



Accurate and Dependable

Ideal for long-term deployment in harsh conditions

Overview

The CS300, manufactured by Apogee Instruments, measures total sun and sky solar radiation for solar, agricultural, meteorological, and hydrological applications. Its spectral range of 360 to 1120 nanometers encompasses most of the

short-wave radiation that reaches the Earth's surface. This pyranometer connects directly to our data loggers. Its output can be measured by our data loggers.

Benefits and Features

- › Compatible with most Campbell Scientific data loggers
- › Designed for continuous, long-term, unattended operation in adverse conditions
- › Measurement waveband of 360 to 1120 nm
- › Dome-shaped head prevents water from accumulating on the sensor head

Detailed Description

The CS300 uses a silicon photovoltaic detector mounted in a cosine-corrected head to provide solar radiation measurements. Its dome-shaped head prevents water from accumulating on the sensor head. To eliminate internal

condensation, the sensor head is potted solid and the cable is shielded with a rugged Santoprene casing. The CS300 is calibrated against a Kipp & Zonen CM21 thermopile pyranometer to accurately measure sun plus sky radiation.

Specifications

Spectral Range	360 to 1120 nm (wavelengths where response is 10% of maximum)	Sensitivity	5 mV/Wm ⁻²
Measurement Range	0 to 2000 W/m ² (full sunlight ≈1000 W/m ²)	Calibration Factor	5 W/m ² /mV
Absolute Accuracy	±5% for daily total radiation	Cosine Correction Error	±5% at 75° zenith angle; ±2% at 45° zenith angle
		Temperature Response	0.04 ± 0.04% per °C

Response Time	< 1 ms
Long-Term Stability	< 2% per year
Operating Temperature Range	-40° to +70°C
Relative Humidity Range	0 to 100%

Output Sensitivity	0.2 mV/W/m ²
Diameter	2.4 cm (0.9 in.)
Height	2.5 cm (1.0 in.)
Weight	65 g (2.3 oz) with 2-m (6.6-ft) lead wire

For comprehensive details, visit: www.campbellsci.com/cs300-pyranometer 



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