



## Solar Radiation Sensor

### S80214

- Easy to use
- First class specifications
- Temperature range: -40 to +80 °C

This is a solar radiation sensor that can be applied in scientific grade solar radiation observations. It complies with the “first class” specifications within the latest ISO and WMO standards. The scientific name of this instrument is pyranometer. It serves to measure the solar radiation flux that is incident on a plane surface in W/m<sup>2</sup> from a 180 degrees field of view (also called “global” solar radiation). Working completely passive, using a thermopile sensor, the sensor generates a small output voltage proportional to this flux. Employing two glass domes, certain measurement errors are reduced; in particular thermal offsets, so that a high measurement accuracy can be attained. The sensor can directly be connected to most commonly used datalogging systems. It can be used for scientific meteorological observations, building physics, climate- and solar collector testing. A common application is for outdoor solar radiation measurements as part of a meteorological station. This application requires horizontal leveling; leveling feet and a level are included. The cable can easily be installed or replaced by the user. Applicable standards are ISO 9060 and 9847, WMO (World Meteorological Organization), and ASTM E824-94. It can also be used for stability estimations according to EPA.





## Technical Specifications

**S80214**

ISO classification: first class

Spectral range: 305 to 2800 nm

Sensitivity (nominal):  $15 \mu\text{V}/\text{Wm}^{-2}$

Temperature range:  $-40$  to  $+80$  °C

Range : 0 to  $2000 \text{ Wm}^{-2}$

Temperature dependence:  $< 0.1\%/^{\circ}\text{C}$

Calibration traceability: WRR

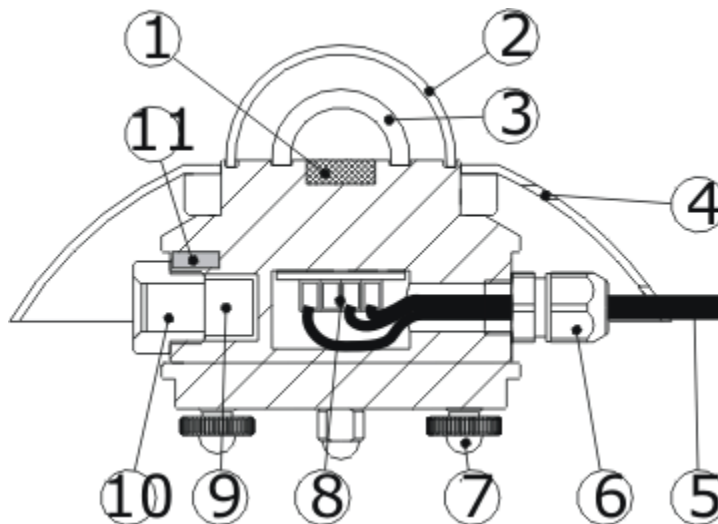


Figure 1: solar radiation sensor. (1) sensor, (2, 3) glass domes, (5) cable, standard length 5 m, (9) desiccant.