

Porometer/Fluorometer



The LI-600N Porometer/Fluorometer is a specialized device designed for rapid and accurate measurement of stomatal conductance and chlorophyll fluorescence, specifically for needles, narrow leaves, and grasses. Below is a summary of its features and specifications:

Key Features

1. Optimized for Narrow Leaves:

- The only instrument tailored for single needles, narrow leaves, or blades of grass.

- Provides precise measurements even for challenging leaf morphologies.

2. Fast and Efficient:

- Porometer measurements: 5–15 seconds, depending on the sample and conditions.
- Fluorometer measurements: 1 second.

3. Robust Design:

- Compact and lightweight (0.68–0.73 kg).
- Durable construction for field use in varied environmental conditions.

4. Integrated Technology:

- GPS with 2.5 m accuracy for precise geolocation of measurements.
- Sunlight-readable monochrome display for outdoor usability.
- Barcode scanner for efficient data tracking and management.

General Specifications

- **Operating Conditions:**
 - Temperature: 0 to 50 °C.
 - Pressure: 50 to 110 kPa.
 - Humidity: 0–85% (non-condensing).

- **Power:**
 - Built-in 5200 mAh Li-ion battery; 8 hours of operation.
 - Quick charging (3.5 hours; 2 hours with Qualcomm® Quick Charge™).
- **Data Management:**
 - Storage: 128 MB.
 - Formats: Text files (.txt, .csv) and .xlsx files.
 - Compatibility: Windows® and macOS®.

Porometer Specifications

- **Leaf Compatibility:**
 - LI-600: Min. size 7.5 × 2.8 mm.
 - LI-600N: Width 1–3.5 mm; length ?14.2 mm.
- **Accuracy:**
 - Relative humidity: ±2%.
 - Reference temperature: ±0.2 °C.
 - Leaf temperature sensor: ±0.5 °C.
- **Flow Rates:**
 - Low: 75 µmol/s.
 - Medium: 115 µmol/s.
 - High: 150 µmol/s.

Fluorometer Specifications

- **Measurement Parameters:**

- F_o , F_m , F_v , F_v/F_m , F_s , F_m' , ?PSII, ETR.
- **Light Source:**
 - Measuring light peak wavelength: 625 nm.
 - Flash intensity: 0–7500 $\mu\text{mol m}^{-2} \text{s}^{-1}$.
 - Exempt from photobiological hazards (IEC 62471:2006).

Applications

- Agricultural research.
- Forestry and ecological studies.
- Environmental monitoring and plant physiology.

The LI-600N offers a powerful and efficient solution for researchers studying plant physiology, making it an essential tool for precise data collection in both laboratory and field settings.