

# Litemeter LM1-10V PRO

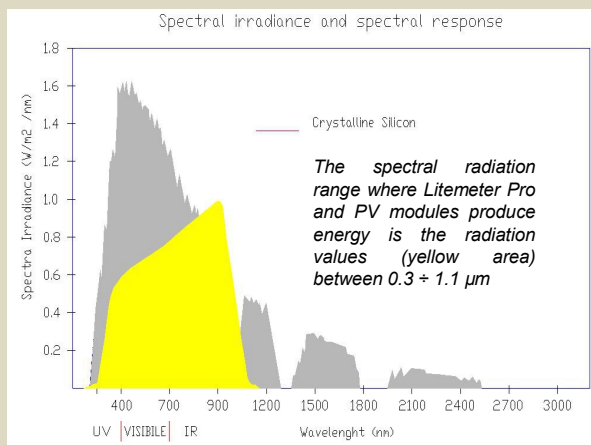
Litemeter **LM1-10V PRO** is an analog photovoltaic pyranometer (or solar irradiance sensor) with a monocrystalline silicon cell laminated in performing glass. It is equipped with two signal outputs, one for irradiance and one for temperature. Manufacturing and Calibrations are done following the **IEC 61215, IEC 60904-2; 60904-4; 60904-10** regulations.

## Measurement features

Litemeter **LM1-10V PRO** has a **photovoltaic cell** which is laminated with **E.V.A.** and a performing **antireflective glass** for **photovoltaic modules**.

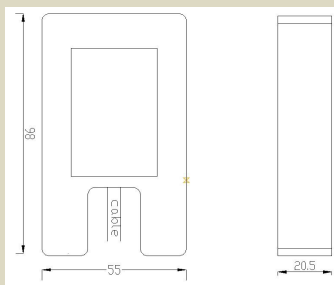
It guarantees the maximum precision in the measurement of irradiance and provides a measurement of the indicative temperature of the photovoltaic modules next to it. The sensor has two signal outputs in voltage:  $0 \div 10$  V, one for solar irradiance and one for temperature. This Litemeter also has another feature: the solar irradiance signal is temperature compensated; so the solar irradiance values are independent by cell temperature. All Litemeters are calibrated with our Primary Reference cell calibrated periodically by **Fraunhofer Institute** (DE), accredited by **Dakks**.

## Spectrum of interest



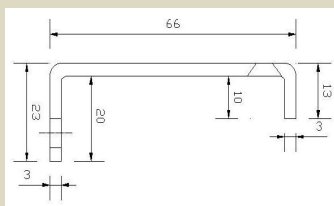
## Calibration

Each Litemeter LM1-10V PRO is calibrated for comparison with our Silicon Reference Cell calibrated periodically by Fraunhofer ISE Institute (DE) and a HP34410A Multimeter.



## Physical features

silicon sensor glass laminated, anodized aluminum housing, high durability, practical mounting bracket with screw clamp, cable UV-resistant.



## Most common uses

Litemeter LM1-10V PRO is used in medium-sized PV systems.

## LITEMETER SENSOR

<b>Product</b>	<b>Litemeter LM1-10V PRO</b>	
<b>Standard Reference</b>	IEC 60904-2; IEC 60904-4; IEC 60904-10	
<b>Output</b>	2 analog channel	
<b>Input Range</b>	<i>irradiance</i>	$0 \div 1200 \text{ W / m}^2$
	<i>Spectral range</i>	$0,3 \mu\text{m} \div 1,1 \mu\text{m}$
	<i>Temperature</i>	$-30 \div +85 \text{ }^\circ\text{C}$
<b>Output</b>	<i>Irradiance</i>	$0-10 \text{ V for } 0-1200\text{W/m}^2$ factory calibrated
	<i>Temperature</i>	$0 \div 10\text{V for } -20 \div 80^\circ\text{C}$ ( $V=1.84 + 0.092 \times T[^\circ\text{C}]$ ) guaranteed by design
<b>Output precision</b>	<i>Irradiance</i>	$\pm 3.5\%$
	<i>Temperature</i>	$\pm 1.5 \text{ }^\circ\text{C}$
	<i>Response Time</i>	$< 100\text{ms}$
<b>Sensor Type</b>	Solameter with 2 analog channel	
<b>Supply</b>	<i>Ext. Current loop</i>	$12 \div 30 \text{ Vdc}$
<b>Encapsulant</b>	Glass + E.V.A. + Poliester	
<b>Cable</b>	2.5 m shielded cable $\varnothing 4.9 \text{ mm}$ , conductors $4 \times 0,25\text{mm}^2$ , UV and high temperature resistant	
<b>Connector</b>	Standard M8 4 pin or not present (4+1 pin)	
<b>Dimensions</b>	55x98x20.5 mm without fixing bracket	
<b>IP grade</b>	IP 65	

