

# Near-Infrared Spectrometer

## BIM-68 Series

The BIM-6805 series near-infrared spectrometer features a compact optical path and structural design, utilizes a Hamamatsu uncooled 128-pixel InGaAs detector that delivers ultra-low power consumption and versatile configuration options. With a spectral detection range of 950nm-1700nm, it is particularly well-suited for applications in food sorting, biopharmaceuticals, and life sciences, while also being ideal for system integration.

The BIM-6809 series near-infrared spectrometer represents an upgraded version of the BIM-6805, utilizes a Hamamatsu's uncooled 256-pixel InGaAs detector. This enhancement not only doubles the number of pixels but also increases pixel size, significantly improving both resolution and sensitivity. Each spectrometer can be configured with different width slit to accommodate diverse spectral measurement requirements for different resolution and sensitivity needs. Ideal for industrial integration and scientific research applications, it is particularly well-suited for food sorting, biopharmaceuticals, life sciences, and related fields.



## Features

- Low-Power Operation: Utilizes uncooled InGaAs detector for minimal power consumption
- Detector Options: Available in 128-pixel or 256-pixel configurations
- Compact Design: Space-saving optical and structural layout for easy system integration
- Interchangeable Slits: Flexible switching between different resolutions and sensitivities
- Customizable Performance: Selectable wavelength ranges and resolutions
- Broad Spectral Range: Stable intensity measurements across 950nm~1700nm
- Development Ready: Supports secondary development and OEM integration
- Advanced Software: Auto-calculation of peak wavelength and bandwidth

## Applications

- Fruit & Vegetable Testing: Freshness and sugar content detection
- Meat Analysis: Fat and protein content measurement
- Grain & Seed Inspection: Quality assessment
- Oil Composition Analysis: Ingredient profiling
- Life Science Research: Biomedical applications
- Pharmaceuticals: Composition analysis and process monitoring
- Plastics Manufacturing: Raw material and production process control
- Material Sorting: Quality control and classification

Optical power  
meter

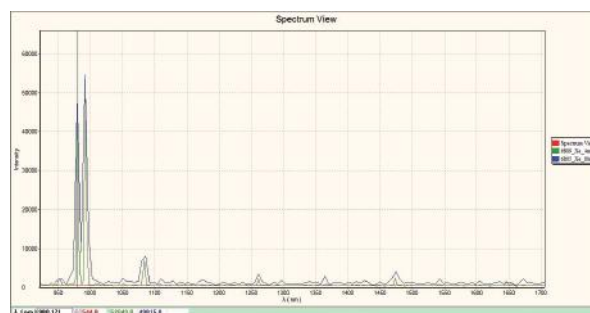
Light source

LD Driver &  
TEC Controller

Solution and system

Accessories

## Typical Spectrum



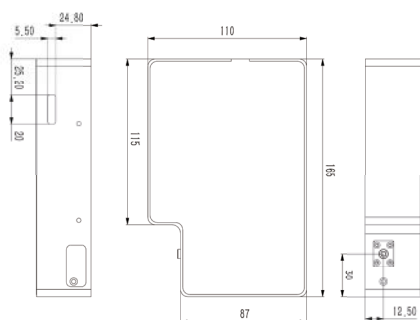
Comparison of Xenon Lamp Spectral Testing  
(BIM-6805 & BIM-6809)

Comparison of Tungsten Lamp Spectral Testing  
(BIM-6805 & BIM-6809)

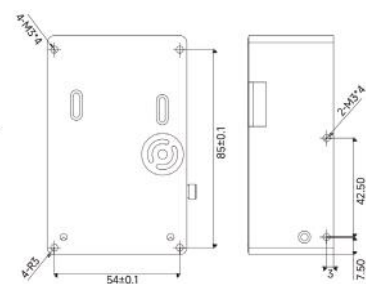
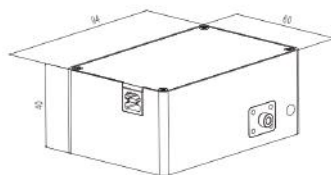
## Specifications

Model	BIM-6805 Series	BIM-6809 Series
Detector	InGaAs 128-pixel non-cooled detector pixel size 50μm×250μm	InGaAs 256-pixel non-cooled detector Pixel size: 50 μm × 500 μm
Wavelength Range	950nm-1700nm	920nm-1700nm
Resolution	-10nm(pre-configured)	~5nm(pre-configuration)
A/D Resolution	16bit	
Integrating Time	0.1ms-65s	
Trigger Model	Normal Mode,Software,Hardware,Synchronization Trigger	
Power Consumption	5VDC, 300mA	
Fiber Connector	SMA905	
Operation Temperature	5°C -35°C (25°C recommended)	5°C -35°C (25°C recommended)
Communication	USB2.0,RS232	
Operation System	Win XP,Win 7,Win 8,Win10	
Power Supply	USB or 5V DC	
Dimension	165 × 110 × 38 mm	94 × 60 × 40mm

## Dimensions (mm)



BIM-6805



BIM-6809