ATP9310

Microspectrophotometer

Datasheet

Microspectrophotometer ATP9310

Features:

- ✧ Microscopic samples or microscopic areas of large samples at μm level
- ✧ Reflectance, fluorescence, Raman scattering and polarization
- ✧ High resolution & High stable
- ✧ Built in high sensitivity deep cooled CCD
- ✧ High stable light source
- ✧ Excellent Infinity chromatic correction optical system ensures excellent resolution and clarity
- ✧ Infinity plan objective lens
- ✧ New generation integrated structure with high stable and user-friendly operation
- ✧ Modular design, multi-functions combination, versatility
- ✧ Extendable to add on modular of fluorescence, Raman spectrometer
- ✧ Free advanced software

Application:

- ✧ Scientific Research Lab, University
- ✧ Forensic Identification, Documentation Check Judicial identification, criminal Investigation
- ✧ Biological samples analysis: Hospital and Biochemical lab, Miroscopic evidences analysis, Trace evidence, Evident documentation, Forensic chemistry
- ✧ Semiconductor, OLED, thin film thick,MEMS equipment, surface plasmaresonance Transmittancemeasurement,reflectance measurement
- ✧ New materials research
- ✧ Jewelry, Mineral Research

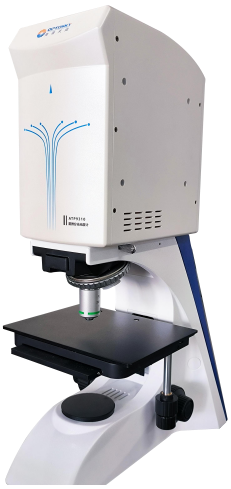
Description:

UV-VIS-NIR Microspectrophotometer, or Microscope spectrophotometer combines advantages of microscope and spectrophotometer in order to measure spectra and colorimetry analysis of microscopic samples or microscopic areas of larger samples. It can measure the reflectance, transmission, fluorescence and other emission spectra, Raman scattering, and polarization.

ATP9310 series is self-developed microspectrophotometer by Optosky brand. Its built-in high stable light source, high resolution spectrometer, and it goes through objectives to microscopic samples on microscope platform, the reflective light signal transfers through objectives to spectrometer for analysis, the obtained reflectance, absorbance, and colorimetric values of different microscopic areas of samples. It can also add on functions of fluorescence spectroscopy and Raman spectroscopy. Scientific-grade deep cooled CCD with high reliability, high resolution color imaging system, the advanced operation system and free software for easy to operate.

It connect to computer by USB for excellent lab experience, and is equipped with advanced and easy to use PC terminal control software to achieve the perfect experimental operation.

Models	Max. Range
ATP9310-4-8	400-800nm
ATP9310-3-11	300-1100 nm
ATP9310-2-10	200-1000 nm
ATP9310-9-17	900-1700 nm
ATP9310-3-17	300-1700 nm
ATP9310-3-25	300-2500 nm
ATP9310-9-25	900-2500 nm



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1. Working Principle

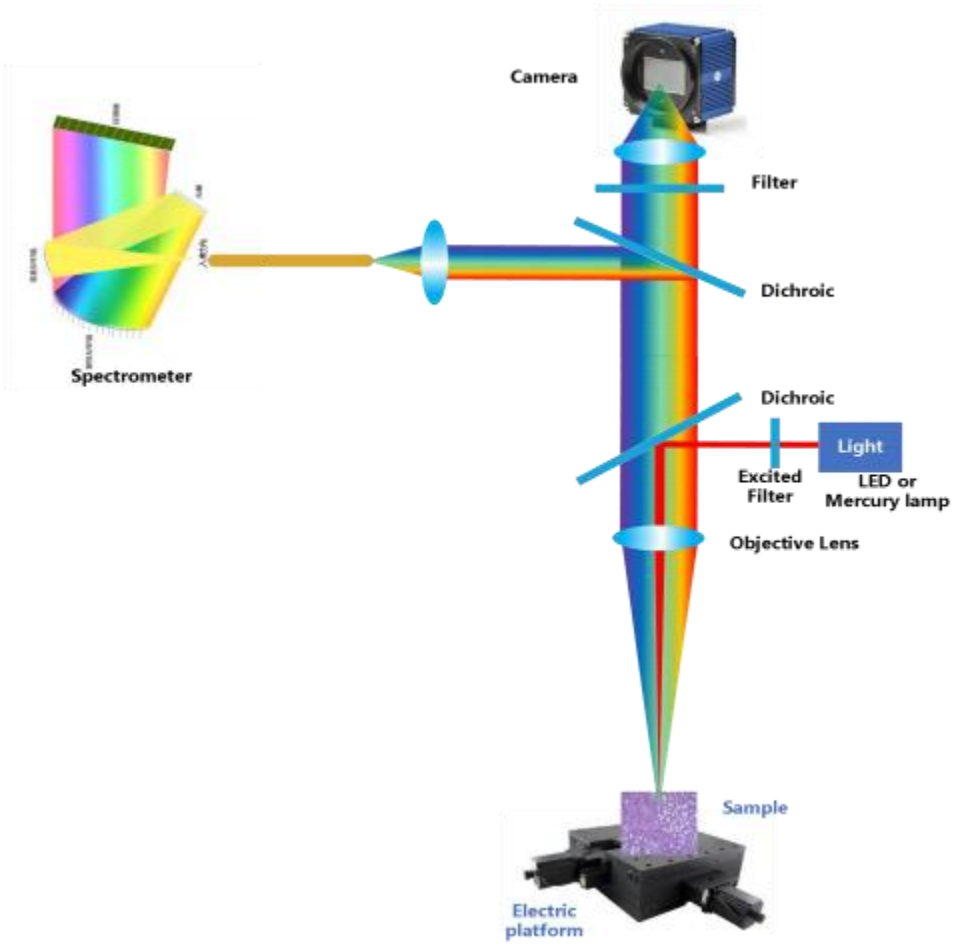

Fig 1 Microspectrophotometer Working Principle

Fig 2 Epi-microscopic spectrum intermediate (left) and spectrum collection intermediate (right)

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2. Parameter

Parameters	Specifications	
Spectral detection system	ATP9310-4-8	ATP9310-3-11
Spectral Method	Reflectance spectrum of different areas on the surface of a substance	
Spectral Range	400-800nm	300-1100 nm
Resolution	≤5nm	≤1.5nm
Optical Design	f/4 cross asymmetric C-T optical path	
Spectral Detector	≥512 pixel non-deep-cooling detector	≥2048 pixel non-deep-cooling detector
Output Channel	512	>1000
Integration Time	1ms- 10s	
SNR	Visible band: >450:1 SWIR band: > 1000:1	
Dynamic Range	Visible band: 2000： 1 SWIR band: 5000:1	
Light Source System		
Light Source	High stability halogen light source, pulse xenon light source	
Micro-optical system		
Optical System	Infinity chromatic aberration correction optical system	
Magnification Range	40X~ 1600X	
Infinity plan achromatic objective lens	Standard configuration: 20X; optional configuration: 40X,100X, 4X, 10X;	
Converter	Inward tilt type internal positioning five-hole converter	
Focus Method	Manual focus method	
Microscope Platform	Steel wire drive stage (X-axis not protruded)	
Camera Device	Equipped with a digital camera system such as 3 million pixels for bright-field photography	
X and Y axis loading platform		
Moving Range	50 X 50 mm	
Maximum stroke	50 mm	
Dimensions	300 X 190 X510 mm	
Weight	7.8 kg	
Software Part		
Spectrum	Visual real-time spectrum measurement	
Image	Visual real-time image acquisition	

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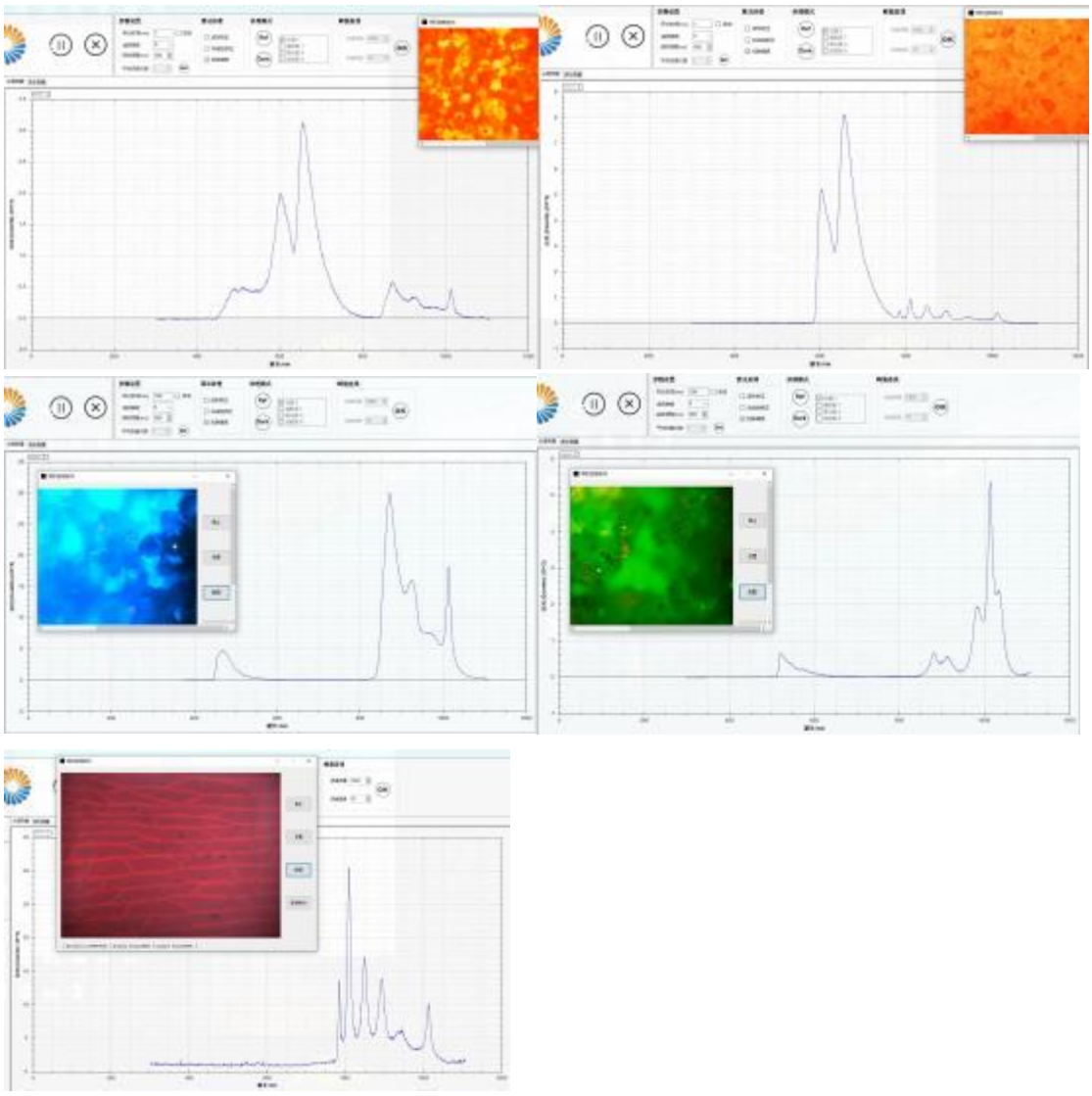
3. Performance Test



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4. Attachments

Order	Goods	Numbers	Optional
1	Microscope photometer host	1 set	Standard
2	Objective lens	1 set	Standard
3	Standard calibration whiteboard	1 pcs	Standard
4	1 2 V power adapter	1 pcs	Standard
5	High- performance shielded USB cable	1 pcs	Standard
6	3 0 % gray board	1 pcs	Optional
7	5 0 % gray board	1 pcs	Optional
8	High and low temperature variable temperature test bench, which can carry out tests in the range of -80℃ to 450℃	1 set	Optional

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