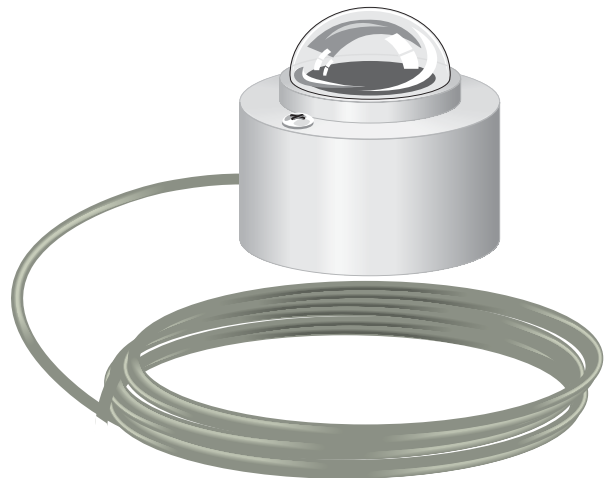


# Solar Radiation Sensor

## Model CM3

The CM3 is a rugged pyranometer manufactured by Kipp & Zonen. It is fully compliant with all ISO-9060 second class pyranometer performance specification criteria. The CM3 measures solar radiation with a high-quality blackened thermopile protected by a dome. The blackened thermopile provides a flat spectral response for the full solar spectrum range, which allows the CM3 to be used under plant canopies or lamps, when the sky is cloudy, and for reflected radiation measurements. The CM3 produces a millivolt signal that is measured directly by a Campbell Scientific datalogger.



### Mounting

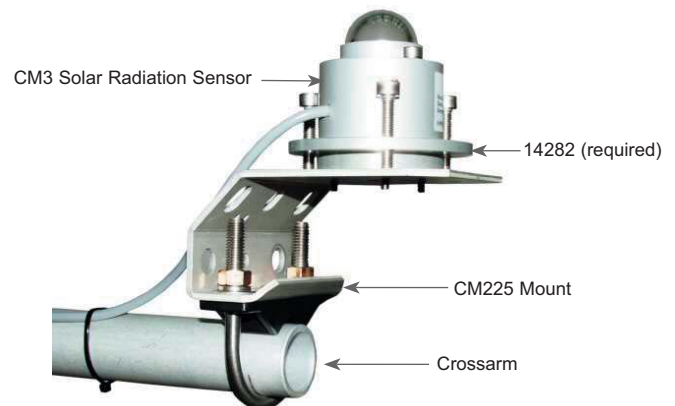
To ensure accurate measurements, the CM3 should be leveled using a 14282 leveling fixture which incorporates a bubble level and three adjusting screws. The 14282 leveling fixture mounts to a tripod or tower using the CM225 mount. For most applications, Campbell Scientific recommends attaching a CM225 to a CM202, CM204, or CM206 crossarm. The CM225 can also be attached to a tripod or tower mast.

### Ordering Information

CM3	Pyranometer, includes 15' lead length.
14282	Leveling Fixture, includes mounting and leveling screws
17906	CM225 Mount for attaching to the 14282 and sensor to a tripod, tower, or vertical pipe.

### Specifications

Light Spectrum Waveband:	305 to 2800 nm
Maximum Irradiance:	2000 W m <sup>-2</sup>
Signal Output:	0 to 50 mV
Sensitivity:	10 to 35 $\mu\text{V W}^{-1} \text{m}^2$
Operating Temperature:	-40° to +80°C
Temperature Dependence:	$\pm 6\%$ (-10° to +40°C)
Non-linearity (0 to 1000 W m <sup>-2</sup> ):	$< \pm 2.5\%$
Tilt Response ( $\pm 80^\circ$ ):	$< \pm 2\%$ at 1000 W m <sup>-2</sup>
Expected accuracy for daily sums:	$\pm 10\%$
Dimensions:	2.1" (5.4 cm) diameter, 2.3" (5.8 cm) height
Weight (with cable):	12 oz (343 g)
ISO Classification:	Second Class



To attach the CM225 to a CM202, CM204, or CM206 crossarm, place the u-bolt in the holes on the bottom of the bracket (shown). If the CM225 is attached to a mast, place the u-bolt in the holes in the side of the bracket.

Note: Second class pyranometers are acceptable for providing the solar radiation data used in stability estimations (EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications, pages 2-10).



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