



APOGEE INSTRUMENTS UV-A METER | MU-250

Cost-effective measurement of UV radiation from 300 to 400 nm

Features

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.

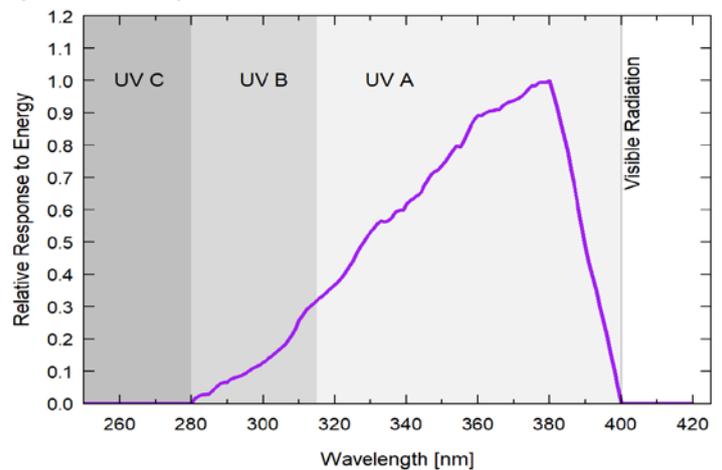
Rugged, Self-cleaning Housing

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.

Calibration Traceability

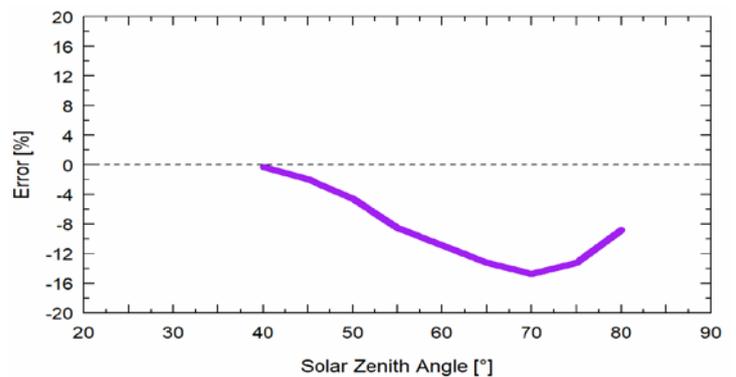
Apogee UV series sensors are calibrated through side-by-side comparison to the mean of four transfer standard UV sensors under UV-enhanced T5 fluorescent tubes. The transfer standard UV sensors are calibrated through side-by-side comparison to an Apogee model PS-300 spectroradiometer under sunlight (clear 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).

Spectral Response

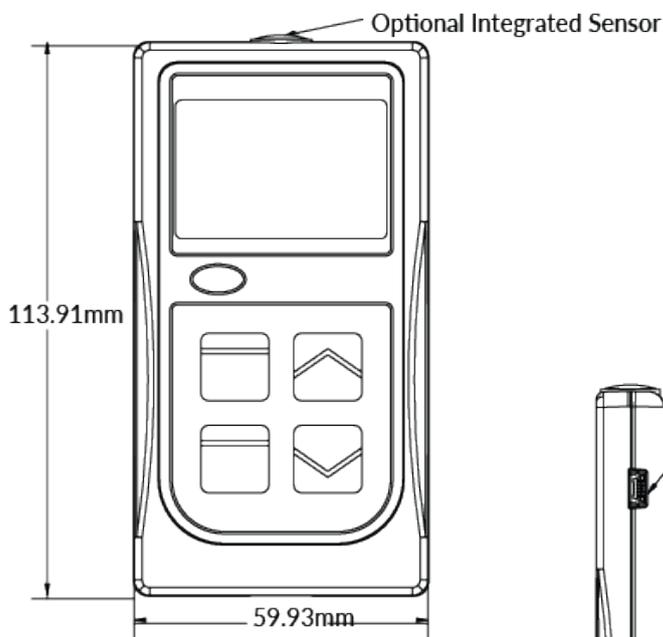


Spectral response estimate of Apogee SU-200 UV-A sensors. Spectral response was modeled from sensitivity of the photodetector and transmittance of the diffuser.

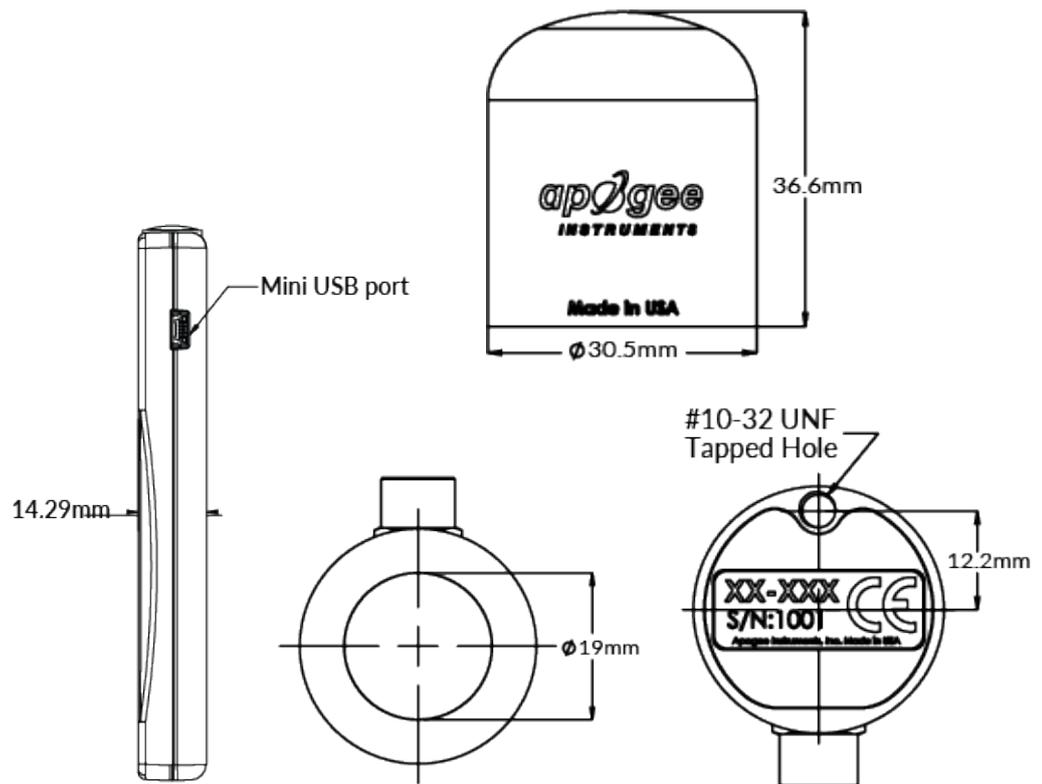
Cosine Response



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.



Dimensions



Product Specifications

	MU-250
Calibration Uncertainty	± 10 %
Measurement Repeatability	Less than 0.5 %
Long-term Drift	Less than 2 % per year
Non-linearity	Less than 1 %
Response Time	Less than 1 ms
Field of View	180°
Spectral Range	300 to 400 nm (wavelengths where response is greater than 10 % of maximum)
Directional (Cosine) Response	± 2 % at 45°; ± 5 % at 75° zenith angle
Temperature Response	Less than 0.1 % per C
Operating Environment	0 to 50 C; less than 90 % non-condensing relative humidity up to 30 C; less than 70 % noncondensing relative humidity from 30 to 50 C
Meter Dimesions	126 mm length, 70 mm width, 24 mm height
Dimensions	30.5 mm diameter, 37 mm height
Mass	180 g
Cable	2 m of two conductor, shielded, twisted-pair wire; TPR jacket (high water resistance, high UV stability, flexibility in cold conditions)
Warranty	4 years against defects in materials and workmanship