Increasing the amount of photosynthetically active radiation (PAR) - light with a wavelength between 400 to 700 nm - increases plant photosynthesis. The optimal light intensity varies with the growth stage of the plant; plants at a vegetative or reproductive stage require much more light than seeds or cuttings. If there is not enough light, growth and crop quality can decline; and if there is excessive light, growth will not increase, despite the expense of providing supplemental lighting.

Light levels are managed for temperature and irrigation management, photoperiod control, to promote flowering of long-day plants or suppress flowering of short-day plants, to minimize crop stress, and optimize photosynthesis. In commercial greenhouses or growth chambers, it is vitally important to properly manage light levels throughout the day, and seasonally.

To monitor the amount of PAR available to your plants, LI-COR offers the LI-250Q PAR System, which includes the LI-250A Light Meter and LI-190R Quantum Sensor, with a 2 meter cable. The LI-250A is a handheld portable meter that displays the output from the LI-190R, and shows instantaneous photosynthetic photon flux density (PPFD) values, or 15-second averages, in PAR units of \( \mu \text{mol of photons s}^{-1} \text{ m}^{-2} \). The LI-190R Quantum Sensor is a newly redesigned sensor from the company that invented the quantum sensor more than 40 years ago, and provides accurate measurements under any lighting conditions, and for most broad-spectrum light sources, including artificial sources such as LED or HID lights.

So, for daily (or more frequent) checks of lighting conditions in your greenhouse or growth chamber, choose the LI-250Q for unrivaled accuracy in a simple, all-inclusive, light monitoring package.

**With the Complete LI-250Q Portable Greenhouse and Growth Chamber PAR System**

The LI-250Q PAR System Includes:
- LI-250A Light Meter
- LI-190R Quantum Sensor
- 2003S Mounting and Leveling Fixture

Measure Light that Matters - In Your Greenhouse or Growth Chamber
Specifications*

**LI-250Q Light Meter**

Accuracy:
- 25 °C: Typically ± 0.4% of reading ± 3 counts on the least significant digit displayed (all ranges).
- 0 - 55 °C: Typically ± 0.6% of reading ± 3 counts on the least significant digit displayed (all ranges).

Range Selection: Autoranging (3 ranges).

Signal Averaging: Sensor output can be collected and displayed as a 15-second average (approximately 60 readings). Averages are retained on the display in HOLD mode.

Display: 4 1/2 digit LCD display. Updated every 0.5 seconds in Instantaneous mode.

Battery Life: 150 hours typical with continuous operation.

Power Requirement: One 9V Alkaline battery.

Operating Conditions: 0 to 55 °C, 0 to 95% RH (non-condensing).

Storage Conditions: -55 to 60 °C, 0 to 95% RH (non-condensing).

Size: 14 cm L × 7.7 cm W × 3.8 cm D (5.5” × 3” x1.5”).

Weight: 0.26 kg (0.57 lbs).

**LI-190R Quantum Sensor**

Absolute Calibration: ± 5% traceable to the U.S. National Institute of Standards and Technology (NIST)

Sensitivity: Typically 5 μA to 10 μA per 1,000 μmol s⁻¹ m⁻²

Linearity: Maximum deviation of 1% up to 10,000 μmol s⁻¹ m⁻²

Response Time: Less than 1μs (2 m cable terminated into a 604 Ohm load)

Temperature Dependence: ± 0.15% per °C maximum

Cosine Correction: Cosine corrected up to 82° angle of incidence

Azimuth: < ± 1% error over 360° at a 45° elevation

Tilt: No error induced from orientation

Operating Temperature Range: -40 °C to 65 °C

Relative Humidity Range: 0% to 95% RH, Non-Condensing

Detector: High stability silicon photovoltaic detector (blue enhanced)

Sensor Housing: Weatherproof anodized aluminum body with acrylic diffuser and stainless steel hardware; O-ring seal on the sensor base

Size: 2.36 cm diameter × 3.63 cm (0.93” × 1.43”)

Weight: 24 g head; 60 g base/cable (2 m) with screws

Cable Length: 2 m (6.5’)

* Specifications subject to change without notice.

Ordering Information