

E50 UV INDEX SENSOR



The E50 UV Index sensor is used to measure and know the risk of sunburn. The E50 UV Index sensor has a response closely matching the Erythema Action Spectrum (EAS), which defined by McKinlay and Diffey (1987) and adopted by the Commission Internationale de l'Eclairage (C.I.E.) as the standard representation of the human skin's sensitivity to UV radiation, the portion of the solar radiation spectrum usually associated with spectrum and skin cancer. Scattered UV is a major portion of global irradiance, the E50 UV Index sensor measures global solar UV irradiance, the sum of the components of solar UV transmitted directly and those scattered in the atmosphere.

The transducer is a semiconductor photodiode that responds only to radiation in the region of interest. The diffuser provides an excellent cosine response, 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. Each sensor is calibrated against a standard UV pyranometer in natural summer daylight.

Technical Specifications :

Sensor Type : Semiconductor photodiode

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

Cosine Response : $\pm 4\%$ (0° to 60° incident angle) ; $\pm 9\%$ (60° to 85° incident angle)

Measuring Range : 0 to 16.67 Index

Resolution : 0.01 Index

Accuracy : $\pm 5\%$ of full scale

Response Time : Less than 1 Sec.

Power Requirement : 3VDC $\pm 10\%$

Signal Output : 0 to 1.25VDC (75mV per UVI)

Cable Length : 5M

Housing Material : UV-resistant ABS plastic

Operating Temperature : -40 to $+65$

Storage Temperature : -45 to $+70$

Dimension : @ 10cm (diameter of round base) * 6.9cm (height)