



Accurate, Versatile

Compatible with most Campbell Scientific data loggers

Overview

The LI200R, manufactured by LI-COR, is a silicon pyranometer that accurately monitors sun plus sky radiation for solar, agricultural, meteorological, and hydrological applications. It uses a silicon photovoltaic detector mounted

in a cosine-corrected head to measure solar radiation. A shunt resistor in the sensor's cable converts the signal from microamps to millivolts, allowing this sensor to be measured directly by a Campbell Scientific data logger.

Benefits and Features

- ▶ Calibrated against an Eppley precision spectral pyranometer (PSP) for the daylight spectrum (400 to 1100 nm)
- ▶ Uniform sensitivity up to 82° incident angle
- ▶ Cosine-corrected miniature head

Technical Description

The LI200R measures incoming solar radiation with a silicon photovoltaic detector mounted in a cosine-corrected head. The detector outputs current; a shunt resistor in the sensor cable converts the signal from current to voltage, allowing the LI200R to be measured directly by Campbell Scientific data loggers.

The LI200R is calibrated against an Eppley Precision Spectral Pyranometer to accurately measure sun plus sky radiation. Campbell Scientific does not recommend using the LI200R under vegetation or artificial lights because it is calibrated for the daylight spectrum (400 to 1100 nm).

Specifications

Sensor	Silicon photovoltaic detector mounted in a cosine-corrected head
Measurement Description	Measures sun plus sky radiation
Spectral Range	400 to 1100 nm
Calibration	±5% traceable to the U.S. National Institute of Standards Technology (NIST)

Sensitivity	0.13 kW m ⁻² mV ⁻¹ (typically)
Linearity	Maximum deviation of 1% up to 3000 W m ⁻²
Absolute Error in Natural Daylight	▶ ±3% (typical) ▶ ±5% (maximum)
Shunt Resistor	100 Ω, 1%, 50 ppm

Stability	< ±2% change over a 1-year period
Response Time	< 1 μs
Temperature Dependence	±0.15% per °C maximum
Cosine Correction	Cosine corrected up to 82° angle of incidence
Operating Temperature Range	-40° to +65°C
Relative Humidity Range	0 to 100%

Detector Description	High-stability silicon photovoltaic (blue enhanced)
Sensor Housing Description	Weatherproof anodized aluminum case with acrylic diffuser and stainless-steel hardware; O-ring seal on the removable base and cable assembly
Diameter	2.36 cm (0.93 in.)
Height	3.63 cm (1.43 in.)
Weight	84 g (2.96 oz)

For comprehensive details, visit: www.campbellsci.eu/li200r-l 



80 Hathern Road, Shepshed, LE12 9GX UK | +(0)1509 828888 | sale@campbellsci.co.uk | www.campbellsci.eu
 AUSTRALIA | BRAZIL | CANADA | CHINA | COSTA RICA | FRANCE | GERMANY | INDIA | SOUTH AFRICA | SPAIN | THAILAND | UK | USA