



CI-203 Handheld Laser Leaf Area Meter

DESCRIPTION

Handheld Laser Leaf Area Meter

The CI-203 Handheld Laser Leaf Area Meter is a highly portable laser scanner ideal for rapid and non-destructive leaf area measurement in any location. Measurements are made easily by sweeping the scanner over a leaf to yield seven different parameters: area, width, length, perimeter, shape factor, aspect ratio, and void count.

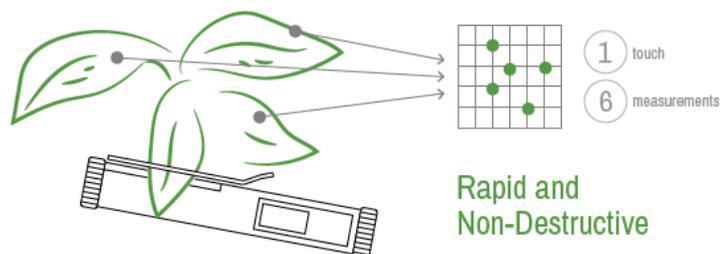
Researchers can use the CI-203 to make non-destructive measurements on leaves of living plants, enabling data collection on a leaf or plant throughout its life span. Graphical outline of the leaf shape is provided upon completing a scan, which provides verification that measurements are calculated accurately on even the most intricate leaf shapes. Built-in GPS tagging adds a location for each data point, and the removable Wi-Fi SD card provides an easy and fast way to download data to your computer. For rapid measurement of detached leaves, the CI-203CA conveyor attachment makes a perfect complement to the CI-203.



CI-203 Handheld Laser Leaf Area Meter:

Perform non-destructive, high-resolution leaf measurements on living plants in any environment with this super light-weight tool. Single-handed operation and unlimited data storage make the CI-203 perfect for the field or the lab. Use the optional CI-203 Conveyor Attachment to achieve rapid measurements of numerous detached leaf samples, and export data later on for further analysis.

To measure a leaf, lift the transparent film, place the leaf on the palette, place the transparent film over the leaf, and slide the laser scanner over the board.



Rapid and Non-Destructive

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THEORY OF OPERATION

The CI-203 collects length, width, perimeter, and area measurements directly using a combination of a sweeping laser beam and an optical motion sensor. Once activated, the device sends a low energy laser beam across the laser window 500 times per second at a rate of 150 m/s. As the user moves the

CI-203 wand down the leaf, an optical sensor records the motion, and the onboard processing unit collects the data. Each laser sweep uses the optical sensor data to correctly accumulate the area and perimeter measurements. When the optical sensor detects that vertical motion has stopped, the laser subsystem stops taking measurements and the processing unit computes and posts the final results.

Product Features:

- One-Touch Data—sweep the CI-203 over a leaf to yield seven measurement parameters: area, width, length, perimeter, shape factor, ratio, and void count
- Non-destructive and multipurpose
- Flattens curled leaves to provide precise measurements
- Durable, lightweight, and intuitive
- Graphic display of leaf outline for scan verification
- GPS tagging to provide location data for each measurement
- SD Card for data storage with virtually unlimited storage capacity
- USB charging and data download
- Rechargeable battery
- Measures objects up to 150 mm wide and 14 mm thick of virtually unlimited length
- Conveyor Attachment (CI-203CA) is available for fast measurement in the field or lab
- No user calibration required
- Includes operational manual and hard-shell carrying case

APPLICATIONS

- Agronomists use the CI-203 to measure response of corn leaf area across treatments.
- Plant physiologists use the CI-203 to relate leaf shape characteristics to gas exchange measurements.
- Ecologists use the CI-203 to measure leaf area of invasive species.
- Response of English oak (*Quercus robur* L.) trees to biostimulants application in the urban environment
- Estimating crop water stress with ETM+ NIR and SWIR data

Contact info



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