



# PHOTOVOLTAIC PYRANOMETER

## FEATURES

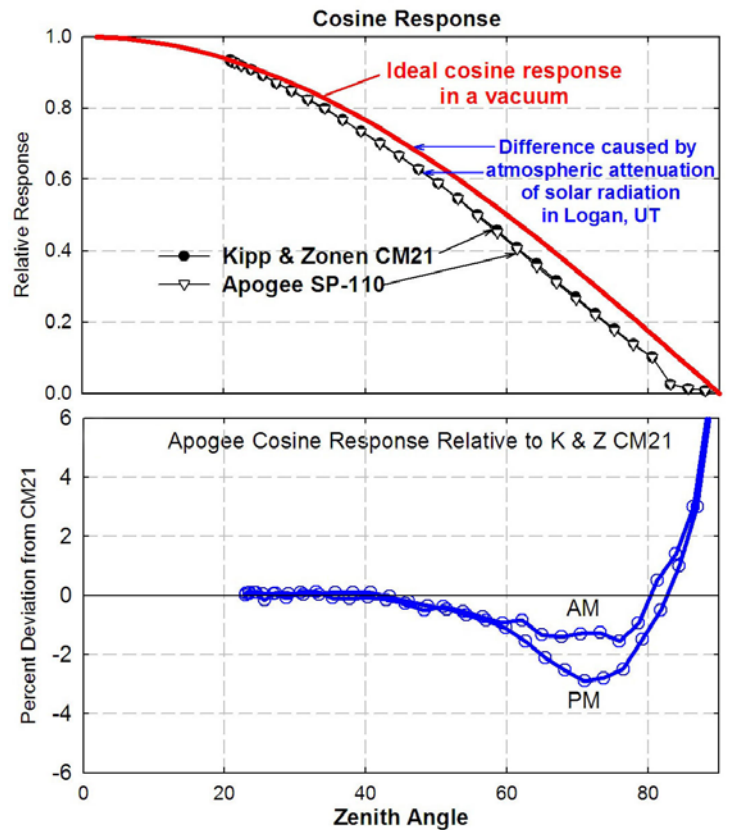
- Photovoltaic Solar Energy Module Monitoring
- Agricultural Evapotranspiration Estimation
- Air Pollution Dispersion Calculations
- Educational Purposes

Climatronics Photovoltaic Pyranometer (P/N 102755) is a silicon-cell pyranometer, calibrated to measure total shortwave radiation, with an amplified output. It comes in 2.5 and 5 volt versions, which allow for applications with less precise measuring capability. The evaporation of water from soil and the transpiration of water from plant leaves are largely determined by the intensity of shortwave radiation, which is measured in Joules per meter squared per second or Watts per meter squared.

This cosine-corrected sensor is designed to maintain its accuracy when radiation comes from low zenith angles. This accuracy is shown in the graph below. The performance of the P/N 102755 Photovoltaic Pyranometer closely matches the performance of our thermopile pyranometer, the P/N 102771.

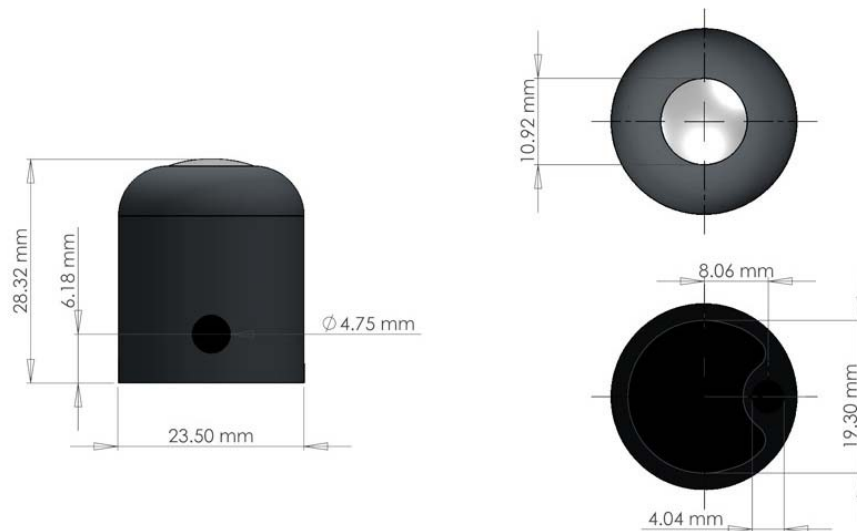


A plate used to keep the sensor head level.



## SPECIFICATIONS

Cosine Response	45° zenith angle: $\pm 1\%$ 75° zenith angle: $\pm 5\%$
Absolute Accuracy	$\pm 5\%$
Repeatability	$\pm 1\%$
Long-Term Drift	Less than 3% per year
Operating Environment	-40 to 55° C 0 to 100% relative humidity Designed for continuous outdoor use Can be submerged in water
Current Draw	285 $\mu$ A
2.5 V Option	Output: 0 to 2.5 V (2.2 V = full sunlight 1100 W m <sup>-2</sup> ) Input Power: 2.5 to 5.5 VDC Sensitivity: Custom calibrated to exactly 0.5 W m <sup>-2</sup> per mV
5.0 V Option	Output: 0 to 5 V (4.4 V = full sunlight 1100 W m <sup>-2</sup> ) Input Power: 5 to 5.5 VDC Sensitivity: Custom calibrated to exactly 0.25 W m <sup>-2</sup> per mV
Materials	Anodized aluminum with cast acrylic lens
Mass	70 g (with 5 m lead wire)
Cable	5 meters of twisted-pair wire Foil shield Santoprene jacket Ending in pigtail leads Additional cable is available in multiples of 5 meters



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