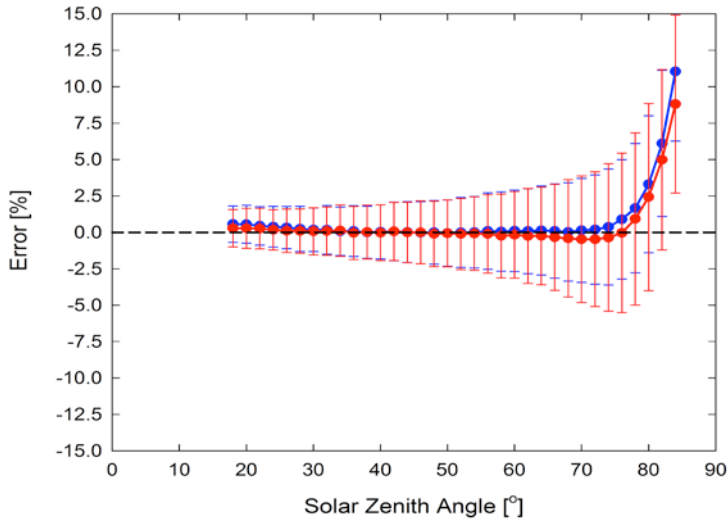
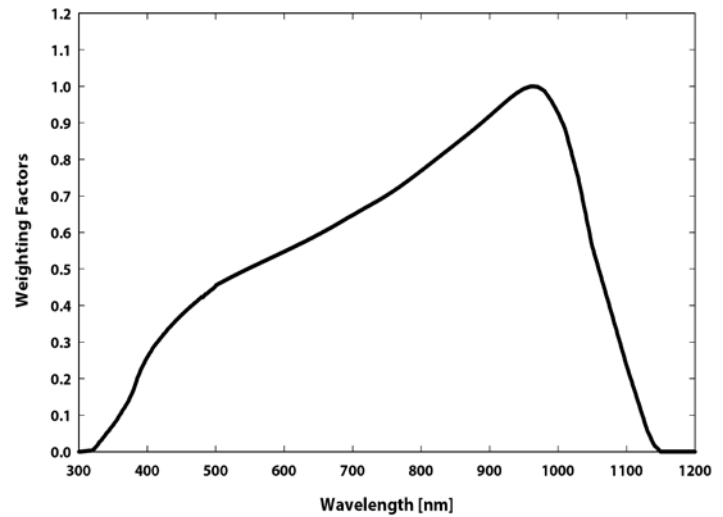




### Response Graphs



Mean **cosine response** of eleven Apogee silicon-cell pyranometers (error bars represent two standard deviations above and below mean). The blue symbols are AM measurements; the red symbols are PM measurements.



**Spectral response** estimate of Apogee silicon-cell pyranometers.

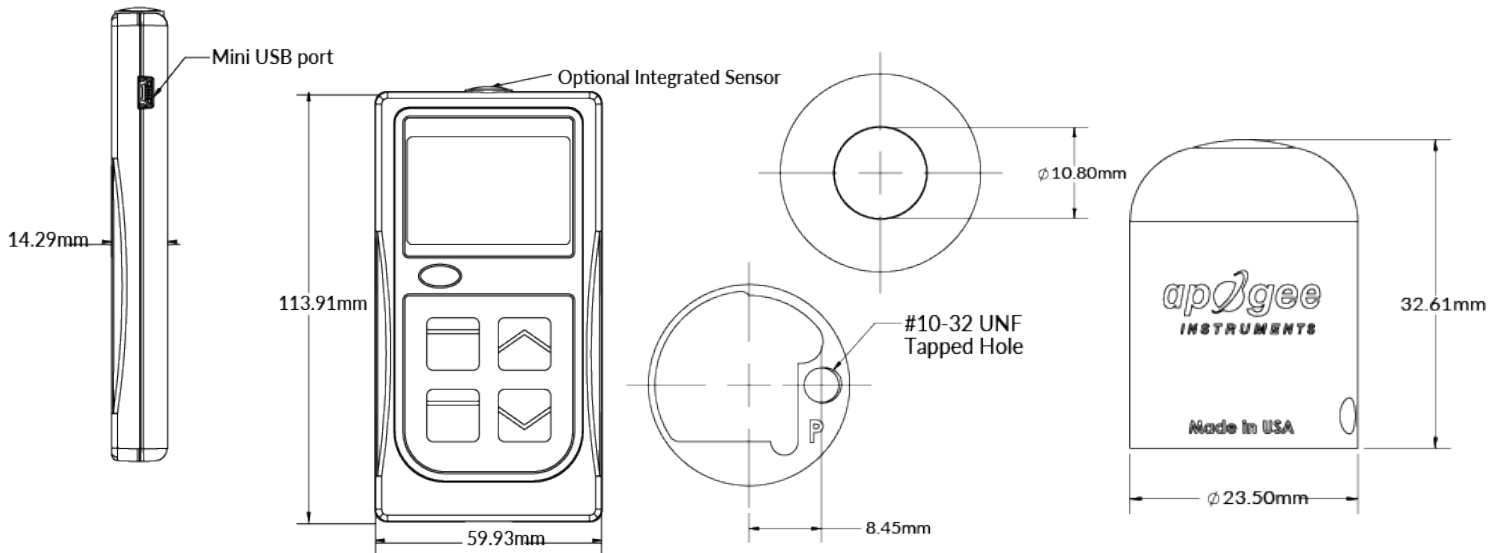
## Product Specifications

|                               |   |                              |
|-------------------------------|---|------------------------------|
| Calibration Uncertainty       | ± 5 %   |                              |
| Measurement Repeatability     | Less than 1 %   |                              |
| Long-term Drift               | Less than 2 % per year  |                              |
| Non-linearity                 | Less than 1 % up to 2000 W m <sup>-2</sup>  |                              |
| Response Time                 | Less than 1 ms  |                              |
| Field of View                 | 180°  |                              |
| Spectral Range                | 360 to 1120 nm  |                              |
| Directional (Cosine) Response | ± 5 % at 75° zenith angle   |                              |
| Temperature Response          | -0.04 ± 0.04 % per C  |                              |
| Operating Environment         | 0 to 50 C; less than 90 % non-condensing relative humidity up to 30 C; less than 70 % non-condensing relative humidity from 30 to 50 C; separate sensors can be submerged in water up to depths of 30 m |                              |
| Sensor Dimensions             | Integrated with Meter   | 24 mm diameter, 33 mm height |
| Meter Dimensions              | 126 cm length, 70 mm width, 24 mm height  |                              |
| Mass                          | 150 g   | 180 g                        |
| Cable                         | 2 m of shielded, twisted-pair wire; additional cable available; TPR jacket (high water resistance, high UV stability, flexibility in cold conditions)   |                              |
| Warranty                      | 4 years against defects in materials and workmanship  |                              |

# Calibration Traceability

Apogee SP series pyranometers are calibrated through side-by-side comparison to the mean of four transfer standard sensors under a reference lamp. The reference sensors are recalibrated under sunlight in Logan, UT traceable to the World Radiometric Reference (WRR) in Davos, Switzerland.

## Dimensions



## Features

### TYPICAL APPLICATIONS

- Solar panel arrays
- Agricultural, ecological, and hydrological weather networks

### STABLE MEASUREMENTS

Long-term non-stability determined from multiple replicate pyranometers in accelerated aging tests and field conditions is less than 2 % per year.

### UNIQUE DESIGN

A patented dome-shaped sensor head keeps the sensor clean and minimizes errors by shedding water. Sensors are housed in a rugged anodized aluminum body and electronics are fully-potted.



MP-100