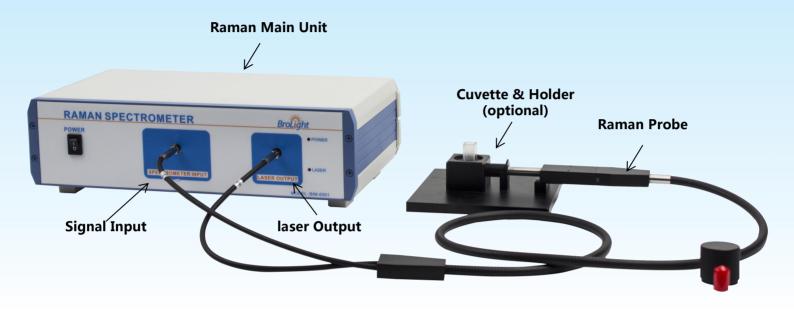


# **BRS-785** Portable 785 Raman Spectrometer



### Overview

Raman spectroscopy is the "fingerprint spectrum" of molecular vibration. Different material molecules have different vibration frequencies, so they are often used as an important basis for material identification.

Raman technology has many unique advantages over traditional infrared and chemical methods. First, Raman scattering of water is very weak, so Raman spectroscopy is an ideal tool for studying biological samples and chemical compounds in aqueous solution. Second, Raman's peaks are sharp and clear, and are more suitable for quantitative research, database search, and qualitative analysis using differential analysis. Third, Raman can cover about 4000 wavenumber intervals at the same time, and can analyze organic matter and inorganic matter. If the infrared technology covers the same Intervals must change gratings, beam splitters, filters, and detectors. Fourth, samples (solid, liquid, gas) for Raman measurements no need to be pretreated, and with advantages of no contact, lossless, real-time and testing materials through transparent packaging.

The BRS-785 series Raman spectrometers are equipped with a narrow linewidth low power laser with an excitation wavelength of 785 nm. The spectral range is up to 3600 cm<sup>-1</sup> and the spectral resolution is up to 8 cm<sup>-1</sup>. According to the intensity of the Raman spectrum, different sensitivity specifications can be selected, which are BRS-785-01 universal type and BRS-785-02 high sensitive type. The instrument is stable in performance, easy to carry, and supports OEM customization and secondary development, providing a great convenience for laboratory and on-site Raman detection.

#### **Features**

Wider range, up to 3600cm<sup>-1</sup> High resolution, up to less than 8cm<sup>-1</sup> Laser power is adjustable for different samples Portable and ease to use Sampling accessories are optional, such as cuvette holder Support OEM and customization

#### **Applications**

Food safety Jewelry appraisal Chemicals, explosive materials and drug identification Biomedical testing Customs verification Other applications where Raman is required.

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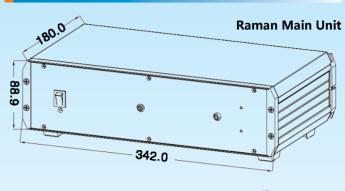


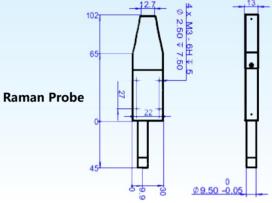


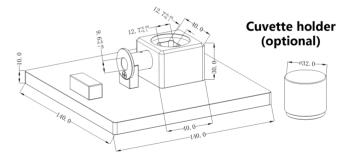
#### **Specifications**

Model	BRS-785-01	BRS-785-02
Range	100cm <sup>-1</sup> - 3600cm <sup>-1</sup>	100cm <sup>-1</sup> - 3600cm <sup>-1</sup>
Resolution	< 10cm <sup>-1</sup>	< 8cm <sup>-1</sup>
Laser	785nm±0.5nm	785nm±0.5nm
	Line width < 0.1nm	Line width < 0.1nm
Laser Power	0-500mW adjustable	0-500mW adjustable
Laser output port	FC	FC
Probe focal length	7.5mm	7.5mm
Detector	Hamamatsu S11639	Hamamatsu S11510
	2048 Line array	Area array back-thinned
	CMOS	CCD
Signal to noise ratio	600:1 full range	800:1 full range
Integration time	0.5ms -10s	1ms-10s
Signal input port	SMA905	SMA905
Power adapter	100-240v AC,	100-240v AC,
	50/60Hz	50/60Hz
Size	342×180×89mm	342×180×89mm
Weight	2.45kg	2.65kg
Signal output	USB2.0, 12Mbps	USB2.0, 12Mbps
Operating	0°C -45°C	0°C -45℃
temperature	(25°C recommend)	(25°C recommend)
Humidity	5%-80%	5%-80%

#### Dimensions







#### **Order Information**

Model	Description	
BRS-785-01	Portable universal 785 Raman spectrometer, using	
	line array detector	
BRS-785-02	Portable high sensitivity 785 Raman spectrometer,	
	using area array detector	
Optional accessories		
BIM-6322	Cuvette holder	
BIM-6301-Q10	Cuvette, 10mm	

#### **Packing List**

Raman main unit x 1, Raman probe x 1, USB cable x 1, Power adapter x 1, CD (software & manual) x 1, Calibration report x 1

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## Testing Data

