





UV-A SENSORS

SU-200-SS Series



Response Graphs



Mean cosine response of four Apogee UV-A sensors. Cosine response was calculated as the relative difference of UV-A sensors from the mean of replicate reference UV-A sensors deployed outdoors. These data are the average of the AM and PM response.



Spectral response estimate of Apogee SU-200 UV-A sensors. Spectral response was modeled from sensitivity of the photodetector and transmittance of the diffuser.

SU-200-SS SU-202-SS SU-205-SS SU-220 SU-221-SS 5 V USB power 5 to 24 V DC 5.5 to 24 V DC Power Supply Self-powered 5.5 to 24 DC source 25 mV per W m⁻²; 50 mV per W m⁻²; 0.1 mV per W m⁻²: Custom for each sensor and stored in Output (sensitivity) 0.03 mV per $\mu mol~m^{^{-2}}~s^{^{-1}}$ 8.33 mV per $\mu mol~m^{^{-2}}~s^{^{-1}}$ 16.67 mV per μ mol m⁻² s⁻¹ the firmware 0.02 W m⁻² per mV; 0.06 μmol m⁻² s⁻¹ per mV 10 W m⁻² per mV; $0.04 \text{ W m}^{-2} \text{ per mV};$ Calibration Factor Custom for each sensor and stored in 30 µmol m⁻² s⁻¹ per mV 0.12 μmol m⁻² s⁻¹ per m (reciprocal of sensitivity) the firmware Calibration Uncertainty ± 5 % USB **Output Range** 0 to 10 mV 0 to 2.5 V 0 to 5 V **SDI-12** 0 to 100 W m⁻² Measurement Range Measurement Less than 0.5 % Repeatability Long-term Drift Less than 2 % per year Non-linearity Less than 1 % **Response Time** Less than 1 ms Less than 0.6 s Field of View 180° Spectral Range 305 to 390 nm (wavelengths where response is greater than 10 % of maximum) ± 2 % at 45°; ± 5 % at 75° zenith angle Directional (Cosine) Response **Temperature Response** Less than 0.1 % per C -30 to 85 C; 0 to 100 % relative humidity **Operating Environment** Dimensions 30.5 mm diameter, 37 mm height 140 g Mass (with 5 m of cable) 5 m of shielded, twisted-pair wire; TPR jacket (high water resistance, high UV stability, flexibility in cold conditions); pigtail Cable lead wires; stainless steel (316), M8 connector Warranty 4 years against defects in materials and workmanship

Product Specifications





Overview

UV-A radiation is important in material sciences and has numerous photo-biological functions that are both harmful and beneficial. Apogee's new UV-A radiometers offer a low-cost option for continuously measuring UV-A radiation in outdoor environments, laboratory settings, and monitoring the filtering ability and stability of various materials.

Dimensions











Features

RUGGED, SELF-CLEANING HOUSING

Sensor features an anodized aluminum body with fully-potted electronics. The dome-shaped sensor head minimizes errors by shedding dust and water for a selfcleaning performance.

HIGH QUALITY CABLE

Pigtail-lead sensors feature on IP68, marine-grade stainless-steel cable connectors attached directly to the sensor head to simplify sensor removal for maintenance and recalibration.

CALIBRATION TRACEABILITY

Apogee UV-A series sensors are calibrated through side-by-side comparison to the mean of four transfer standard UV sensors under sunlight (clear sky conditions) in Logan, Utah. The transfer standard UV-A sensors are calibrated though side-by-side comparison to an Apogee model PS-300 spectroradiometer under sunlight (clear sky conditions) in Logan, Utah. The PS-300 is calibrated with a quartz halogen lamp traceable to the National Institute of Standards and Technology (NIST).



