

SPECTRAVUE Leaf Spectrometer

■ CI-710s



Measure plant stress and pigments in the field.

A powerful spectrometer paired with a leaf probe attachment, on-board software and touchscreen display, the CI-710s SPECTRAVUE Leaf Spectrometer gives plant researchers and agronomists the ability to measure plant stress and the effects of environmental factors on nutrient and pigment quantification within the plant.

SPECTRAVUE is designed to simultaneously measure the transmission, absorption and reflection of light by biological substances within a wide range of wavelengths that cover visible and Near Infra-Red (NIR) light. The spectrum can be used for the quantification of chemical concentrations, color analysis, the study of photochemical reactions, and the quantification of physical or optical properties such as film thickness, index of refraction, and extinction coefficient. Raw spectra can also be used to deploy chemometric techniques such as PLS or ANN modeling.

FEATURES

- Upgraded with an all new spectrometer and wider spectral range - **360-1100nm**
Handheld form factor with a 7" 1024 x 600 IPS touchscreen display
- Measures **reflectance, transmittance and absorbance simultaneously**
- Easy portability for remote operation
- A full suite of built in analysis software
- GPS enabled

APPLICATIONS

Agronomists use SpectraVue to analyze the effects of different nutrient applications.

Plant Physiologists use SpectraVue to evaluate environmental changes on plant stress.

Educators use SpectraVue to demonstrate spectral measurements of leaves.

Ecologists use SpectraVue to compare changes in pigments across elevations.

3 spectroscopic measurements can be performed:

**Transmittance | Absorbance
Reflectivity**

SPECIFICATIONS

Dimension	220 mm x 150 mm x 30 mm
Weight	952 g
Operating Environment	-30° to 70° C storage, -10° to 50° C Operation, 0% - 90% noncondensing humidity
Minimum Leaf Size	10 mm x 10 mm
Display	7" 1024 x 600 IPS Display
Languages	English, Spanish
Measure Modes	Reflectance, Transmittance and Absorbance
Memory	64GB

Detector Specifications

Detector	CMOS Linear Array
Wavelength Range	360-1100 nm
Pixels	2048 pixels
Pixel Size	14 µm x 200 µm
Pixel Well Depth	100,000 electrons
Signal-to-Noise Ratio	330:1 (at full signal)
A/D Resolution	16bit
Dark Noise	16 counts
Corrected Linearity	>99.8%
Sensitivity	337.500
Wavelength Data Increment	0.55 - 0.7 nm

Spectroscopic

Grating	300 lines/mm, Slit = 55 µm
Optical Resolution	2.4 FWHM in nm
Integration Time	0.03ms-60 seconds
Dynamic Range	3300:1
Stray Light	0.2 – 1.0%

Electronics

Power Supply	Two 18650 batteries & USB-C
Battery Life	3-4 hours
Trigger Mode	Manual