

SK01-D2 PYRANOMETER, SK01-DP2 PAR SENSOR

SK01-D2 for Solar Global Radiation Measurement

SK01-DP2 for Photosynthetically Active Radiation for Plants



The SK01-D2 is a simple pyranometer for measuring total solar global radiation on a horizontal surface. The SK01-DP2 version incorporates a special filter to limit its sensitivity to the Photosynthetically Active Radiation region of the solar spectrum (400-700nm).

Performance Specification

Response time (to 95%)	30ms
Non-stability (per year)	-0.5% (typical)
Non-linearity	< 1%
Directional response	< $\pm 30 \text{ W.m}^{-2}$ (ISO 9060 Class C)
Spectral response (w.r.t clear sun)	SK01-D2: -6% (heavy o'cast) to +2% (bright cloud)
Temperature response (relative to 20°C)	< $\pm 4.0\%$, -10 to +40°C (ISO 9060 Class C)
Tilt response	no tilt error

SILICON PHOTODIODE SENSOR WITH PRECISION AMPLIFIER

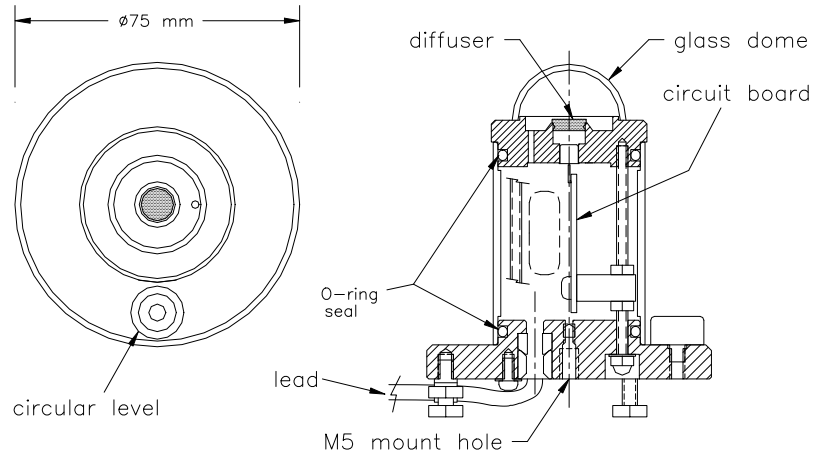
Glass dome to keep debris off the cosine corrected diffuser.

Hard anodized aluminium for corrosion resistance.

Circular level and adjustable feet.

Sealed and fully weatherproof.

Middleton Solar SK01-D2 Pyranometer & SK01-DP2 PAR Sensor Detailed Specification



In-built signal amplifier to give a millivolt output for easy measurement.
Chopper stabilised (for zero amplifier drift), with overvoltage & polarity reversal protection.
SK01-D2 spectral response varies with wavelength so it is calibrated for solar spectral distribution and is not recommended for use in indirect or artificial lighting.
Sealed to IP66, with internal desiccant (non-toxic silica-gel).
User's Instructions and Calibration Certificate included.

General Specification

viewing angle	2π steradians
spectral range (nominal)	SK01-D2: 300-1150nm SK01-DP2: 400-700nm
irradiance	SK01-D2: $0-2000 \text{ W.m}^{-2}$ SK01-DP2: $0-3000 \mu\text{mol.s}^{-1}.\text{m}^{-2}$
sensitivity	SK01-D2: 1mV/W.m^{-2} SK01-DP2: $0.5\text{mV}/\mu\text{mol.s}^{-1}.\text{m}^{-2}$
calibration accuracy	$\pm 3\%$
operating temperature	-35°C to $+60^{\circ}\text{C}$
power requirement	5.5V to 14.5VDC, 3mA
sensor type	silicon photodiode
lead	3m
mounting	central M5 hole; adjustable feet
shipping size & weight; net weight	150 x 150 x 150mm, 0.5kg, 0.3kg

For applications requiring a pyranometer with a flat spectral response and negligible temperature error the Middleton Solar SK08 and EQ08-B series pyranometers should be considered.