The NEW Plant Canopy Imager

CI-110

Fast and simple— In depth canopy analysis any time, anywhere

Capture wide-angle plant canopy images while instantly estimating Leaf Area Index (LAI) and measuring Photosynthetically Active Radiation (PAR) levels. The digital, self-leveling camera, updated touch screen, and included filters work together to collect, calculate, and save data in any daylight condition.

New unit with delay trigger release capture and amplified antennae connected to four satellite constellations provide accurate, instant location data along LAI measurements.

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Tools that work where you work.

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The new CI-110 combines hemispherical canopy photography and image analysis with light measurement to non-destrucitvely calculate leaf area index (LAI) and other canopy parameters. The self-leveling digital camera takes 150° images of plant canopies and the 24 photosynthetically active radiation (PAR) sensors in the arm of the device measure light to calculate Sunflecks. The updated, ergonomic design is paired with a 7" capacitive touch screen, a trigger with delayed image release for crisp images, and the ability to add or exchange filters over the camera lens.

Lens	Equidistant wide-angle lens
Image resolution	8g image size, 282,600 pixels
Interface	7" capacitive touch screen, 6 button keypad, trigger-release capture
Measuring time	0.5 second
Fish-eye lens angle	150°
Operating temperature	5 to 50 °C
Arm length	400 mm
Battery capacity	Approximately 6+ hours

Product Features

- Permanent, 150° image of the plant canopy
- Fully integrated ceptometer with 24 photodiodes to measure Sunflecks in the range of Photosynthetically Active Radiation (PAR)
- Measures photosynthetically active radiation (PAR) and calculates sunflecks
- Non-destructive calculation of leaf area index (LAI) using imagesor PAR sensors
- Calculated LAI of plant canopies across all size classes; from turf to full forest canopy
- Adjustable camera lens focus for varying canopy heights
- No above-canopy reference readings required
- Image and data visible in the field and saved for further analysis
- GPS location saved for follow-up measurements, with access to four satellite constellations and amplified antenna.
- Internal compass for standardizing measurements across locations
- Full, user-selectable range of zenith & azimuth angles, digitally applied
- Calculation of Canopy Gap size distribution
- User selectable and literature-based thresholding methods, including the Otsu Method and Entropy Crossover Technique
- Neutral Density Filters included allowing easy differentiation between leaf and sky
- Calculation of diffuse radiation transmission coefficients, sky view factor, mean foliage inclination angles, and plant canopy extinction coefficients
- Performs measurements under any sky condition