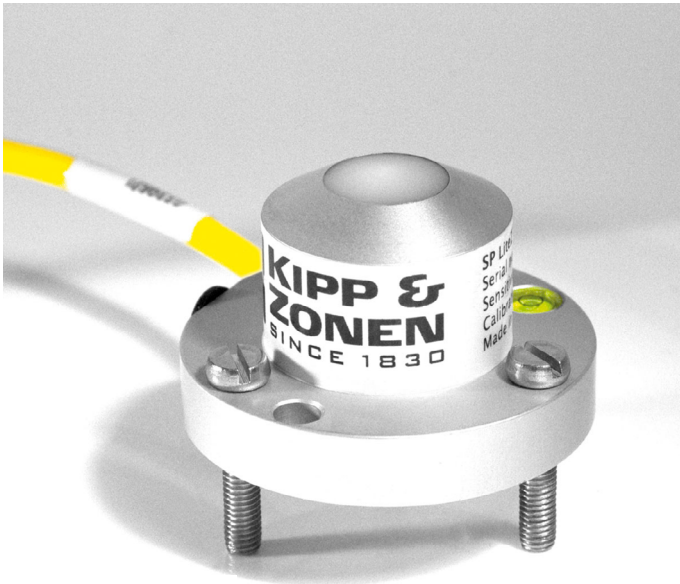



SP Lite2


Silicon Pyranometer

SP Lite2 can be used under all weather conditions and is designed for a long operating life with simple maintenance. The sensor receives solar energy from the entire hemisphere in its view and produces a small voltage output that can be converted into the irradiance in Watts per square meter [W/m²].







Designed for use under all weather conditions



Used in meteorology, hydrology and agriculture



Ideal for solar energy applications



Compact and lightweight

SP Lite2 is installed around the world for meteorology, hydrology, agriculture and building automation; where reliable measurement at relatively low cost is required, and the performance of a broadband thermopile pyranometer is not needed.

SP Lite2 is particularly suited to monitoring the efficiency of photovoltaic solar energy systems, where the spectral response is similar to that of PV cells. Solar radiation is also a key input to decision making on activities such as product quality control, determination of optimum location and predicting the system output under various sky conditions.

SP Lite2 is a simple pyranometer for routine measurements of solar radiation. It has a conical diffuser that provides excellent

directional (cosine) response, causes rain to run off and is easy to clean. Although the spectral range is limited by the photo-diode detector, the performance of the SP Lite2 compares favorably to ISO 9060 Second Class thermopile pyranometers under clear and unobstructed natural daylight conditions.

The mounting flange incorporates a bubble level and adjustment screws, for easy leveling. A threaded hole takes the accessory screw-in mounting rod for fitting to masts and poles. Two SP Lite2 instruments can easily be bolted back-to-back, and fitted with the mounting rod, to make a simple albedometer. The standard cable length is 5 m, with an option of 15 m. SP Lite2 is ideal for use with the METEON handheld display and data logger for field test testing.

Specifications

Spectral range (overall)	400 to 1100 nm
Sensitivity	60 to 100 $\mu\text{V}/\text{W}/\text{m}^2$
Sensitivity (10 $\mu\text{V}/\text{W}/\text{m}^2$ version)	10 $\pm 0.5 \text{ V}/\text{W}/\text{m}^2$
Impedance	50 Ω
Impedance (10 $\mu\text{V}/\text{W}/\text{m}^2$ version)	< 10 Ω
Expected output range (0 to 1500 W/m^2)	0 to 150 mV
Expected output range (10 $\mu\text{V}/\text{W}/\text{m}^2$ version)	0 to 15 mV
Maximum operational irradiance	2000 W/m^2
Response time SP Lite2 (95 %)	< 500 ns
Non-stability (change/year)	< 2 %
Non-linearity (100 to 1000 W/m^2)	< 2.5 %
Directional response (up to 80° with 1000 W/m^2 beam)	< 10 W/m^2
Temperature response	- 0.15 %/°C
Field of view	180°
Accuracy of bubble level	< 0.2°
Detector type	Photo-diode
Operational temperature range	-40 °C to +80 °C
Storage temperature range	-40°C to +80 °C
Humidity range	0 to 100 % non-condensing
Ingress Protection (IP) rating	67