GOPTICA
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RMT series portable Raman spectrometer

Product introduction

The RMT series portable Raman spectrometer is a professional Raman spectroscopy equipment designed for applications such as food and pharmaceuticals, industry, and scientific research. It has the characteristics of easy portability, matching application scenarios, easy operation, and excellent performance. This series is divided into food and drug RMT SY type, industrial RMT GY type, and scientific research RMT KY type. Among them, the industrial (RMT GY) and scientific research (RMT KY) versions have external fiber optic probes for more flexible use.

RMT SY   **RMT GY**   **RMT KY**

Technical advantages

1. Integrated spatial optical path

The RMT series portable Raman spectrometer adopts an integrated optical path design with full free space coupling, without fiber loss and spectral instability caused by free fiber vibration. Its spectral sensitivity is about 2-5 times that of traditional fiber optic paths, indicating a significantly higher signal-to-noise ratio in the spectrum.

The RMT GY is equipped with a HiNA high-sensitivity spectrometer that can detect concentration changes up to 1%.

2. Powerful software features

The PC software provided by RMT KY, RMT GY, and spectrometer: FLAVOR is a powerful software that not only has basic spectral acquisition control functions, but also features wavelet smoothing, automatic calculation of CV, and other characteristic functions.

The RMT SY has a built-in probe, built-in testing position, built-in screen and operating software, built-in database and matching algorithm, and supports wireless recording upload and printing of test reports.

3. High stability

Built in self calibration function, one-time calibration with lifetime maintenance free

Temperature drift within ± 2cm-1 at 0~40 ℃

7 * 24 continuous operation, spectral frequency shift less than 2cm-1/month

4. Simple to use

No need for configuration,preheating, plug and play

Individual 5V DC power supply or optional battery configuration

RMT series portable Raman spectrometer

Product parameter

Application range	Food & medication	Industry	Scientific research		
Model	RMT785 SY	RMT785 GY	RMT785 KY	RMT532 KY	RMT1064 KY
Wavelength range	200~3200cm^{-1}	200~3000cm^{-1}	200~3000或 200~3200cm^{-1}	200~3000或 200~3200cm^{-1}	200~2500cm^{-1}
Resolution	6-8cm^{-1}	6-8cm^{-1}	8cm^{-1}	8cm^{-1}	10cm^{-1}
Frequency shift error	≤±2cm^{-1}	≤±2cm^{-1}	≤±2cm^{-1}	≤±2cm^{-1}	≤±2cm^{-1}
Temperature drift	≤±2cm^{-1} @ 0~40℃	≤±2cm^{-1}@ 0~40℃	≤±2cm^{-1} @ 0~40℃	≤±2cm^{-1} @ 0~40℃	≤±2cm^{-1} @ 0~40℃
Laser wavelength	785nm±0.5nm	785nm±0.5nm	785nm±0.5nm	532nm±0.5nm	1064nm±0.5nm
Linewidth	< 0.1nm	< 0.1nm	< 0.1nm	< 0.1nm	< 0.1nm
Laser power	0~500mW	0~500mW	0~500mW	0~100mW	0~500mW
Probe working distance	7.5mm	7.5mm	7.5mm		
Size	415*336*120mm^3	312*275*151mm^3	484*375*178mm^3		
Weight	~3kg	~7.5kg	~5kg		
Software	Raman software for Food & medication	Raman software:flavor	Raman software:flavor		
Raman Probe	Built-in	External (probe fiber 1m)	External (probe fiber 1m)		
Batterybiao	Yes	/	Optional		
Data interface	/	USB2.0，USB-B	USB2.0，USB-B		
Power interface	DC2.5	DC2.1	DC2.5		
Power supply	12V DC	12V DC	12V DC		

Software function

- **Device connection management, reconnecting or refreshing devices**
- **When the spectrum saturates, the software automatically adjusts the integration time and records the actual integration time and laser power**
- **Wavelet smoothing**
- **Automatic peak searching**
- **Model library management: creating, deleting, and modifying**
- **Model matching**
- **Laser can be independently controlled or associated with equipment**

- **Continuous spectral acquisition mode, or Raman acquisition mode**
- **Automatic calibration function**
- **Performance monitoring/evaluation**
- **Overlay/delete spectra, select spectra first**
- **Add multiple spectral collection pages**
- **Wave number/wavelength switching**
- **Manually specify the X-axis translation value**
- **Manually turn on/off the laser cooling for easy control of heat and energy savings**
- **RMT SY's software includes a database and matching algorithm**
- **RMT SY's software supports wireless data upload and printing test reports**