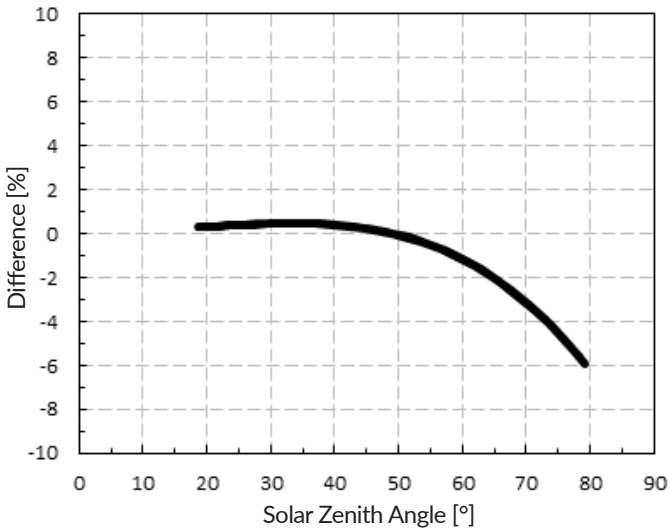
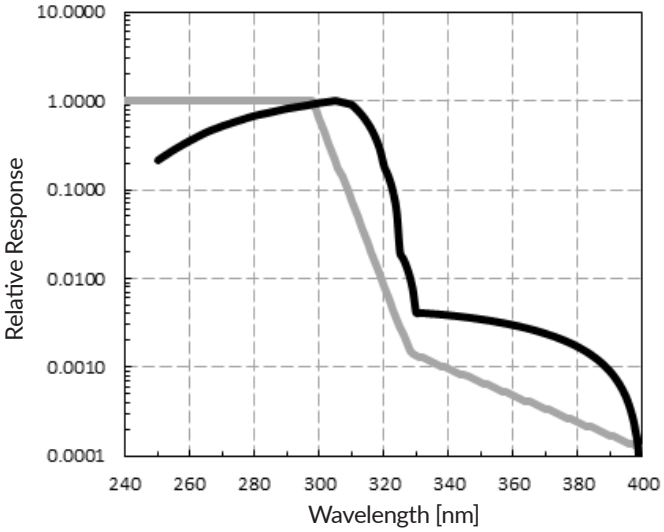
UV-I/UV-B SENSORS

SU-300-SS Series

Response Graphs



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



Spectral response estimate of Apogee SU-300 UV-I/UV-B sensors. Spectral response was modeled from sensitivity of the photodetector and transmittance of the diffuser. Gray line is the Erythemal Action Spectrum and provides a relative indication of skin damage caused by UV radiation.

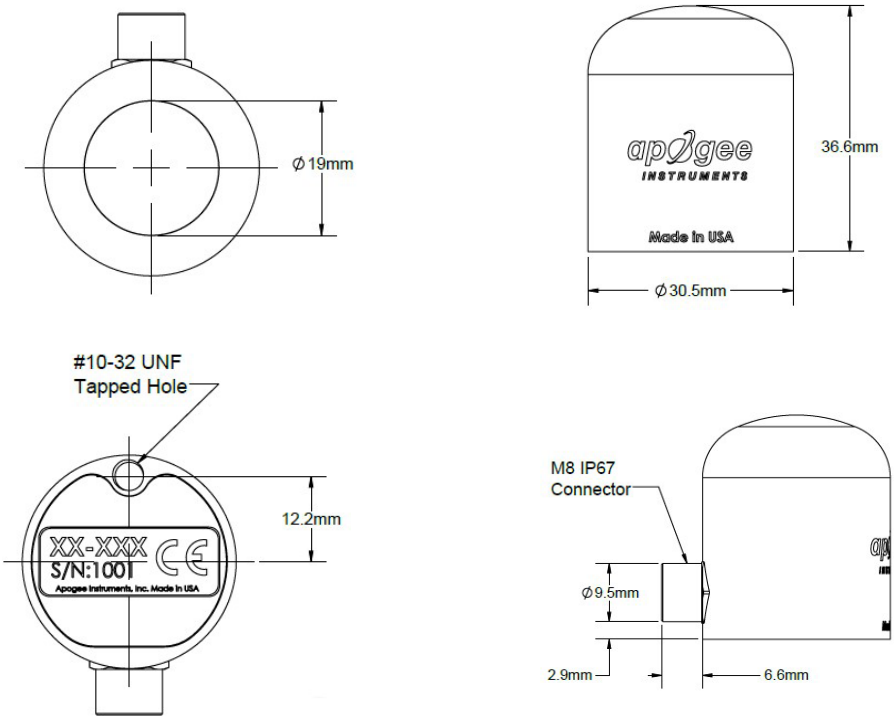
Product Specifications

	SU-300-SS	SU-321-SS
Power Supply	Self-powered	5.5 to 24 V DC
Output (sensitivity)	0.1 mV per UV index units	-
Calibration Factor (reciprocal of sensitivity)	10 UV index units per mV	Custom for each sensor and stored in the firmware
Calibration Uncertainty	± 10 %	± 10 %
Output Range	0 to 2 mV	SDI-12
Measurement Range	0 to 20 UV index units	0 to 20 UV index units
Measurement Repeatability	Less than 0.5 %	Less than 0.5 %
Long-term Drift	Less than 2 % per year	Less than 2 % per year
Non-linearity	Less than 1 %	Less than 1 %
Response Time	Less than 1 ms	Less than 1 ms
Field of View	180°	180°
Spectral Range	270 to 315 nm (wavelengths where response is greater than 10 % of maximum)	270 to 315 nm (wavelengths where response is greater than 10 % of maximum)
Directional (cosine) Response	± 2 % at 45°, ± 5 % at 75°	± 2 % at 45°, ± 5 % at 75°
Temperature Response	Less than 0.1 % per C	Less than 0.1 % per C
Operating Environment	-30 to 85 C; 0 to 100 % relative humidity	-30 to 85 C; 0 to 100 % relative humidity
Dimensions	30.5 mm diameter, 37 mm height	30.5 mm diameter, 37 mm height
Mass	140 g (with 5 m of lead wire)	140 g (with 5 m of lead wire)
Warranty	4 years against defects in materials and workmanship	4 years against defects in materials and workmanship

Overview

Apogee Instruments SU-300 series UV-I/UV-B sensors detect UV radiation from 270 to 315 nm and are calibrated to output UV Index measurements. UV Index is a relative metric that scales linearly with the intensity of UV radiation that causes sunburn in humans. Typical applications of UV-I/UV-B sensors include incoming UV radiation measurement in outdoor environments, aimed at informing people of potential for UV exposure and sunburn, or in laboratory use with artificial light sources (e.g., germicidal lamps).

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 self-cleaning 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-I/UV-B series sensors are calibrated through side-by-side comparison to the mean of four transfer standard UV-I/UV-B sensors under sunlight (clear sky conditions) in Logan, Utah. The transfer standard UV 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).