



Handheld Porometer/Fluorometers

Precision Insights for Expedited Plant Research

The LI-600 and LI-600N are compact porometers with Pulse-Amplitude Modulation (PAM) fluorometers that simultaneously measure stomatal conductance and chlorophyll *a* fluorescence over the same leaf or needle area. These dual measurements provide key information about the relationship between water and energy-use efficiencies.

Both porometer/fluorometers are designed to:

- Accurately measure broad and narrow leaves in seconds.
- Quickly and easily screen large plant populations.
- Diagnose plant stress in various environmental conditions.
- Capture GPS locations wherever your research takes you.
- Document and organize the data that matters most.

Innovative Solutions for All Plant Types

Both the LI-600 and the LI-600N offer exceptional performance and cater to a wide range of research and environmental conditions. While both share a commitment to industry-best precision, accuracy, and speed, they each have key features that set them apart and make them uniquely designed to meet your needs.



LI-600 Porometer/Fluorometer	LI-600N Porometer/Fluorometer
Optimized for broadleaves	Optimized for needles and narrow leaves
Width: 7.5 mm min.	Width: 1 to 3.5 mm
Length: 7.5 mm min.	Length: 14.2 mm min.
Thickness: 2.8 mm max.	Thickness: 2.8 mm max.
Reaches stability in 5-10 seconds across a range of g_{sw} rates	Reaches stability in 5-15 seconds across a range of g_{sw} rates
Automatically logs stable measurements	Logs a measurement at the press of a button
Takes one-sided conductance measurements	Takes two-sided conductance measurements

Similarities
Barcode scanner that records a sample's information and reduces manual data entry errors
Automatic leak detection and warnings that help prevent any measurement errors
Infrared thermometer that takes fast and accurate leaf temperature measurements
Built-in rechargeable battery that can last for eight or more hours of active use
Built-in Integrated GPS receiver that tracks and records the location of each measurement
Leaf angle and solar indication measurements for canopy trait and light-water use studies
USB port that allows for quick, easy data transfer to its intuitive computer software

Diverse Applications for Different Fields

The LI-600 and LI-600N deliver reliable data that can be used to address even the most unique scientific or industrial application. From environmental research to agriculture to climate change, both instruments provide the necessary knowledge and trustworthy insights for continued advancement and innovation.

Agronomy & Horticulture



- Detect early signs of plant stress to prevent widespread crop damage.
- Screen all plants in an entire greenhouse to optimize growth conditions and improve yield.
- Gather data that supports better crop breeding, pest resistance, and production.

Plant Physiology & Ecophysiology

- Assess plant response to controlled and natural environmental conditions.
- Accelerate the analysis of large plant populations to allow for research expansion.
- Track and assess plant adaptations to a variety of environmental stressors.



Climate Change & Sustainability



- Monitor plant responses to climate change for improved models and predictions.
- Identify plants that exhibit resilience to climate stressors, such as drought or heat.
- Develop data-driven corporate strategies and policies on environmental impact.

“

We were curious about the effect of leaf shape and size on the ability of the instrument to work, and we had success with everything we tried.”

Dr. Patrick McKenzie | Columbia University
New York, NY, USA



A Complete Picture of Plant Health

Explore beyond stomatal conductance measurements with the LI-6800 Portable Photosynthesis System. Designed to complement the LI-600's high-throughput capabilities, the LI-6800 offers a detailed look at the physiology and photosynthetic activities of any plant that the LI-600 pinpoints. Together, they can provide deeper, data-driven insights for a comprehensive analysis and more informed decision-making.



“

The actual values measured agreed...with what we are used to seeing with measurements from the LI-6800.”

Susanne von Caemmerer
Australian National University
Canberra, AU

Key Specifications

Measurement time:

Porometer: 5 to 15 seconds typically, depending on species, leaf or needle surface characteristics, and conditions

Fluorometer: 1 second

Operating conditions:

Temperature: 0 to 50 °C

Weight: 0.68 kg (porometer only); 0.73 kg with fluorometer

Battery:

Built-in Li-ion

Operating hours: 8 hours typically

Recharging time: 3.5 hours typically; 2 hours with Qualcomm® Quick Charge™ 2.0 or 3.0

Data storage: 128 MB

** High flow may not be achievable at higher altitude.
Specifications subject to change without notice.*

Porometer

Flow rates:

Low: 75 $\mu\text{mol s}^{-1}$

Medium: 115 $\mu\text{mol s}^{-1}$

High: 150 $\mu\text{mol s}^{-1}$ *

Parameters:

- g_{sw} $\text{mol m}^{-2} \text{s}^{-1}$; g_{bw} $\text{mol m}^{-2} \text{s}^{-1}$;
 g_{tw} $\text{mol m}^{-2} \text{s}^{-1}$; E $\text{mmol m}^{-2} \text{s}^{-1}$
- VP_{leaf} kPaRH%

Leaf temperature Accuracy: $\pm 0.5^\circ\text{C}$

Leaf angle of incidence °

Fluorometer

Flash types: User configurable Rectangular and Multi-phase Flash™ (MPF)

Flash Intensity: 0 to 7500 $\mu\text{mol m}^{-2} \text{s}^{-1}$

Parameters:

F_o , F_m , F_v , F_v/F_m , F_s , F_m' , Φ_{PSII} , ETR

GPS Receiver

Accuracy: 2.5 m CEP (circular error probable)

Full Specifications

