hamamatsu back-illuminated area CCD sensor
- Auto-Calculation: Peak wavelength and bandwidth detection
- Compact Design: Palm-sized for easy operation
- Optical Path: Crossed asymmetric C-T configuration with interference filter for second-order diffraction suppression
- Connectivity: SMA905 fiber optic connector, USB 2.0 (data & power)
- Flexible Configuration: Selectable wavelength range & optical resolution
- Communication: RS232 interface
- Triggering Options: Multiple trigger modes
- Customization Support: Supports SDK for secondary development & OEM integration

Applications

- Raman spectroscopy & fluorescence spectroscopy measurements
- Near-infrared (NIR) and ultraviolet (UV) weak spectrum detection
- Weak spectrum transmittance, absorbance, and reflectance measurements

Optical power
meter

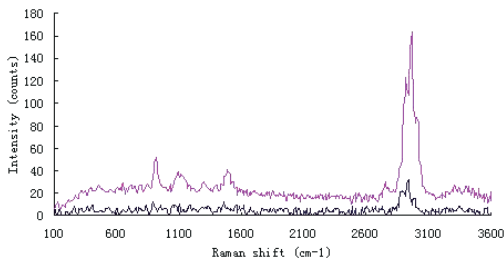
Light source

LD Driver &
TEC Controller

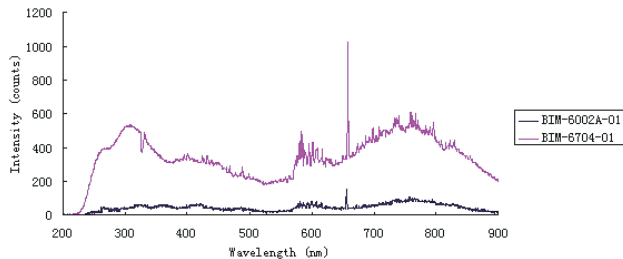
Solution and system

Accessories

Typical Spectrum



BIM-6703 VS BIM-6002A
Raman spectrum testing



BIM-6704 VS BIM-6002A
Deuterium Tungsten lamp spectrum testing

Specifications

Model	BIM-6703 Series		BIM-6704 Series
Detector Wavelength Range	200nm-1100nm		200nm-1100nm optional
Detector Sensitivity Range	500nm-1100nm		200nm-500nm
Resolution	Optimal ~ 0.35nm		
Fiber Connector	SMA905		
Detector Type	Hamamatsu S16010 series area array back-illuminated CCD		Hamamatsu series area array back-illuminated CCD
Detector Pixel	2048×64 pixel, each pixel 14 μm×14μm		
Signal to noise ratio	800:1		
A/D Resolution	16 bit		
Integrating Time	1ms-10s		
Dynamic Range	50000:1		
Trigger Model	Normal Mode,Software,Hardware,Synchronization Trigger		
Power Consumption	250mA,5VDC		5VDC,500mA
Operating Temperature	5℃ -35℃ (25℃ recommended)		
Communication Interface	USB2.0, RS232		
Operation System	Win XP,Win7,Win8,Win10		
Power Supply	USB		
Dimension	165mmx110mmx38mm		
Weight	0.7 Kg		

Dimensions (mm)

