Datasheet

Broadband Fiber Optic Spectrometer Array

ATP9200

Features

- The array combination of multiple spectrometers has the characteristics of wide band and high resolution
- Linear array back-illuminated CCD/ InGaAs sensor
- Maximum spectral range: 200-2500nm
- Number of bands: 2060 bands
- Integration time: 1ms ~ 10s
- Built-in anti-secondary diffraction coating and filter, high accuracy
- High sensitivity, the quantum efficiency of the detector can reach up to 60%, and the near-infrared sensitivity is 40% higher than that of traditional PDA detectors;
- Dynamic dark current correction to reduce the influence of thermal noise;
- Portable, special carrying case, easy to carry
- Power supply: DC 12V±10% @ <5A
- Optical input interface: optical fiber input or free space input
- Support external trigger synchronous acquisition
- Data output interface: USB 2.0
- PC software control mode

Application

- Plasma signal
- Photoelectric signal analysis
- Spectral signal analysis in various fields

Description

ATP9200 series broadband fiber optic spectrometer is the latest product of Optosky, with the widest wavelength range up to 200nm~2500nm, suitable for applications in various fields such as physics, optoelectronics, materials, and biology.

The ATP9200 series broadband fiber optic spectrometer uses multiple spectrometers of different bands to combine to form an ultra-wide band spectrometer. At the same time, it has better spectral resolution, has the characteristics of high cost performance, fast and accurate measurement, simple operation, and convenient portability. Equipped with a powerful software package, in addition to measuring spectral signals, it can also be used for reflectance and transmittance measurements, as well as radiometric, photometric and colorimetric measurements.

ATP9200 can receive external acquisition trigger signal for synchronous optical signal acquisition.

ATP9200 can receive SMA905 fiber input light or free space light, and output the measured spectral data through USB2.0.

Model	Feature
ATP9200- 17	wavelength range 200- 1700nm
ATP9200-25	wavelength range 200-2500nm

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1. Performance

Model	ATP9200-17	ATP9200-25
Detector		
Type	Area array back-illuminated CCD/ InGaAs sensor	
Detector	200~1100nm：2048 pixel 1100~1700nm： InGaAs 512 pixel Two-stage TEC refrigeration 1100~2500nm： InGaAs 512 pixel Two-stage TEC refrigeration	
Optical parameters		
Wavelength range	200-1700nm	200-2500nm
Optimal optical resolution	0.9~1.3nm@756nm 3~5nm@1400nm	0.9~1.3nm@756nm 7~12nm@1400&2100nm
Wavelength repeatability	± 0.1nm @ VIS ± 0.5nm @ SWIR ± 3nm @ MWIR	
Wavelength accuracy	± 0.5nm@ VIS ± 1.1 nm @ SWIR ± 5nm @ MWIR	
SNR	200~1000nm：>2000， 1000~2500nm：>16000	
Spectral sampling intervals	Visible light: 0.4nm, Short-wave infrared: 1.5 nm	Visible light: 0.4nm, Short-wave infrared: 2.0 nm
The average number of spectra	Up to 10 0,000 times	
Physical parameters		
Waterproof level	IP54	
Size	330*250*155mm	
Weight	7.45kg	
Electrical parameters		
Integration time	1ms ~ 10 s	
Data output interface	USB 2.0;	
Power	External 12V power supply	
Current	2.5 A	3.5 A
Temperature	-10 ~ 50 °C	
Humidity	< 90% RH	

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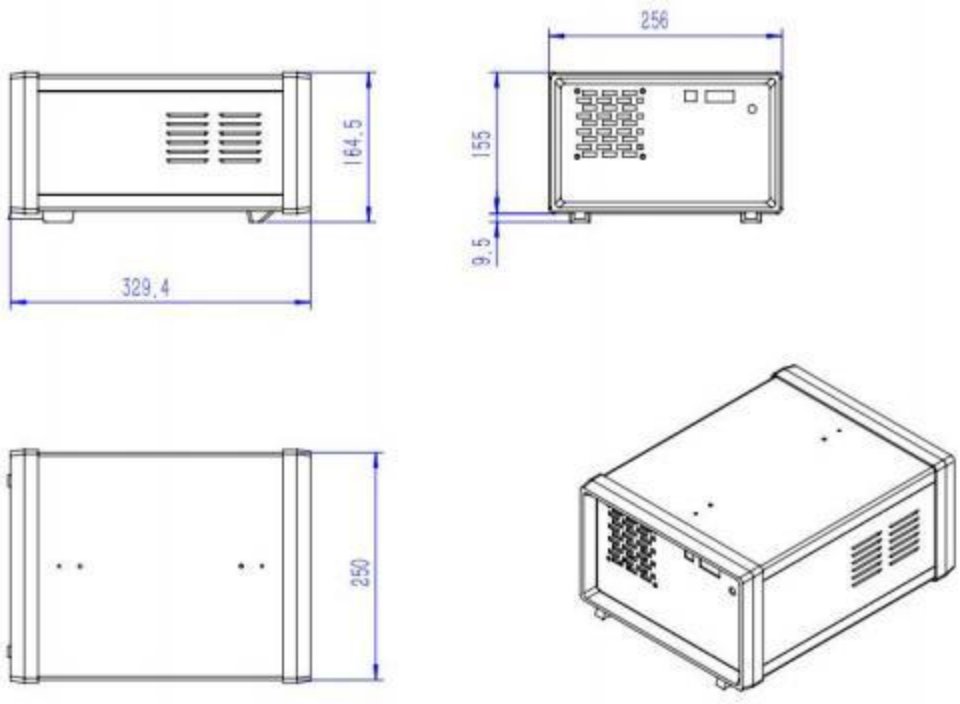
2. Size



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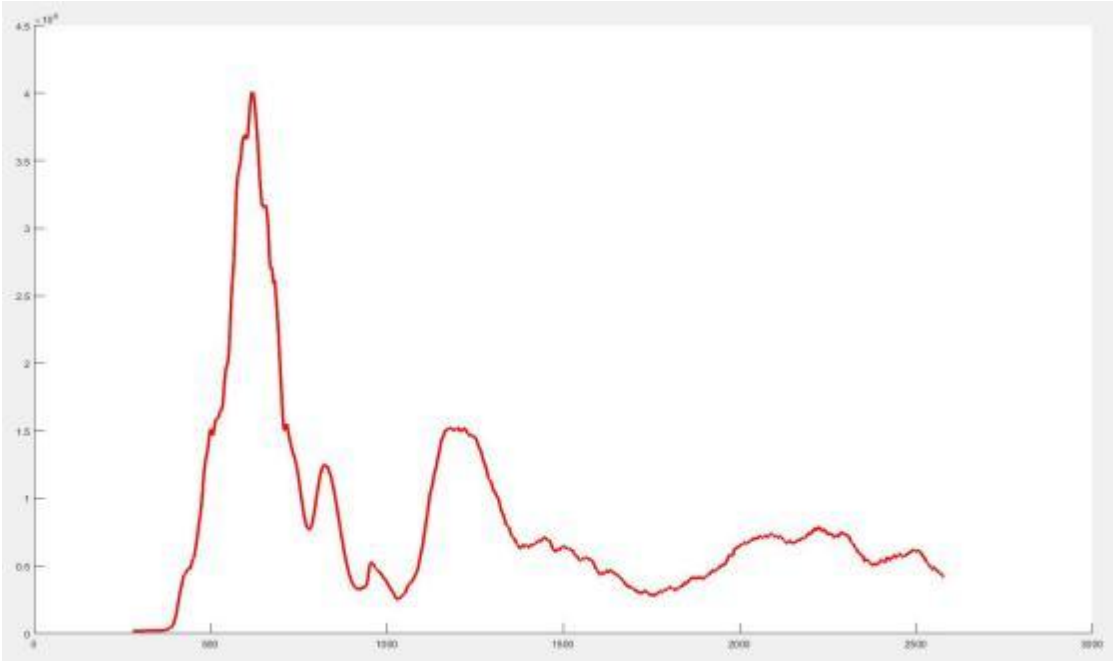
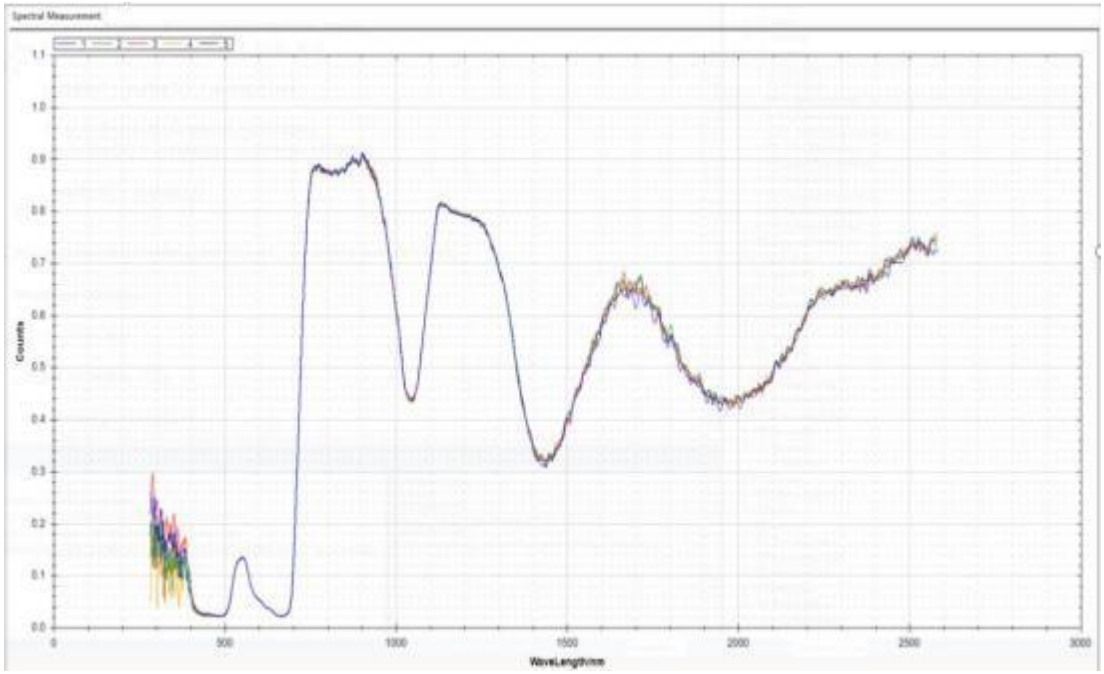
3. Spectrogram



Halogen lamp spectrum measured by ATP9200 (simulated solar spectrum)



Reflectance spectrum of green leaves measured by ATP9200 (5 repeated measurements)

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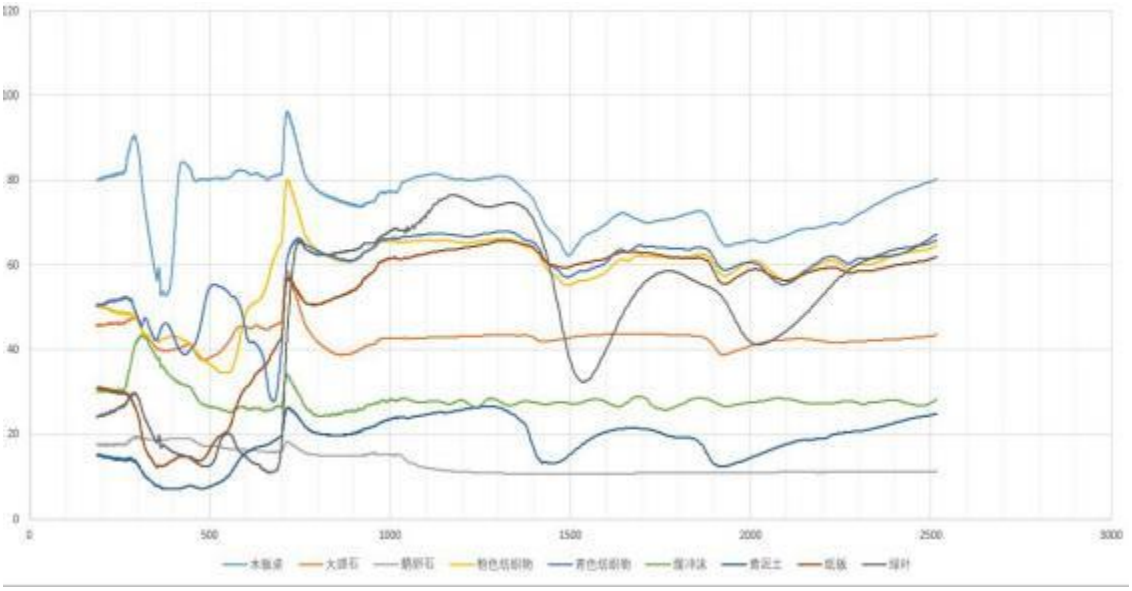

Spectra of different substances measured by ATP9200

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