



Overview

The MS-80, manufactured by EKO Instruments, is an innovative, next-generation secondary standard pyranometer inspired by the combination of latest technologies and state-of-the-art thermopile sensor with an unprecedented low zero-offset behavior; fast sensor response; and a five-year warranty and recalibration interval.

The MS-80 features a compact design with internal desiccation, single dome, isolated thermopile detector, quartz diffusor, immunity to offsets, ultra-low temperature dependency, and exceptional non-linearity characteristics. EKO instruments is the only ISO 17025 accredited pyranometer manufacturer in the world, enabling highest-quality calibration, compliant to international standards (ISO/IEC 17025/9847).

For a similar pyranometer with RS-485 Modbus communication, refer to the [MS-80M](#).

Benefits and Features

- › ISO 9060 secondary standard
- › Fastest secondary standard detector response
- › Exceptional stability, offset immunity, temperature dependency, and non-linearity
- › ISO 17025 certified calibration
- › Five-year warranty and recalibration interval

Specifications

ISO 9060 Classification	Secondary standard pyranometer
Output	Analog (mV)
Sensitivity	~10 $\mu\text{V}/\text{W}/\text{m}^2$
Impedance	< 45000 Ω
Response Time	< 1 s (95%)

Zero Offset A	< 1 W/m^2 (response to 200 W/m^2 net thermal radiation)
Zero Offset B	± 1 W/m^2 (response to 5 K/h change in ambient temperature)
Non-Stability	$\pm 0.5\%$ change per 5 years
Non-Linearity	$\pm 0.2\%$ (at 1000 W/m^2)

Directional Response	$\pm 10 \text{ W/m}^2$ (at 1000 W/m^2)
Spectral Selectivity	$\pm 3\%$ (0.35 to $1.5 \mu\text{m}$)
Temperature Response	<ul style="list-style-type: none"> › $< 0.8\%$ (-10° to $+40^\circ\text{C}$) › $< 1\%$ (-20° to $+50^\circ\text{C}$)
Tilt Response	$< \pm 0.2\%$ (0 to 90° at 1000 W/m^2)

Operating Temperature Range	-40° to $+80^\circ\text{C}$
Irradiance Range	0 to 4000 W/m^2
Wavelength Range	285 to 3000 nm
Ingress Protection	IP67

For comprehensive details, visit: www.campbellsci.com/ms-80-l 



Campbell Scientific, Inc. | 815 W 1800 N | Logan, UT 84321-1784 | (435) 227-9120 | www.campbellsci.com
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