



Global Solar Radiation Model 200SR

P/N: SR-102

The 200SA Pyranometer is designed for field measurement of global solar radiation in agricultural, meteorological, and solar energy studies. In clear unobstructed daylight conditions, the 200SA Pyranometer compares favorably with first class thermopile type Pyranometer. The 200SA features a silicon photovoltaic detector mounted in a fully cosine-corrected head. Current output, which is directly proportional to solar radiation. The 200SA is calibrated against an Eppley Precision Spectral Pyranometer (PSP) under natural daylight conditions in units of watts per square meter (w/m^2). The spectral response of the 200SA does not include the entire solar spectrum, so it must be used in the same lighting conditions as those under which it was calibrated. Therefore, the 200SA should only be used to measure unobstructed daylight.

Specifications

Calibration: Calibrated against an Eppley Precision Spectral Pyranometer (PSP) under natural daylight conditions. Typical error is $\pm 5\%$

Sensitivity: Typically $90 \mu A$ per $1000 W m^{-2}$

Linearity: Maximum deviation of 1% up to $3000 W m^{-2}$

Stability: $< \pm 2\%$ change over a 1 year period

Response Time: $10 \mu s$

Temperature Dependence: 0.15% per $^{\circ}C$ maximum

Cosine Correction: Cosine corrected up to 80° angle of incidence

Azimuth: $< \pm 1\%$ error over 360° at 45° elevation

Tilt: No error induced from orientation

Operating Temperature: -40 to $65^{\circ}C$

Relative Humidity: 0 to 100%

Detector: High stability silicon photovoltaic detector (blue enhanced).

Sensor Housing: Weatherproof anodized aluminum case with acrylic diffuser and stainless steel hardware