



## ML-01 Si-Pyranometer

Same spectral response as a PV module

Accurate solution for PV performance ratio monitoring

Low temperature dependency

Fast response photodiode detector

Industrial grade Si-pyranometer with removable mounting plate

The ML-01 Si-sensor can be categorized between the reference cell and broadband thermopile pyranometer. Compared to the reference sensors it has a proper cosine response and it is relatively compact, but benefits from the same characteristics as a PV module (Response time, Spectral and Temperature response). The ML-01 is an industrial grade solar sensor specially made for Performance ratio measurements as well as irradiance measurement applications for the meteorological, agricultural and environmental studies. The compact dimensions of the sensor body make it easy to integrate it within any application using it with or without a mounting plate. For global horizontal measurement applications, the sensor can be mounted in the horizontal position with a standard removable mounting plate with a spirit level and leveling feet. The Mono-Silicon detector with UV resistant diffuser gives a cosine response also

at low solar elevation angles. Besides the effects of soiling or water deposition on top of the diffuser will be minimized due to the cone shape geometry. The ML-01 pyranometers are manufactured in a consistent way followed by strict quality inspection and performance evaluation. EKO provides a unique calibration compliant to the international standards defined by ISO/IEC17025/9847. The sensor has 2 years warranty with 2 years re-calibration interval are recommended.

Specifications	ML-01
Output	Analog (mV)
Response time 95%	< 1 ms
Zero Offset A 200W/m <sup>2</sup>	0 W/m <sup>2</sup>
Zero Offset B 5K/hr	0 W/m <sup>2</sup>
Non-stability change/1 year	+/- 2 %
Non-linearity at 1000W/m <sup>2</sup>	< 0.2 %
Directional response at 1000W/m <sup>2</sup>	< 10 W/m <sup>2</sup>
Temperature response -10°C + 40°C	< 0.15 %/°C
Tilt response	0 %
Sensitivity	Approx. 50 µV/W/m <sup>2</sup>
Impedance	50 Ω
Wavelength range	400 - 1100 nm
Operating temperature range	-30 - 70 °C
Irradiance range	0 - 2000 W/m <sup>2</sup>
Cable length	5 m

Options	ML-01
Leveling Plate	Optional

Specifications are subject to change without further notice.