Optoelectronics

KNIGHT OPTICAL

Title: Raman Galaxy
Material / Specification: 785nm or 1064nm Raman
Part number(s): OSP0601, OSP0602, OSP0603, OSP0604, OSP0605

Our complete ranges of mini spectrometers are designed with operating efficiency in mind.

Knight Optical's range of high performance Raman mini spectrometers are equipped with enhanced CCD detectors for applications at 785nm and TEC cooled InGaAs detectors for 1064nm Raman spectroscopy. Our 1064nm detectors are designed to minimized fluorescence and all our Raman systems contain enhanced optics for extreme sensitivity and very low stray light values down to 0.05%. Our high resolution models achieve 4cm-1 resolution using a 2048 pixel CCD detector.

Like all our mini spectrometers, our Raman systems are designed with durability in mind. Enclosed in a rugged metal housing and with bolt fixed optics and no moving parts, the Raman Galaxy is suitable for demanding field applications as well as traditional laboratory applications.

The Raman Galaxy mini spectrometer is suitable for a range of Raman applications including chemical match testing and identification in liquids, solids and power samples and features a standard SMA 905 adaptor for compatibility with most probes.

Specifications:

Model:	Raman Galaxy
Optical resolution:	4cm-1 or 8cm-1
Signal to noise:	1000:1
Detector type:	Enhanced CCD with 2048 pixels or 512/1024 PDA
Diffraction gratings:	1200g/mm with gold surface
Spectral range at 785nm:	220-2200cm-1 / 200-3200cm-1
Stray light:	<0.05%
Exposure times:	to 20sec OR to 60sec with TEC
Dimensions:	25.4 x 76.2 x 127.0mm
Weight:	0.4kg
Power consumption:	<100mA, USB powered
Fiber optic input:	SMA905
Interface	USB-2
Operating systems:	Windows XP/Vista/7/8
Software included:	SpectraWiz, LabView, Delphi, C

Variations of the Raman Galaxy:

Model	Wavelength (nm)	Spectral Range (cm-1)	Detector	TEC
SR	785	200-3200	2048 CCD	No
HR	785	200-2200	2048 CCD	No
HR-TEC	785	200-2200	2048 CCD	Yes
SR-TEC-IG	1064	200-3500	512 PDA	Yes
HR-TEC-IG	1064	200-3500	1024 PDA	Yes

Directors: Mr C. G. Overton, Mrs A. E. Overton. Knight Optical (UK) Ltd is Registered in England and Wales, **Registration No.** 3755966 Registered office: 34 Bower Mount Road, Maidstone, Kent, ME16 8AU **V.A.T. Registration No.** GB 703 1430 90

Varations:

Knight Optical's standard Raman Galaxy SR model is designed for 785nm over a spectral range of 200-3200cm-1 with an optical resolution of 8cm-1 and is ideal for a broad range of Raman applications such as chemical identification. Our Raman Galaxy HR 785nm model improves the optical resolution to 4cm-1 at the expense of a reduced spectral range and is desirable for applications where an exceptionally accurate resolution is essential. Improving on the HR model, the HR-TEC system includes a thermoelectric cooler to improve signal to noise.

Our Raman Galaxy SR-TEC-IG and HR-TEC-IG models operate at 1064nm and include integrated thermoelectric coolers to substantially improve the signal to noise ratio. Our 512 and 1064 InGaAs PDA detector systems also boast the greatest spectral range. Combined with a 1064nm laser, both systems are also ideal for minimizing fluorescence.

All our mini spectrometers are supplied with intuitive Windows XP, Vista, 7 and 8 compatible SpectraWiz software for quick and easy measuring wherever you are. SpectraWiz software is versatile, allowing for accurately measuring and displaying wavelength emissions, reflectance, transmission, absorption, concentrations and absolute intensities.

In addition to our Raman Galaxy range of mini spectrometers, Knight Optical also supply a range of mini spectrometer models and accessories for alternative applications, please click on the "see also" tab below, alternatively speak to our experienced, technical sales team to discover how Knight Optical's range of high quality mini-spectrometers can improve your spectral analysis capabilities and experience.

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