

# PV Meter

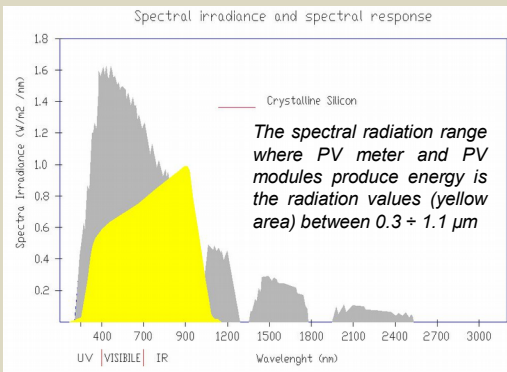
**PV Meter** is a digital PV module power meter (or irradiation sensor) equipped with an stand alone circuitry. This sensor uses one of the PV panels of your PV system to measure power output and solar irradiance per square meter. This sensor can easily work with more than 90% of the PV panels currently available on the market.

## Measurement features

PV Meter use a PV which is used in the Solar Farm. **Using a real PV panel for power measurement will increase the accuracy of the power output measurement of the solar farm.** The advantage of the high linearity and stability of PV panel is added to the accuracy of measurements and calculations accuracy; **these three features together improve the accuracy of the actual value measurement for all possible solar inclinations.** Comparative observations lead us to affirm that the measurement uncertainty is better than  $\pm 2\%$ .

All PV Meters will be calibrate with our sunmeter Reference cell calibrated periodically by **ISFH Institute**, accredited by **Dakks**. Thanks to its performances, PV Meter is used to realize accurate measurement of solar radiation of medium and large PV systems.

### Spectrum of interest



### Calibration

Each PV Meter will calibrate for comparison with our Silicon Reference Cell referenced by ISFH Institute, accredited by Dakks

### Physical features

UV-resistant cable.

### Most common uses

It's used to calculate **P/R** (Performance Ratio) with maximal accuracy of medium-large PV systems.

PV Meter		
Product	PV Meter	
Reference Standard	IEC 60904-2 IEC 60904-4 IEC 60904-10 IEC 61724-1	
Output	Digital	
Input Range	Irradiance	$0 \div 1500 \text{ W/m}^2$
	Spectral range	Same of your PV module
	Temp.	$-30 \div +90 \text{ }^\circ\text{C}$ (with external PT100)
Output	Digital	RS485, standard Modbus RTU protocol
Output precision	Irradiance	$< \pm 2\% \text{ }^{(1)}$
	Temperature	$\leq \pm 0.5 \text{ }^\circ\text{C}$
Sensor Type	PV Power Sensor	
Supply	Dual Supply $18 \div 80 \text{ Vdc}$ protected against reverse polarity, short circuit.	
Electronics non-linearity	$\pm 0,03\%$ of range	
Temperature drift. $-30 + 90^\circ\text{C}$	$< \pm 0,2\%$ at $1000 \text{ W/m}^2$	
Overall measurement uncertainty	$\pm 2\%$ @ $1000 \text{ W/m}^2$	
Uncertainty reference cell	$\pm 1,2\%$ ( ISFH , accredited by Dakks)	
PV cell	Entire Photovoltaic Panel	
Cable	50cm UV-resistant cable with Male connector	
Connectors	Male M12 8 pin, IP67 (main), Photovoltaic Panel input	
	Female M12 8 pin, IP67 for field installation	
Dimensions	119.5*94*34mm	
Weight	0.285 kg	
IP code	IP 65	
(1): Note: recalibration advised after 2 years.		

