

Solar Radiation Sensor



The solar radiation sensor is for the measurement of the global radiation. The sensor is based on a precision silicon photodiode with on-chip amplifier. The radiation is collected through a Cosine Receptor unit which provides angular response flatness with high accuracy over a wide range. The mounting balance is achieved using a built in spirit eye leveler.

The sensor architecture includes a Dark box inside which the silicon diode is placed. The photo responsive area of the photodiode is under the Cosine receptor unit to collect the normally incident solar radiations, to provide the global radiation measurement. The cosine receptors collect lights with a 180 degree field of view using demountable diffusers. The on-chip amplification of the photodiode provides better response and a linear relation with incident radiations.

- Negligible hysteresis induced.
- High repeatability.
- Best SNR with programmable sampling at high frequency.
- Proper encapsulation and weather shielding (IP65).

SPECIFICATIONS

Sensor Type:	Precision Photodiode with Cosine Corrected Diffuser
Range:	0 to 2000 W/m ²
Resolution:	1 W/m ²
Accuracy:	+/- 5% FS
Response time:	< 10 sec
Spectral Response:	300 to 1100 nm
Power Supply:	5.0 V, 120 uA
Operating Temp:	-25°C to +70°C
Long term drift:	< 1% FS/yr