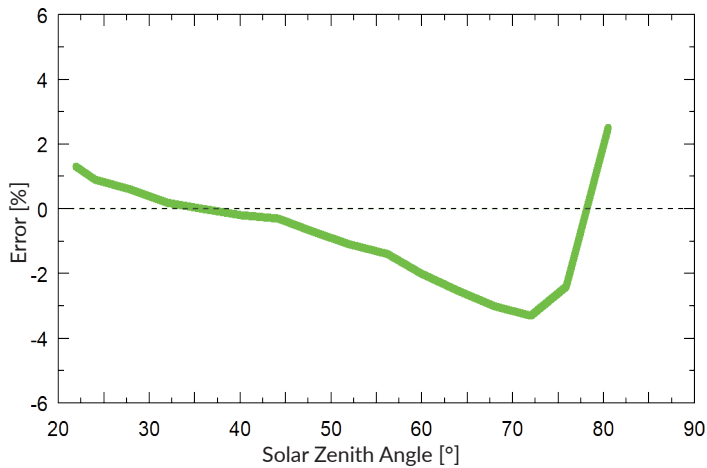
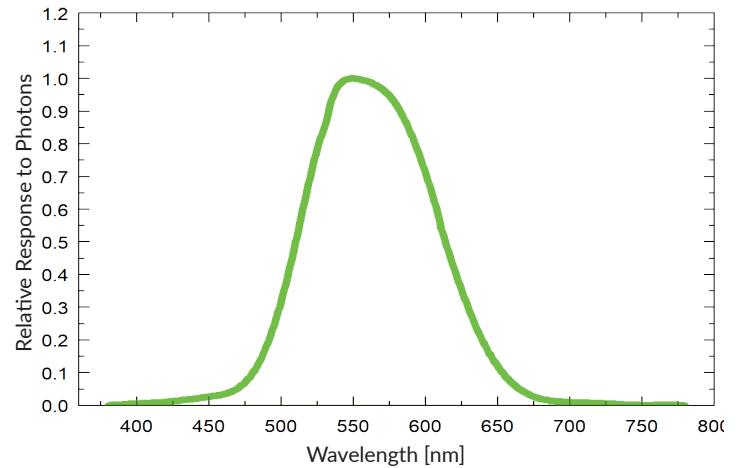




## Response Graphs



Cosine response of four photometric sensors. These data are the average of the AM and PM response.



Spectral response of photometric sensors (green) compared to the CIE 1931 photopic curve.

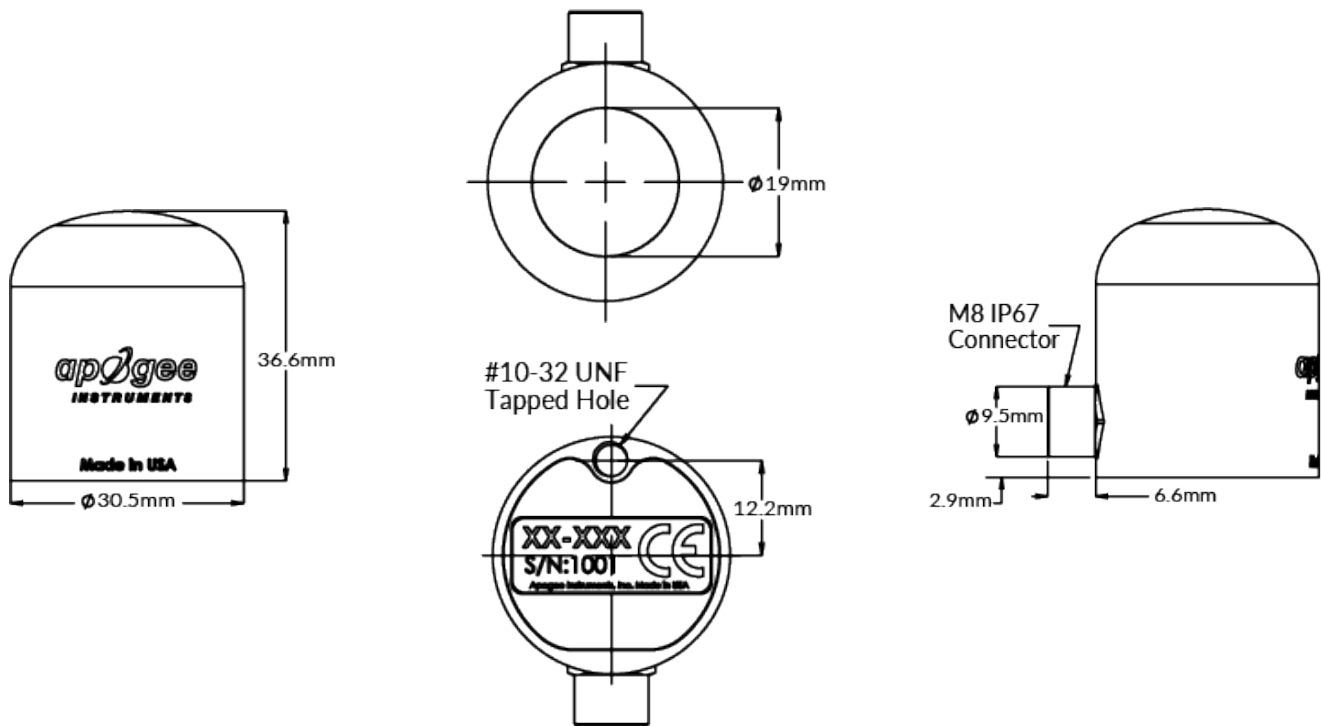
## Product Specifications

|                                  | SE-100-SS                                                                        | SE-202-SS        | SE-205-SS      | SE-212-SS         | SE-215-SS        | SE-421-SS                                               |
|----------------------------------|----------------------------------------------------------------------------------|------------------|----------------|-------------------|------------------|---------------------------------------------------------|
| Power Supply                     | —                                                                                | 5 to 24 V DC     | 5.5 to 24 V DC | 5 to 24 V DC      | 5.5 to 24 V DC   |                                                         |
| Current Draw                     | —                                                                                | Maximum of 10 µA |                |                   |                  | 1.4 mA (quiescent);<br>1.8 mA (active)                  |
| Output (sensitivity)             | 0.001 mV per lux                                                                 | 0.5 mV per lux   | 1 mV per lux   | 0.0167 mV per lux | 0.033 mV per lux | —                                                       |
| Calibration Factor               | 1000 lux per mV                                                                  | 2 lux per mV     | 1 lux per mV   | 60 lux per mV     | 30 lux per mV    | Custom for each<br>sensor and stored in<br>the firmware |
| Calibration Uncertainty          | ± 5 %                                                                            |                  |                |                   |                  |                                                         |
| Output Range                     | 0 to 200 mV                                                                      | 0 to 2500 mV     | 0 to 5000 mV   | 0 to 2500 mV      | 0 to 5000 mV     | SDI-12                                                  |
| Measurement Range                | 0 to 150000 lux                                                                  | 0 to 5000 lux    |                | 0 to 150000 lux   |                  |                                                         |
| 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                                                                   |                  |                |                   |                  |                                                         |
| Spectral Range                   | CIE 1931 luminous efficiency function                                            |                  |                |                   |                  |                                                         |
| Field of View                    | 180°                                                                             |                  |                |                   |                  |                                                         |
| Directional (Cosine)<br>Response | ± 2 % at 45°; ± 5 % at 75°                                                       |                  |                |                   |                  |                                                         |
| Temperature Response             | Less than 0.1 % per C                                                            |                  |                |                   |                  |                                                         |
| Operating Environment            | -40 to 70 C; 0 to 100 % relative humidity                                        |                  |                |                   |                  |                                                         |
| Dimensions                       | 30.5 mm diameter, 37 mm height                                                   |                  |                |                   |                  |                                                         |
| Mass (with 5 m of cable)         | 140 g                                                                            |                  |                |                   |                  |                                                         |
| Cable                            | 5 m of shielded, twisted-pair wire with TPR jacket and stainless steel connector |                  |                |                   |                  |                                                         |
| Warranty                         | 4 years against defects in materials and workmanship                             |                  |                |                   |                  |                                                         |

## Overview

Apogee photometric sensors use a photodetector with a spectral response that closely matches the sensitivity of the human eye to light; sensors include a diffuser to properly weight light incident from any angle. Apogee photometric sensors provide highly accurate illuminance measurements (lux or footcandles) at an affordable price.

## 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.

### CALIBRATION TRACEABILITY

Apogee SE photometric sensors are calibrated through side-by-side comparison to the mean of two transfer standard sensors under a reference lamp. The reference sensors are verified with a quartz halogen lamp traceable to the National Institute of Standards and Technology (NIST).

