

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.



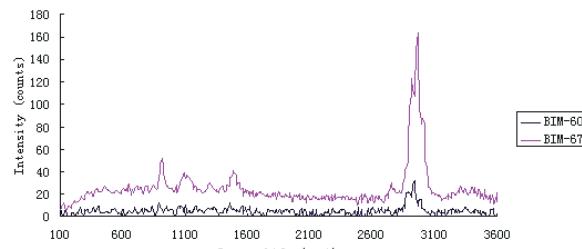
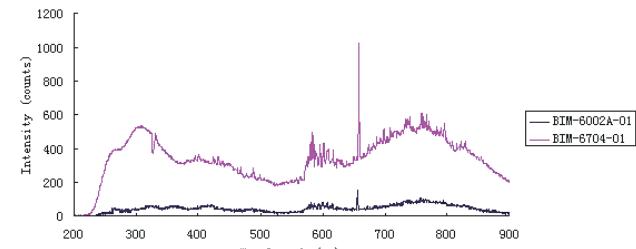
Features

- 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

Typical Spectrum

BIM-6703 VS BIM-6002A
Raman spectrum testingBIM-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°C -35°C (25°C recommended) | |
| Communication Interface | USB2.0, RS232 | |
| Operation System | Win XP,Win7,Win8,Win10 | |
| Power Supply | USB | |
| Dimension | 165mmx110mmx38mm | |
| Weight | 0.7 Kg | |

Dimensions (mm)

