



# CS300-QD

Pyranometer for RAWS-F Station



## Accurate and Dependable

Ideal for fire weather stations

### Overview

The CS300-QD, manufactured by Apogee, 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. The CS300-QD supports continuous outdoor use.

### 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

With this version of the CS300 pyranometer, the cable has a military style connector instead of pigtailed for attachment to the RAWS-F Fire Weather Quick Deployment Station.

The CS300-QD 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

Light Spectrum Waveband	360 to 1120 nm (wavelengths where response is 10% of maximum)
Measurement Range	0 to 2000 W m <sup>-2</sup> (full sunlight ≈1000 W m <sup>-2</sup> )

Absolute Accuracy	±5% for daily total radiation
Sensitivity	5 W m <sup>-2</sup> mV <sup>-1</sup> (0.2 mV W <sup>-1</sup> m <sup>-2</sup> )
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	0.2 mV per W m <sup>-2</sup>
Cable Length	2.44 m (8 ft)
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-qd](http://www.campbellsci.com/cs300-qd) 



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