

Measure Ultraviolet Radiation

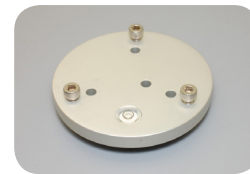


The SU-100 is an ultraviolet sensor that measures UV radiation between 250 and 400 nanometers in $\mu\text{mol m}^{-2} \text{s}^{-1}$ (micromoles of photons per square meter per second) or W m^{-2} (Watts per square meter). The self-cleaning dome-shaped head prevents water accumulation. The sensor head is potted solid to prevent internal condensation in humid environments.

Although the relative wavelengths of UV radiation

differ among sunlight and electric lights our measurements, shown in the graph below (Figure 1), indicate that this sensor provides a close estimate of the UV radiation coming from electric lamps. This sensor is particularly useful for determining the UV filtering capacity of the transparent plastic and glass barriers that are commonly used below electric lamps.

Related Product



AL-100
Leveling plate used to keep the sensor heads level.

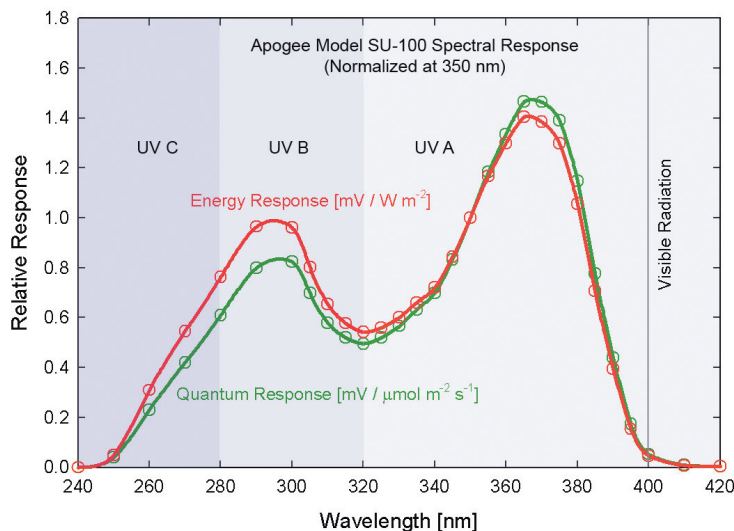


Figure 1:

The sensor is sensitive to UV-B radiation, but it is included with the UV-A radiation to provide a total measurement of UV

Specifications

Absolute Accuracy

- $\pm 10\%$

Uniformity

- $\pm 5\%$

Repeatability

- $\pm 1\%$

Output

- Responsivity = 0.2 mV per $\mu\text{mol m}^{-2}\text{s}^{-1}$, 0.58 mV per W m^{-2} , Full sunlight = 35 mV ($175 \mu\text{mol m}^{-2}\text{s}^{-1}$, 60 W m^{-2})
- Calibration Factor = $5.0 \mu\text{mol m}^{-2}\text{s}^{-1}$ per mV, 1.7 W m^{-2} per mV
- Range = 0 – 60 mV (0 – $300 \mu\text{mol m}^{-2}\text{s}^{-1}$, 0 - 102 W m^{-2})

Input Power

- None, self-powered

Response Time

- Less than 1 millisecond

Long Term Drift

- Less than 3% per year

Operating Environment

- Can be submerged in water with or without mounting screw
- 0 to 100% relative humidity
- - 25 to 55 C

Materials

- Aluminum head, potted solid

Mass

- 75g

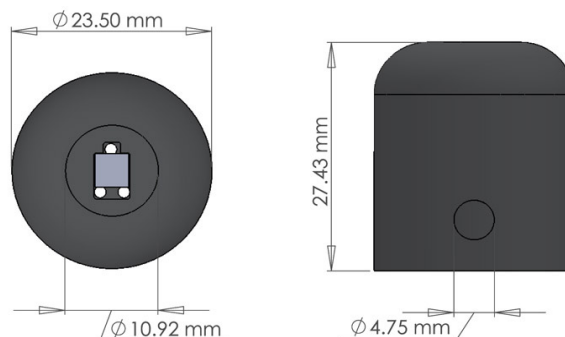
Cable

- 5 meters of twisted-pair, shielded wire with Santoprene jacket
- Custom lengths available

Warranty

- 1 year against defects in materials and workmanship

Measurements



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