



**Spectrafy**  
solar spectral sensors

# SolarSIM-ALB

The SolarSIM-ALB delivers a new standard in albedo measurement. Composed of two Class A SolarSIM-G sensors back-to-back, the SolarSIM-ALB is the only sensor capable of measuring both broadband and spectral albedo, simultaneously.

The SolarSIM-G uses silicon and InGaAs photodiodes, coupled with hard-coated optical filters to accurately measure the global solar and reflected spectra in several narrow wavelength bands. The SolarSIM-ALB's powerful software then uses these measurements to accurately resolve the broadband and spectral albedo.

Standard SolarSIM-G data outputs such as GHI, spectral irradiance, and PV spectral correction factors, for both downwelling and upwelling irradiance are also available.

- **All-in-one**

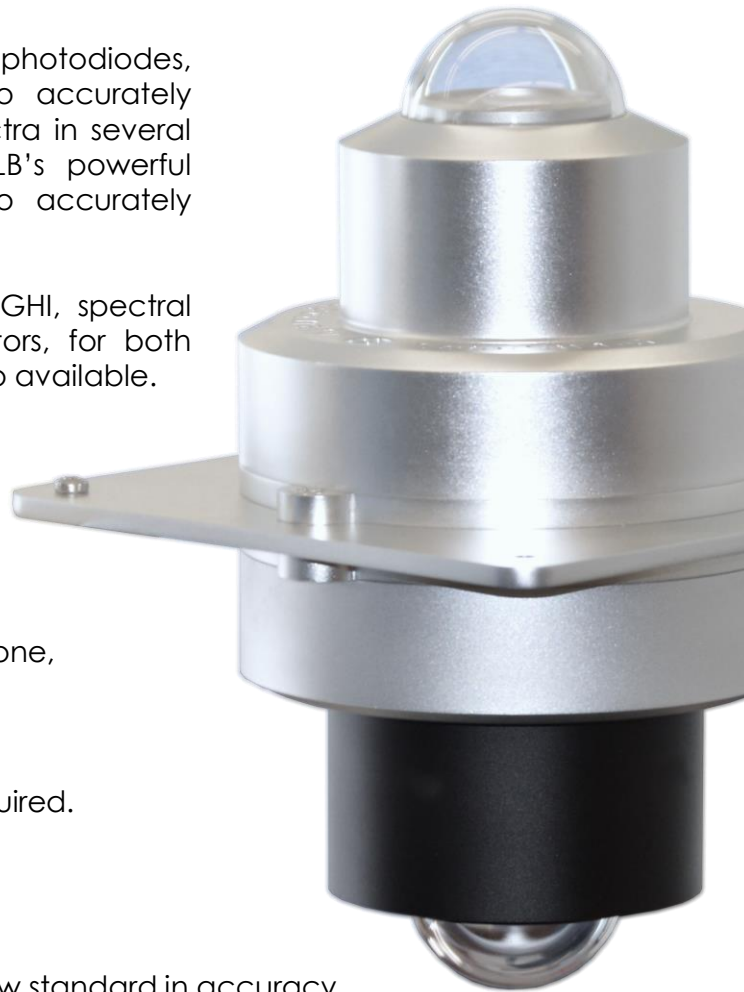
Measure global and spectral albedo all in one, compact, reliable, digital sensor.

- **Easy-to-use**

Easy to deploy with minimal maintenance required. Modular design facilitates maintenance and calibration. Automated PV correction factors.

- **Accurate & reliable**

Spectral measurement technology unlocks new standard in accuracy. The SolarSIM-G uses the highest quality optical and electronic components, ensuring highly stable and accurate performance for years.





## SolarSIM-ALB: Specifications

### Broadband Irradiance

Spectral range	280 – 4000 nm
Custom range selection	Yes
Maximum Irradiance	2000 W/m <sup>2</sup>
Response Time (95%)	0. 7s (0.4s optional)
Zero offsets (A and B)	n/a
Field of view	upper 180°, lower 170°
Non-stability (change per year)	< 0.2%
Non-linearity	< 0.3%
Spectral error	< 0.5%
Temperature response	< 0.1% (on-board temp. correction)
Directional/cosine response	< 10 W/m <sup>2</sup>
Tilt response	n/a
Calibration uncertainty	1.1%
ISO 9060:2018 classification	Class A
ISO 9060:2018 sub-category: "Spectrally flat"	Compliant for sunlight
ISO 9060:2018 sub-category: "Fast response"	Optional

### Spectral Irradiance

Wavelength Range	280 – 4000 nm
Spectral resolution (FWHM)	1 nm
Wavelength accuracy	± 0.1 nm
Spectral measurement uncertainty	< 5% ± 0.05 W/m <sup>2</sup> per wavelength
Exposure time	< 1 ms
Max. acquisition rate	1 Hz
Temperature dependency	< 0.1% (on-board temp. correction)

### General

Weight	2.4 kg
Dimensions	132 x 132 x 250 mm
Power supply	12 VDC
Power consumption	< 2W
Communication	RS-485 ASCII, Direct to PC, serial over ethernet, datalogger
Operating Temperature	-30 to 65 °C
Humidity Range	0 to 100% RH