Sol HT Datasheet

1064 nm Raman Spectrometer

The new Sol HT spectrometer engine for 1064nm Raman Spectroscopy provides you high quality Raman spectra easier than ever. Thanks to the fluorescence suppressing nature of 1064nm Raman, the Sol HT is equipped to tackle the challenging samples that traditional techniques cannot.High quality extended InGaAs spectrometer for the widest NIR coverage possible.

Do More with Higher Throughput

This spectrometer has been optimized to increase available photons to the detector which is perfect for a low-light application such as Raman Spectroscopy. The overall sensitivity increase will allow for more free use of the detector's High Dynamic range modes to achieve better SNR and shorter scan times without sacrificing overall signal intensity.

Improving Cooling for Long Acquisition Times

Deep cooling is an integral part of achieving high-quality spectra using InGaAs arrays. The Sol HT is equipped with a multi-stage TE Cooling package to cool down to -20C which suppresses dark noise and improves overall instrument stability. Long acquisition times can be performed without the worry of overwhelming dark current.

Smooth Operation
High Quality 512 pixel Detector

The detector is field tested in our i-Raman series Laboratory Raman instrument. This ensures the engine is robust and reliable. The detector has available gain modes to meet dynamic requirements. The High Dynamic Range detector mode will drop the noise and overall gain to improve the short integration time scans, while the High Sensitivity detector mode will improve the signal intensity while sacrificing the noise floor.

FC / PC Fiber Optic Input

FC/PC fiber optic connection is the default input method for Sol HT. Unlike SMA905, FC/PC allows for more repeatable fiber insertions. The spectrometer pairs perfectly with the variety of Laboratory Raman probes available from Metrohm Spectro, allowing for flexible sampling to meet the sample anywhere.

Specifications

Dimensions (Approx)	W	94 mm
	H	68 mm
	L	162 mm
Weight		1133 g
Model No.		BTC284N
DC Power Input		5V
Detector Type		Linear InGaAs Array
Pixels		512 x 1 @ 25μm x 500μm per element
Spectrograph f/#		2.2
Dynamic Range		14,000:1 typical
Digitizer Resolution		16 bit (65,535:1)
Readout Speed		500 kHz
Data Transfer Speed		>300 spectra per second via USB 2.0
Integration Time		250μ s to 64 s
External Trigger		Available in Aux Port Functions
Operating Temperature		0°C to 35°C
TE Cooling		Target CCD Temperature: -15°C Δ45°C from ambient
Computer Interface		USB 2.0/1.1

Raman Configuration

Raman Shift Range	Approx Resolution (cm-1)
0 to 2500 cm-1	~10cm-1 @ 1296nm

Diffraction Grating

Spectral Coverage	Grating	Approx Resolution 40μm Slit
1047 to 1450nm	150/1250	~1.67nm

Software

BWSpec

A spectral data acquisition software with a wide range of tools that are designed to perform complex measurements and calculations at the click of a button. It allows the user to choose between multiple data formats and offers optimization of scanning parameters, such as integration time. In addition to powerful data acquisition and processing, other features include automatic dark removal, spectrum smoothing, and baseline correction. SDK with demo code is available as additional option.

Accessories

Light Sources

Fiber Patch Cords

Fiber Sampling Probes

Fiber Sample Holders

www.bwtek.com