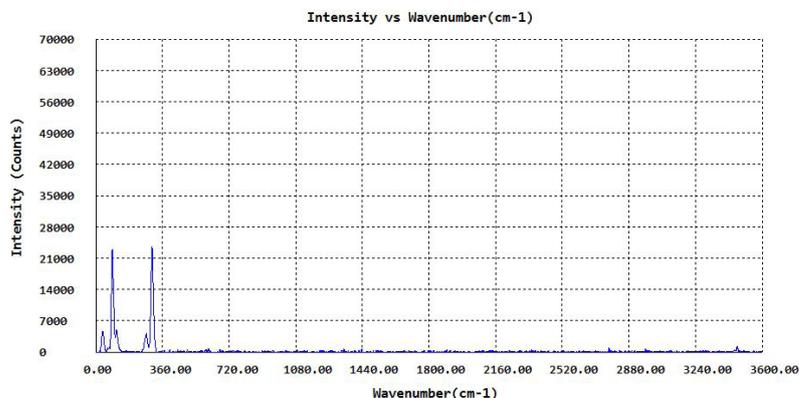


# DATASHEET

## Portable Raman Spectrometer *GL-PRS-785*



GL-PRS-785, produced by Glydden Science Pte Ltd, employs a 785nm laser diode as an excitation light source, a linear CCD as a detector and a grating as a spectral dispersion component. GL-PRS-785 is able to carry out material analysis using Raman spectrum without direct contact to material. Professional heat dissipation design with a TEC cooler and constant current control can stabilize the 785nm laser wavelength and power. In order to get laser's FWHM of 0.1nm, center wavelength of the 785 nm laser diode employed in GL-785LD-500 is stabilized using a volume grating.

A unique optical design and approach eliminating stray light enable Raman optical probe to obtain the material's Raman spectrum with both high coupling efficiency and high signal to noise ratio. The 785 laser diode source, a Raman spectrum detection module and the Raman optical probe are assembled into a portable casing. The Raman optical probe is connected to the 785 laser diode source and the spectrum detection module respectively through two fibers in an about 1 meter armored fiber bundle. A computer that controls GL-PRS-785 directly through its GUI is mounted on a plate in the portable casing. A built-in rechargeable lithium battery can meet requirement of on-site measurements for about 5 hours. GL-PRS-785 is a portable Raman spectrometer featuring compact structure, easy operation, various applications and good performance etc.

Operation software of GL-PRS-785 developed by Glydden Science Pte Ltd features the laser control, Raman spectrum detection, database management and retrieval, material analysis and log recording experiment timely etc. Besides the normal Raman analysis functions, the software has special recording functions of photography and video while measuring the Raman spectrum. Both photography and video can record Raman analysis environment including operators, samples and other relevant analysis equipment etc. The software can compile Raman spectrum, analysis results and the photo or the video as one file in same GUI as well as operate on the file such as save, retrieval, comparison and edition etc. The software can also load a saved file for carrying out review, comparison or edition etc. These unique features help users of GL-PRS-785 to timely record the Raman analysis environment as evidence while doing Raman spectrum analysis.

# Technical Specifications

ITEMS	SPECIFICATIONS	REMARKS
Excitation Wavelength	SMA 905	Optional upon request
Raman Probe Laser Power	0-350 mw	
Laser Output Efficiency of Raman Probe	80%	
Working Distance of Raman Probe	~4mm (Default)	Optional upon request
Grating	1200 line/mm, blazed at 750nm	Optional upon request
Raman Spectrum	200-2800cm <sup>-1</sup>	
Spectrum Resolution	8 cm <sup>-1</sup>	
Stray Light	0.002% @850nm	
Stability	0.05% @ 785nm	
CCD	Toshiba TCD1304DG	Cooled CCD optional upon request
Pixel Number	3648	
Pixel Size	8µm-200µm	
SNR	500:1	Room temperature
Dark Noise	30(RMS)	
ADC Resolution	16 bits	
Integration Time	1ms-15min	
Power Supply	5VDC	
Power Consumption	Max70W	
Probe Fiber	1M armed	
Dimensions	508mm x 373mm x 147mm	
Weight	6Kg	
Operating Temperature	-10C° to 50C°	

Need to customize your product? Our team of experienced designers can help you. Kindly contact us:

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