

PYRGEOMETERS

SL-500-SS & SL-600-SS Series

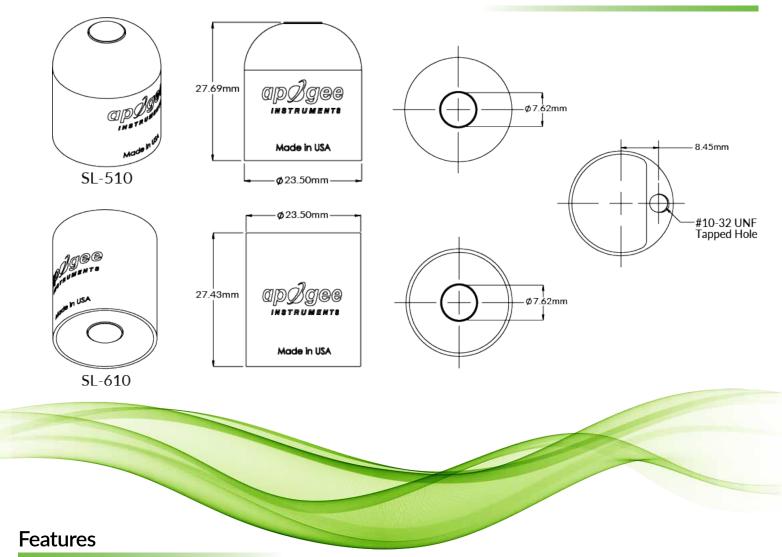
Downward-facing



Product Specifications



| | SL-510-SS | SL-610-SS |
|--|--|-----------|
| Sensitivity | 0.12 mV per W m ⁻² (variable from sensor to sensor, typical value listed) | |
| Calibration Factor | 8.5 W m ⁻² per mV (variable from sensor to sensor, typical values listed) | |
| Calibration Uncertainty | ± 5 % | |
| Measurement Range | -200 to 200 W m ⁻² (net longwave irradiance) | |
| Measurement Repeatability | Less than 1 % | |
| Long-term Drift | Less than 2 % change in sensitivity per year | |
| Non-linearity | Less than 1 % | |
| Response Time | Less than 0.5 s | |
| Field of View | 180° | 150° |
| Spectral Range | 5 to 30 μm | |
| Temperature Response | Less than 5 % from -15 to 45 C | |
| Window Heating Offset | Less than 10 W m ⁻² | |
| Zero Offset B | Less than 5 W m ⁻² | |
| Tilt Error | Less than 0.5 % | |
| Uncertainty with Daily Total | ± 5 % | |
| Temperature Sensor | 30 k Ω thermistor ± 1 C tolerance at 25 C | |
| Output from Thermistor | 0 to 2500 mV (typical, other voltages can be used) | |
| Input Voltages Requirement for Thermistor | 2500 mV excitation (typical, other voltages can be used) | |
| Heater | $780~\Omega,15.4~\text{mA}$ current draw and $185~\text{mW}$ power requirement at $12~\text{v}$ DC | |
| Dimensions | 27.5 mm height, 23.5 mm diameter | |
| Mass | 90 g | 100 g |
| Warranty | 4 years against defects in materials and workmanship | |



Output Options

- 0 to 114 mV
- 0 to 2.5 V
- 0 to 5 V

Accurate, Stable Measurements

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

Unique Design

Designed to optimize performance and price. The patented dome-shaped aluminum head is completely waterproof and minimizes errors by shedding water and dirt. All electronics are fully-potted.

On-board Heater

A 0.2 W heater keeps water off the sensor and minimizes errors caused by dew, frost, rain, or snow blocking the radiation path.

Typical Measurement Applications

- Longwave radiation measurement in agricultural, ecological, and hydrological
- Weather networks and renewable energy applications.



