



High Quality

Blackened thermopile provides full solar spectrum range

Overview

The LP02 is an ISO second-class pyranometer that monitors solar radiation for the full spectrum range. It produces a millivolt signal that is measured directly by a

Campbell Scientific datalogger. The LP02 can provide solar radiation measurements for a variety of meteorological applications.

Benefits and Features

- › Compatible with most Campbell Scientific dataloggers
- › Measures reflected solar radiation when inverted
- › Provides measurements in direct sunlight, under plant canopies, when the sky is cloudy, and in artificial light
- › Compatible with the CWS900-series interfaces, allowing it to be used in a wireless sensor network
- › Includes bubble level and levelling screws eliminating need for a separate levelling base, which simplifies installation
- › Acceptable for providing the solar radiation data used in stability estimations
- › Dome protects thermopile and allows water to roll off of it

Technical Description

The LP02 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, which allows the LP02 to be used under plant canopies or lamps, when the sky is cloudy, and for reflected radiation measurements.

The LP02 includes a bubble level, three adjusting screws, and a cable gland. The bubble level and adjusting screws

allow the sensor to be levelled without using a levelling base. The gland facilitates cable replacement.

Please note that the LP02 is not compatible with the CR200(X)-series dataloggers.

Mounting

The LP02 includes a bubble level and three adjusting levelling screws, which allow the sensor to be levelled without using a levelling base. The CM225E Solar Sensor Mounting Stand is used to attach the sensor to a mast, crossarm, or pole (33 mm to 53 mm outer diameter). The CM225E consists of a rectangular plate, mounting bracket, U-bolts, washers, lock washers and nuts.

The LP02 should be mounted away from all obstructions and reflective surfaces that might adversely affect the measurement.

Two LP02 pyranometers can be mounted back-to-back to make a low-cost albedometer. Contact Campbell Scientific for more information.

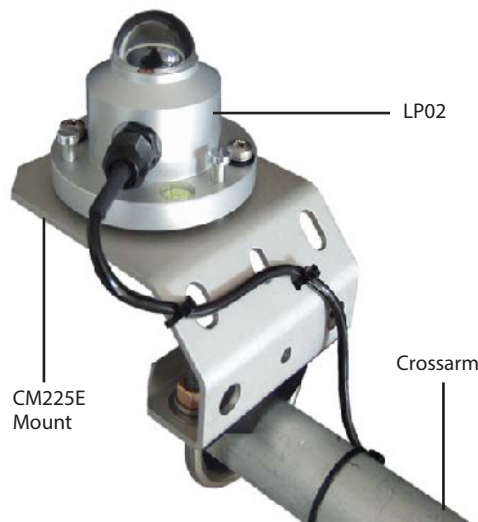
Ordering Information

Solar Radiation Sensor

LP02 Hukseflux pyranometer with standard 5 m cable length.

Mount

CM225E Solar Sensor Mounting Stand for attaching the sensor to a tripod or tower mast or to a CM202, CM204, or CM206 crossarm.



To attach the CM225E to a CM202, CM204, or CM206 crossarm, place the U-bolt in the holes on the bottom of the bracket (shown). If the CM225E is attached to a mast, place the U-bolt in the holes in the side of the bracket.

Specifications

- › Light Spectrum Waveband: 285 to 3000 nm
- › Maximum Irradiance: 2000 W/m²
- › Sensitivity (nominal): 15 μ V/W/m²
- › Operating Temperature Range: -40° to +80°C
- › Temperature Dependence: < 0.15% per °C
- › ISO Classification: Second Class
- › Width: 7.8 cm (3.1 in)
- › Height: 5.9 cm (2.3 in)
- › Dome Diameter: 3.0 cm (1.2 in)
- › Weight with 5 m (15 ft) cable: 363 g (0.8 lb)