



## UV Sensor S9091

The UV sensor measures the sunburning portion of the UV spectrum. Its spectral response matches very closely with the Erythema Action Spectrum (EAS). The sensor measures global solar UV irradiance, the sum of the components of solar UV transmitted direction, and those scattered in the atmosphere. Scattered UV is a major portion of global irradiance.

The transducer is a semiconductor photodiode that responds only to radiation in the region of interest. The diffuser provides an excellent cosine response. With multiple hard-oxide coatings, the interference filter provides the Erythema Action Spectral response. It is stable in the presence of heat and humidity.

The outer shell shields the sensor from thermal radiation and provides a path for convection cooling of the body, minimizing heating of the sensor interior. It provides a cutoff ring for cosine response, a level indicator, and fins to aid in aligning the sensor with the sun's rays. Spring-loaded mounting screws, in conjunction with the level indicator, enable rapid and accurate leveling of the sensor.





## Technical Specifications

S9091

Operating Temperature: -40°F to +150°F (-40°C to +65°C)  
Non-Operating Temperature: -50°F to +158°F (-45°C to +70°C)

Transducer: Semiconductor photodiode

Spectral Response: 280 to 360 nm (Erythema Action Spectrum)

Cosine Response: ± 4% of reading (0° to 65° incident angle)  
± 9% of reading (65° to 85° incident angle)

### Ultra Violet (UV) Radiation Dose

Resolution and Units: 0.1 MEDs to 19.9 MEDs  
1 MED above 19.9 MEDs  
Range: 0 to 199 MEDs  
Accuracy: ± 5% of daily total  
Drift: up to ± 2% per year  
Update Interval: 50 seconds to 1 minute (5 minutes when dark)

### Ultra Violet (UV) Radiation Index

Resolution and Units: 0.1 Index  
Range: 0 to 16 Index  
Accuracy: ± 5% of full scale  
Cosine Response: ± 4% (0° to 65° incident angle)  
9% (65° to 85° incident angle)  
Update Interval: 50 seconds to 1 minute (5 minutes when dark)

## PHYSICAL

Housing Material: UV-resistant AVS plastic  
Dimensions: 2 in x 2.75 in x 2.25 in (51mm x 70 mm x 57 mm)  
Weight: 0.5 lbs (226 g)