OPTOSKY
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Datasheet

Ultra-thin, High performance Handheld Raman Spectrometer

ATR6200

Features:

- TE-Cooled Linear CCD sensor
- Spectral range: 250-2400 cm-1 or 200-3300cm-1
- Spectral resolution: 13 or 15 cm-1
- 5-Inch High resolution capacitive touch screen
- High resolution camera
- Wi-Fi (optional)
- GPS (optional)
- High reliability
- Smart intuitive software, available for both technical and non-technical users
- Android 4.4 operation system
- Internal Li-ion battery life, >3 hrs Operation
- Light weight (1.2kg),compact and easy to held
- IP-66 Dust Tight and Powerful waterjet proof related housing
- Available in two version:
  - ATR6200 : High performance
  - ATR6200HS: High sensitivity

Application:

- Substances identification
- Mineral selection
- Experiment research
- Antique identification
- Gemstone identification
- Drugs detection

Description:

Optosky provides a series of ultra-thin, light-weight, mini handheld Raman spectrometers. The total weight is less than 1.2kg, compact and easy-to-held, and it's convenient to identify and validate raw and auxiliary materials whether in the lab, factory plant, warehouse, loading dock or outdoor. Excellent spectral identification algorithm are embedded in Handheld Raman spectrometers to easily identify substance, and enable users to add their own spectral data.

A user-friendly interface for both technical & non-technical users to make their job easier. High-quality hardware configuration and robust multivariate algorithms guarantee accurate, uniform and reliable results detected.

Raman spectrometer is an approved method by the United States, European and Chinese Pharmacopoeia. It is also an analytical method in compliance with 100% identity assurance for incoming materials such as APIs, excipients, intermediates, and packing materials.

Optosky offers comprehensive technical assistance services, including spectral library building, method & verification, IQ/OQ/PQ validation etc.

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	ATR6200	ATR6200HS
System parameters		
Interface	USB port, WIFI optional	
Operating system	Android 4.4	
Built-in Li battery life	> 4 hours	>2.5 hours
Integration time	3.8 ms - 120 s	
Power supply	DC 9V ± 5%	
Operating temperature range	-20 – 45 ℃	
Humidity range	< 90% RH	
size	18×10×4.8 cm	
Weight	1.2 kg	1.25 kg
Reliability		
Spectral stability	deviation < 0.5%	
Temperature stability	Temp shift < 1 cm^{-1}	
Peak intensity 40℃	> 95%	
Peak intensity 5℃	> 95%	
Optical parameters		
Wavenumbers range	200-3300 cm^{-1}	
Resolution	13 cm^{-1}（ASTM）	
SNR	>800:1 ▲	>3000:1
Entrance slit	50 μm	
Numerical aperture	0.22	
Optical path	C-T	
Sensor		
Type	Linear CCD	TE-cooled, back-thinned, enhanced Raman signal CCD
Detecting range	200-1100 nm	
Effective pixels	2048	
Dynamic range	2000:1 ▲	80000:1
Pixel size	14μm×200μm	14μm×14μm
Laser sources		
Central wavelength	785 ± 0.5nm	
Linewidth	0.08 nm	
Power output	≥550 mW	
Power stability	Standard deviation~±0.2%	
Raman probe		
Operating distance	6 mm	
Rayleigh scattering resistance	OD > 8	
aperture	7mm	

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2. Performance

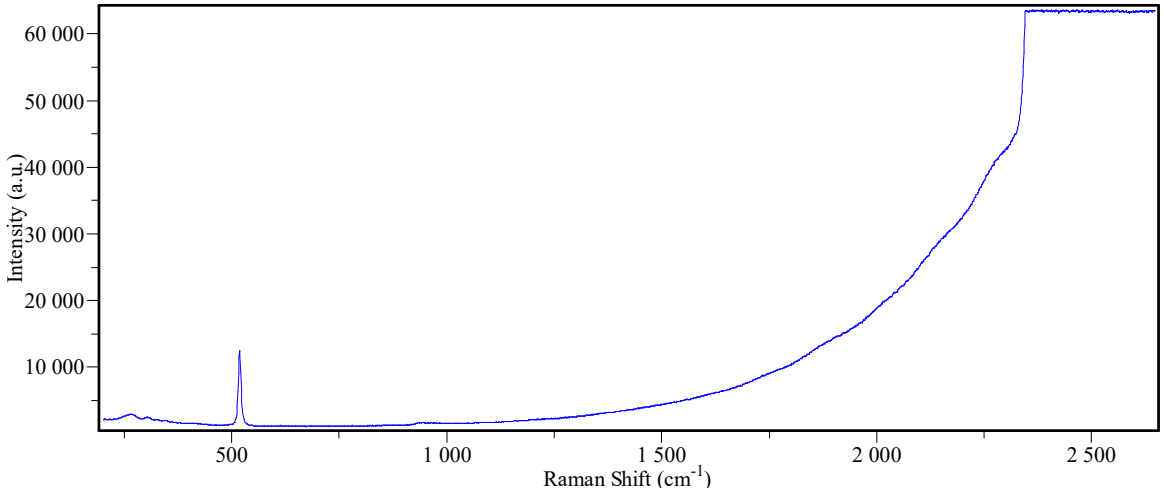

Fig 1 ATR6200 measure Si Raman spectra (500mW, integration time: 1S)

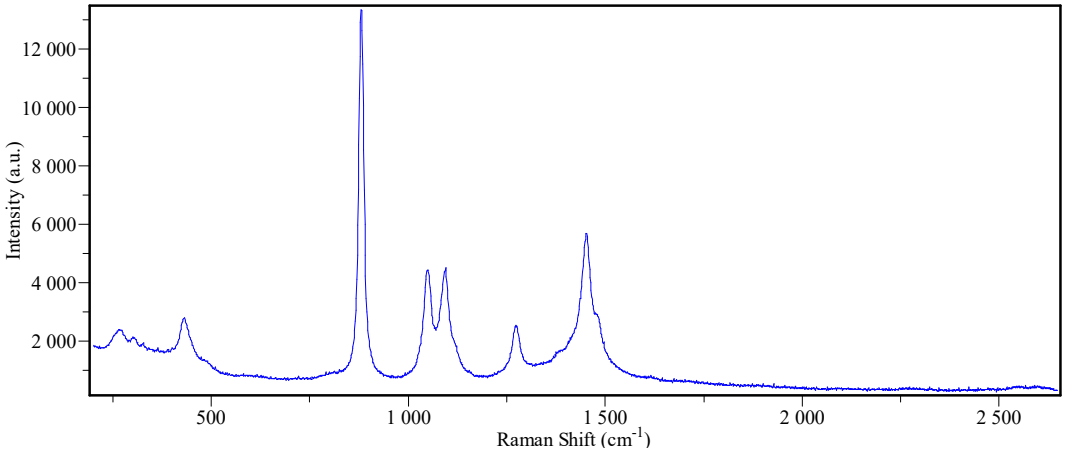

Fig 2 ATR6200 measure alcohol Raman spectra (500mW, integration time: 1S)

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