Solar Radiation Sensor

Model CM3

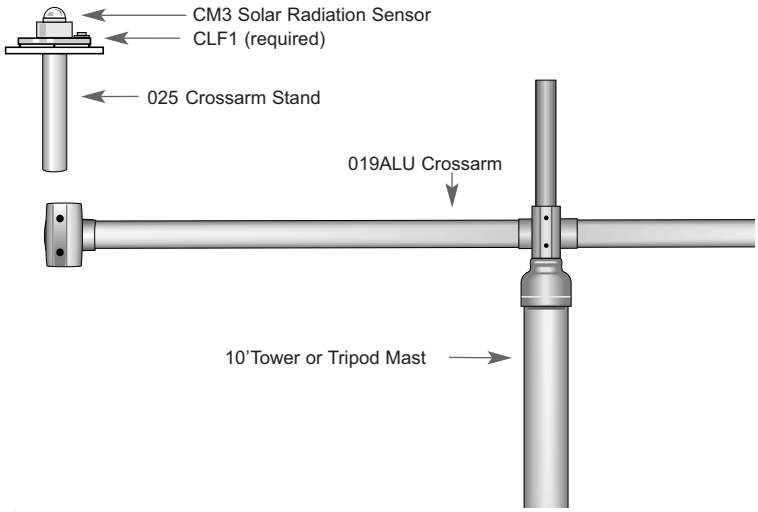
The CM3 is a rugged pyranometer manufactured by Kipp & Zonen. It is fully compliant with all ISO-9060 second class pyranometer performance specification criteria. The CM3 measures solar radiation with a high-quality blackened thermopile protected by a dome. The blackened thermopile provides a flat spectral response for the full solar spectrum range. This 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 mV signal that is measured directly by a Campbell Scientific datalogger.

Mounting

To ensure accurate measurements, the CM3 should be leveled using a CLF1 leveling fixture which incorporates a bubble level and three adjusting screws. The CLF1 leveling fixture attaches either to a 025 Crossarm Stand, or 015 Mounting Arm. The 025 attaches to a 019ALU Crossarm sitting atop a tripod or UT10 Tower. The 015 mounts onto a tripod mast or tower leg.

Ordering Information

CM3-L	Pyranometer, includes 15' lead length.
CLF1	Leveling Fixture, includes mounting and leveling screws



Specifications

Light Spectrum Waveband:	305 to 2800 nm
Maximum Irradiance:	2000 $W^{-1}m^{-2}$
Signal Ouput:	0 to 50 mV
Sensitivity:	10 to 35 µV $W^{-1}m^{2}$
Operating Temperature:	-40° to +80°C
Temperature Dependence:	±6%/C° (-10° to +40°C)
Non-linearity (at 100 $W^{-1}m^{-2}$):	<±2.5%
Tilt Response (±80°):	<±2% at 1000 W m^{-2}
Expected accuracy for daily sums:	±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

Note: If solar radiation data are to be used in procedures for estimating stability then second class pyranometers are acceptable. (*EPA Meterological Monitoring Guidance for Regulatory Modeling Applications*, pages 2-10.)

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