

ROSTLINY

LI-600 - Fluorometr / Porometr

Základní vlastnosti

- Kombinovaný porometr a fluorometr
- Přístroj měří stomatální vodivost a fluorescenci chlorofylu na stejném vzorku listu
- Měření adaptace listu na světlo („light adapted“) a tmu („dark adapted“)
- Velmi rychlé měření v řádu jednotek sekund
- Kompaktní přenosný přístroj, hmotnost pouze 0,73 Kg
- Integrovaná čtečka čárových kódů pro snadnou identifikaci vzorku, integrovaný generátor kódů
- Interní Li-ion baterie pro až 8 hodin provozu

Integrovaný GPS, magnetometr/akcelerometr pro měření sklonu, směru a náklonu listu pro výpočet úhlu dopadu listu.

LI-COR®



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Technická specifikace

General

- **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
 - Pressure: 50 to 110 kPa
 - Humidity: 0 to 85%; non-condensing
 - **Weight:** 0.68 kg (porometer only); 0.73 kg with fluorometer
 - **Dimensions:** 32.4 cm × 16.9 cm × 6.2 cm (L × W × H)
 - **GPS:** Accuracy 2.5 m CEP
 - **Display:**
 - Dimensions: 6.8 cm diagonally
 - Resolution: 400 × 200 pixels; sunlight readable monochrome
 - **Keypad:** 5-button membrane pad
 - **Battery:**
 - Built-in Li-ion
 - Operating hours: 8 hours typically
 - Capacity: 5200 mAh
 - Recharging time: 3.5 hours typically; 2 hours with Qualcomm® Quick Charge™ 2.0 or 3.0
 - **Data storage:** 128 MB
 - **USB specifications:** Communication/charging interface: Micro-B Qualcomm® Quick Charge™ 2.0 or 3.0 for rapid charging
 - **Universal charging adapter:**
 - Input: 90 to 264 VAC; 50 to 60 Hz
 - Output: 5 VDC; 1 Amp
 - **Configuration software:** Windows® and macOS® applications
 - **Data output:** Plain text files (comma or tab-delimited) and an .xlsx file with embedded equations.
 - **Barcode scanner:** 1-D and 2-D, including Code 39, Code 128, PDF417, 100% UPC, Data Matrix, QR Code
 - **Photosynthetically Active Radiation (PAR) measurement:**
 - Units: Photosynthetic Photon Flux Density (PPFD); $\mu\text{mol m}^{-2} \text{s}^{-1}$
 - Calibration accuracy: $\pm 10\%$ of reading; traceable to NIST
 - Cosine correction: Cosine corrected up to 60° angle of incidence
- *High flow may not be achievable at higher altitudes
Specifications are subject to change without notice

Porometer

- **Leaf and needle sizes:**
 - LI-600:
 - Length and width: 7.5 mm minimum
 - Thickness: 2.8 mm maximum
 - LI-600N:
 - Width: 1-3.5 mm
 - Length: 14.2 mm minimum
 - Thickness: 2.8 mm maximum
- **Flow rates:**
 - Low: $75 \mu\text{mol s}^{-1}$

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- Medium: $115 \mu\text{mol s}^{-1}$
- High: $150 \mu\text{mol s}^{-1*}$
- RH sensor accuracy: $\pm 2\%$ RH
- Reference temperature: $\pm 0.2^\circ\text{C}$
- Leaf temperature sensor accuracy: $\pm 0.5^\circ\text{C}$
- Inlet flow measurement: $\pm 1\%$ of reading from $75 \mu\text{mol s}^{-1}$ to $150 \mu\text{mol s}^{-1}$
- Exhaust flow measurement: $\pm 5\%$ of full scale up to $150 \mu\text{mol s}^{-1}$
- Parameters:
 - $g_{sw} \text{ mol m}^{-2} \text{ s}^{-1}$; $g_{bw} \text{ mol m}^{-2} \text{ s}^{-1}$; $g_{tw} \text{ mol m}^{-2} \text{ s}^{-1}$; $E \text{ mmol m}^{-2} \text{ s}^{-1}$
 - $VP_{cham} \text{ kPa}$; $VP_{ref} \text{ kPa}$; $VP_{leaf} \text{ kPa}$; $VPD_{leaf} \text{ kPa}$
 - $H_2O_{ref} \text{ mmol mol}^{-1}$; $H_2O_{samp} \text{ mmol mol}^{-1}$; $H_2O_{leaf} \text{ mmol mol}^{-1}$

Fluorometer

- Flash types: User configurable Rectangular and Multi-phase Flash™ (MPF)
- Measuring light peak wavelength: 625 nm
- Measuring light peak intensity: 0 to $10,000 \mu\text{mol m}^{-2} \text{ s}^{-1}$
- Flash intensity: 0 to $7500 \mu\text{mol m}^{-2} \text{ s}^{-1}$
- LED risk group: Exempt group in acc. with IEC 62471:2006. The LED does not pose any photobiological hazard
- Parameters:
 - F_o ; F_m ; F_v ; F_v/F_m ; F_s ; F_m' ; Φ_{PSII} ; ETR