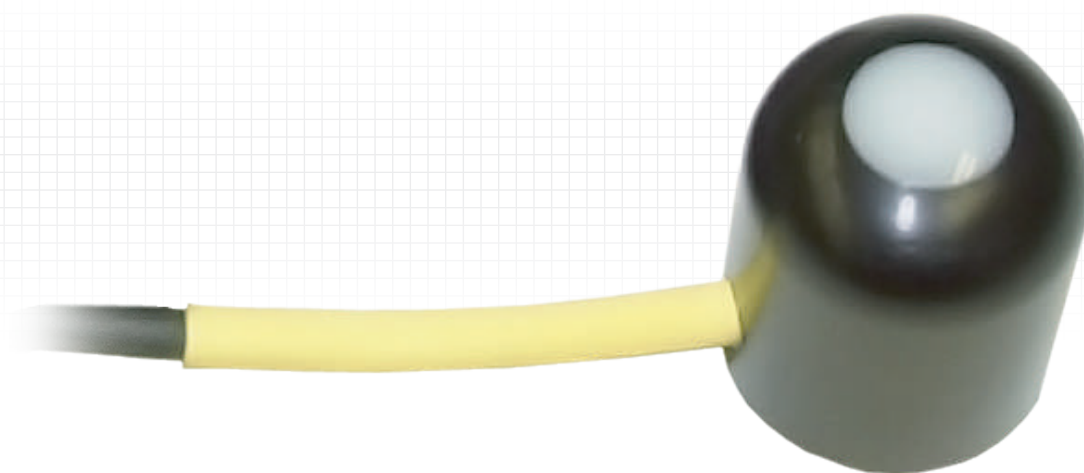


Accurate and Dependable

Ideal for long-term deployment
in harsh conditions



Overview

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

shortwave radiation that reaches the Earth's surface. This pyranometer connects directly to our dataloggers. Its output can be measured by all of our dataloggers.

Benefits and Features

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

Technical 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.

Mounting

Accurate measurements require the sensor to be leveled using a 18356 leveling fixture. This leveling fixture incorporates a bubble level and three leveling screws. The 18356 mounts to a crossarm

using the CM225 mounting stand. The CS300 should be mounted away from all obstructions and reflective surfaces that might adversely effect the measurement.

**Sensors calibrated to the 360 to 1120 nm spectral range should not be used under vegetation or artificial lights.*



Ordering Information

Silicon Pyranometer

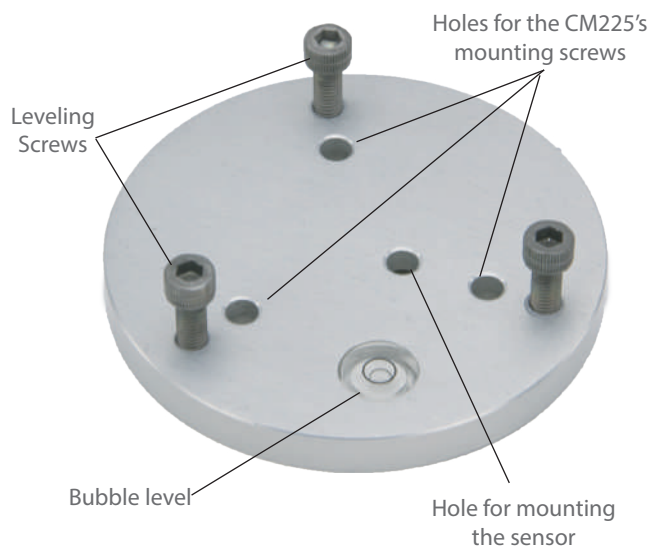
CS300-L Silicon Pyranometer with user specified cable length; enter the cable length after the L. An 11 ft length (CS300-L11) is recommended for a 3 m mounting height. Must choose a cable termination option (see below).

Cable Termination Options (choose one)

- PT** Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals.
- PW** Cable terminates in connector for attachment to a prewired enclosure.
- RQ** Cable terminates in connector for attachment to a RAWS weather station.

Accessories

- 18356** Base and leveling fixture required to level the sensor.
- CM225** Mount for attaching to the 18356 and sensor to a crossarm.



18356 Base and Leveling Fixture

Specifications

- Light Spectrum Waveband: 360 to 1120 nm (wavelengths where response is 10 % of maximum)
- Measurement Range: 0 to 1750 W m⁻² (full sunlight ≈1000 W m⁻²)
- Absolute Accuracy: ±5% for daily total radiation
- Sensitivity: 5 W m⁻² mV⁻¹ (0.2 mV W⁻¹ m⁻²)
- Cosine Correction Error: ±5% at 75° zenith angle; ±2% at 45° zenith angle
- Response Time: <1 ms
- Temperature Response: -0.04 ±0.04% per °C
- Long-term Stability: < 2% per year
- Operating Temperature Range: -40° to +70°C
- Relative Humidity Range: 0 to 100%
- Diameter: 2.4 cm (0.9 in)
- Height: 2.5 cm (1.0 in)
- Weight: 65 g (2.3 oz)

