

Portable Spectroradiometer



FS-9100

FS-9200/FS-9300

The FigSpec® series spectroradiometers are the latest products from CHNSpec.

FS-9100 is a standard handheld spectroradiometer with a wavelength range of 300-1100 nm. It features high cost-effectiveness, fast and accurate measurement, and easy operation, making it suitable for applications in vegetation research, forestry science, and agricultural surveys.

FS-9200 has all the functions of the standard handheld spectroradiometer but extends the wavelength range to 300-1700 nm. It also has a longer battery life and can be used for water body research, climate change studies, and ecosystem monitoring, helping to assess water quality changes and analyze the impact of climate change on ecosystems.

FS-9300 has a wavelength range of 300-2500 nm and supports accessories such as a pistol-style aiming device and a contact probe handle. It offers more functions and is suitable for a wider range of applications.

- The device uses a fiber optic probe for measurements, making it lightweight and highly flexible in actual operation, allowing it to adapt to various complex measurement scenarios.
- Designed as a handheld device, it comes with a dedicated carrying case, ensuring easy transportation and storage, which enhances its portability.
- The device features real-time display of the probe's tilt angle and is equipped with a laser pointer to precisely indicate the measurement location, greatly facilitating angle and position adjustments during operation.
- It is controlled via a high-definition touchscreen and also supports PC software and Bluetooth connectivity, enabling both remote and local operation, offering users multiple control options.
- An integrated high-definition camera provides a clear view of the measurement area, helping users accurately position the target for spectral analysis.
- The main unit is specially designed with excellent dustproof and waterproof capabilities, ensuring high durability and resistance to environmental factors, reducing the risk of damage.

Technical Parameters

Model	FS-9100	FS-9200	FS-9300
Detector			
Type	CMOS Linear Sensor	300-950nm: CMOS linear array sensor 950-1700nm: InGaAs detector, two-stage cooling	300-1000nm: CMOS linear array sensor 1000-2500nm: InGaAs detector, two-stage cooling
Optical parameters			
Spectral range	300-1100nm	300-1700nm	300-2500nm
Wavelength repeatability	± 0.1nm @ VIS, ± 0.5nm @ SWIR		
Wavelength accuracy	± 0.5nm @ VIS, ± 1.1nm @ SWIR		
Spectral resolution	Up to 1.7nm	300-950nm up to 1.7nm 950-1700nm up to 6.5nm	300-1000nm up to 1.7nm 1000-2500nm up to 15nm
Input	Spatial light (1.5m optical fiber optional)	1.5m optical fiber	
Field of view	Standard 25°, 1°/8°/15° optional		
Indicated laser wavelength	650nm	/	
Indicated laser power	5mW	/	
Maximum radiation	VNIR 2 times sunlight/SWIR 10 times sunlight		
Signal-to-noise ratio	380:1	300-950nm 380:1 950-1700nm 1200:1	300-1000nm 380:1 1000-2500nm 1200:1
Spectral sampling interval	0.45nm	Visible light: 0.4nm, short-wave infrared: 5.0nm	
Number of hardware spectral averages	Up to 100 times		
Electrical parameters			
Operating system	windows11		
Camera	12 megapixels	/	
LCD screen	5.5 inches 720×1280 (IPS)	7 inches 1280×800 (IPS+HD+300ANSI)	
Integration time	1ms~1000ms (1s) automatic optimization integration time		
Data output interface	TYPE-C—USB2.0, Bluetooth		
Geographic location	Built-in GPS positioning system		
Angle data	JY60 gyroscope optical test angle ±180°	/	
Power supply	Built-in battery: lithium battery 4500mAh	Built-in battery Li-ion battery 9000mAh	
Battery life	Estimated 4 hours	Estimated 6 hours	
Power supply	External power adapter: 12V 5A charging	External power adapter 12V 6A charging	
Storage temperature	-20°C~+65°C		
Operating temperature	-10~45°C	-10~50°C	-20~50°C
Working humidity	< 90%RH (no condensation)		
Physical parameters			
Waterproof rating	IP65	IP54	
Dimensions	272×210×106 mm	359.8×336×117.8 mm	
Weight	2.3kg	4.8kg	