Datasheet

Miniature Fieldspec ATP9101

Features

- Ultra-lightweight and highly portable
- USB and Bluetooth interfaces for easy connection to computers and mobile devices
- Number of bands: 512
- Spectral range: 400–900 nm or 200–1000 nm
- Spectral resolution: 4–7 nm @811 nm
- Wavelength accuracy: ±0.5 nm
- Wavelength repeatability: ±0.3 nm @±10°C temperature variation
- Signal-to-noise ratio: >450:1
- Weight: <325 g (entire unit)
- Power supply: Built-in lithium battery, standby time >6 hours
- Waterproof rating: IP65
- Field-of-view lenses: Optional 25°/15°/8°/1°
- Built-in laser indicator for targeting the probe direction
- Built-in GPS, angle, altitude sensors, and temperature and humidity sensors

Description

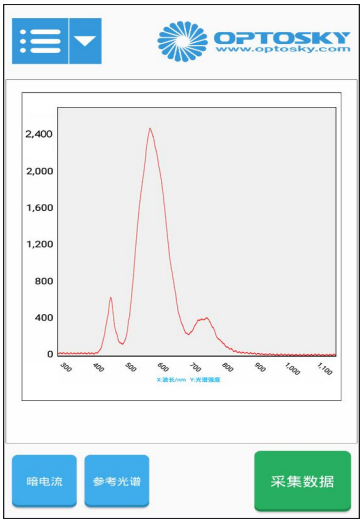
The ATP9101 is a miniature ground object spectrometer featuring high reliability, ultra-high speed, low cost, and high cost-effectiveness, making it adaptable to various environmental applications such as online testing.

It enables fast, precise, non-destructive, and contactless spectral measurements, serving as a truly portable ground object spectroradiometer. With a built-in battery for easy portability, it connects effortlessly to mobile phones or computers via Bluetooth, minimizing the time required for field data collection while ensuring optimal spectral measurement quality. Whether measuring from different orientations or in diverse environments, the flexible and durable ATP9101 delivers laboratory-grade results in remote sensing and analytical applications.

Application

Remote sensing measurement, crop monitoring, forest research, river/lake/ocean studies, aquaculture, and scientific research and education.

Model	Feature
ATP9101	Spectral range：400~900nm
ATP9101UV	Spectral range：200~1000nm



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1. Parameter

Optical Parameters		
Model	ATP9101	ATP9101UV
Detector	Linear CMOS Sensor	
Number of Bands	512 Channels	
Wavelength Accuracy	±0.5nm	
Spectral Resolution	<4nm@811nm	<7nm@811nm
Spectral Range	400~900nm	200~1000nm
Field of View	Narrow FOV lenses, optional 1°/8°/15°/25°	
Laser Indicator Wavelength	650nm	
Laser Indicator Power	5mW	
Electrical Parameters		
Integration Time	10ms~10s	
Data Output Interface	USB 2.0, Bluetooth	
ADC Bit Depth	16 bit	
Sensor	Humidity accuracy ±2%RH, Temperature accuracy ±0.3℃, Altitude sensor accuracy ±1.5m	
Power Supply	DC 5V±10%	
Battery Life	>4h	
Operating Current	<350mA	
Storage Temperature	-20° C～+65° C	
Operating Temperature	-10～45oC	
Protection Rating	IP65	
Operating Humidity	< 90%RH	
Physical Parameters		
Dimensions	35×146.5×169mm	
Weight	323g	

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2. ATP9101 Drawing

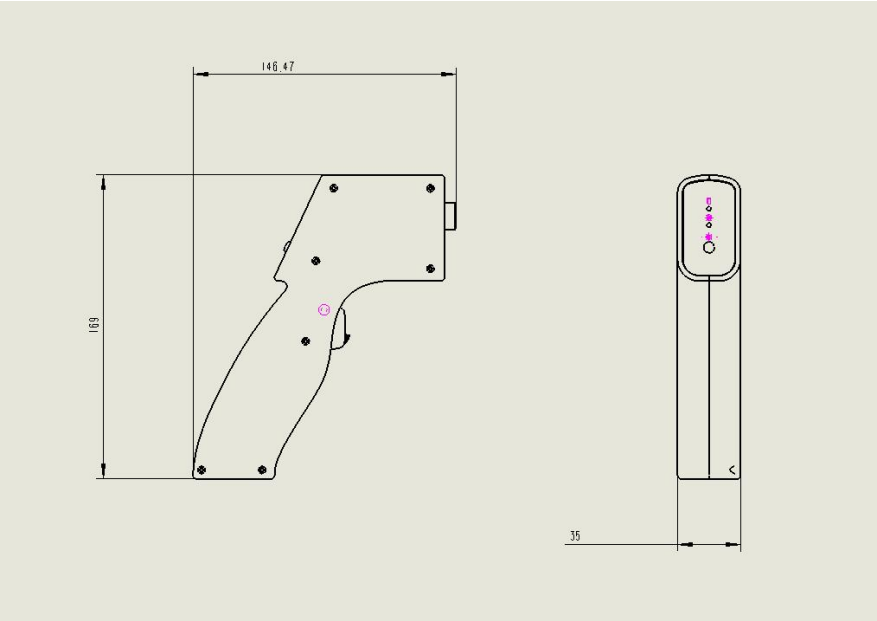

Figure 1 ATP9101 Drawing

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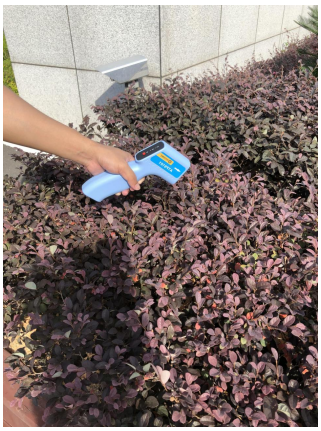
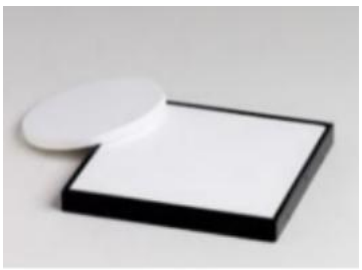


Figure 2 ATP9101 Image

3. Accessory List

NO.	Product	Description	Number
1	Charger	5V/3A	1
2	FOV Lens	25°	1
3	Diffuse Reflection Standard White Panel	10*10cm，95%	1

Optional accessory

Picture	Product
	FJ30039 Field of View Lens
	FJ00024 Diffuse Reflection Standard White Panel

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	FJ30021 Fiber Optic Patch Cable

4. FieldSpee Application

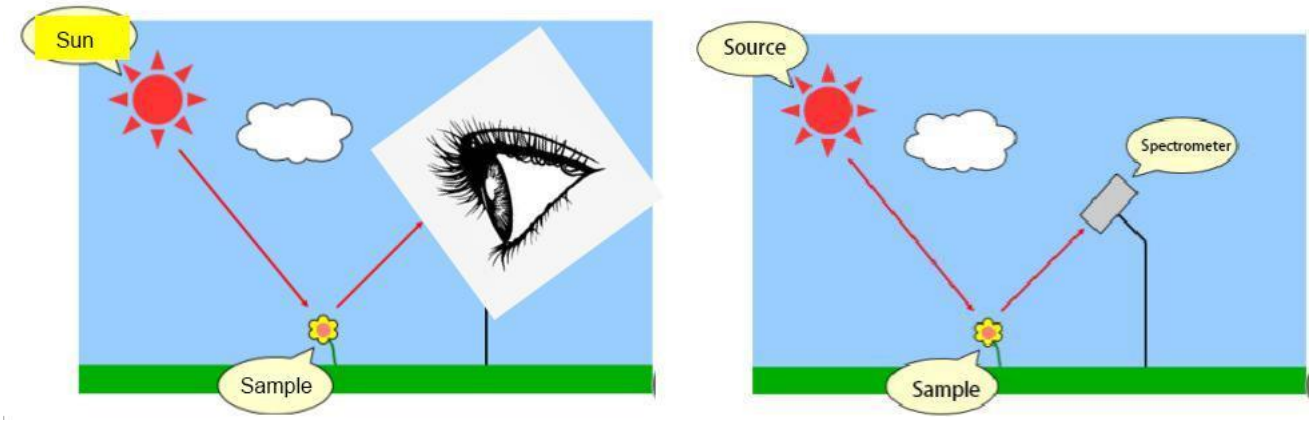

Figure 3 Field spectroradiometer working principle； Sunlight on the left; Artificial light on the right.

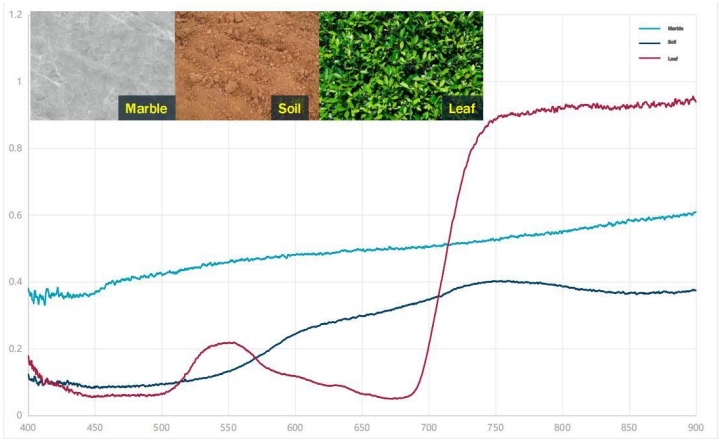

Figure 4 Spectra of marble, soil and green leaf tested by field spectroradiometer

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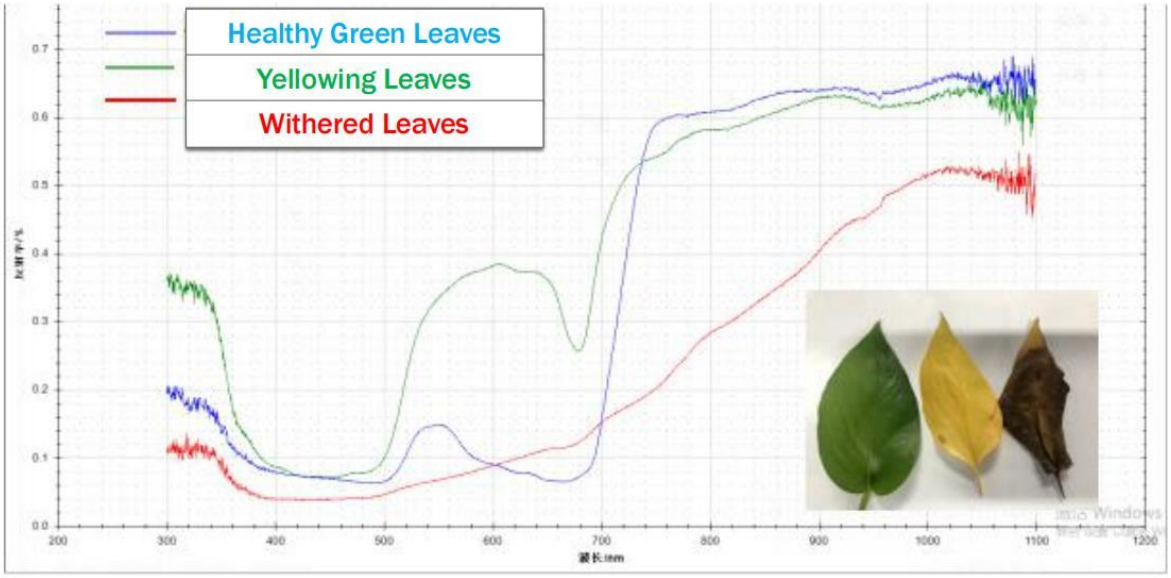

Figure 5 Spectra of different leaves tested by field spectroradiometer

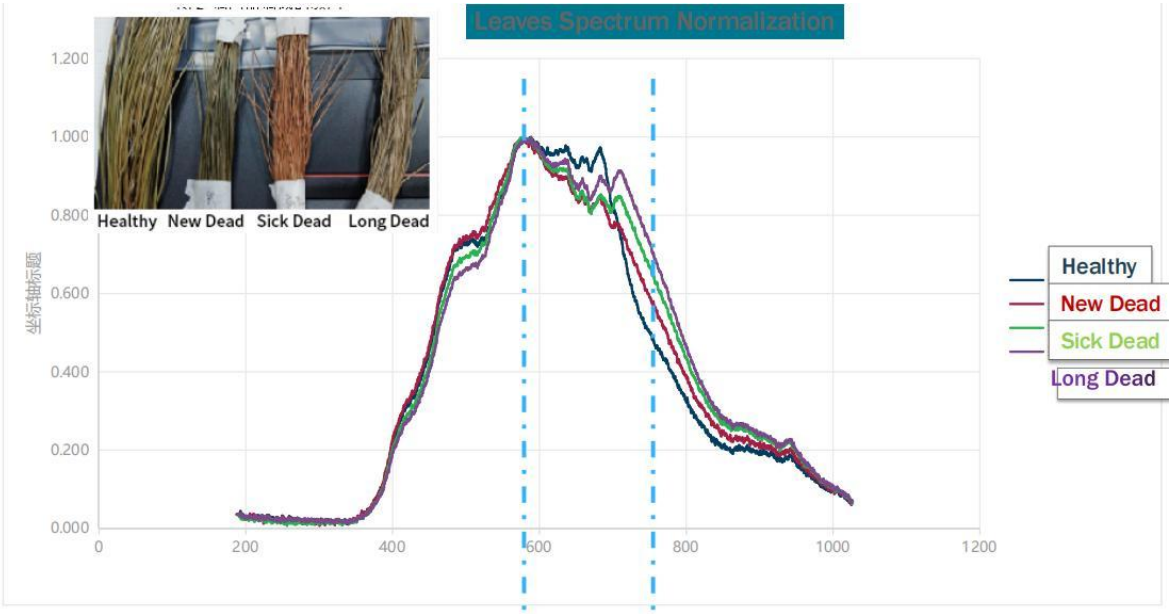

Figure 6 spectrogram of ground object spectrometer test of Castanopsis kawakamii infusion

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