

240-200SZ Silicon Pyranometer

The **Model 240-200SZ Silicon Pyranometer** is designed for field measurement of global solar radiation in agricultural, meteorological, and solar energy studies. In clear unobstructed daylight conditions, the 240-200SZ compares favorably with first class thermopile type pyranometers, but at a fraction of the cost. It features a silicon photovoltaic detector mounted in a fully cosine-corrected miniature head. Current output, which is directly proportional to solar radiation, is calibrated under natural daylight conditions in units of watts per square meter (W/m^2). Under most conditions of natural daylight, the error is less than 5%. Because the spectral response of the 240-200SZ does not include the entire solar spectrum, it must be used only in the natural daylight conditions for which it was calibrated. It should not be used under vegetation, artificial lights, in a greenhouse, or to measure reflected solar radiation.



Specifications

Sensor: High stability silicon voltaic detector (blue enchance)
 Accuracy: $\pm 5\%$ typical under natural daylight conditions
 Sensitivity: 100 μA per 1000 W/m^2 typical
 Linearity: Max deviation of 1% up to 3000 W/m^2
 Stability: $< \pm 2\%$ change over a one year period
 Response time: 10 μs
 Temperature dependence: 0.15% per $^{\circ}C$ max
 Cosine correction: Cosine corrected up to 80° angle of incidence
 Azimuth: $< \pm 1\%$ error over 360° at 45° elevation
 Tilt: no error induced from orientation
 Operating temperature: $-40^{\circ}C$ to $+65^{\circ}C$ ($-40^{\circ}F$ to $+149^{\circ}F$)
 Sensor housing: Weatherproof anodized aluminum case with acrylic diffuser and stainless steel hardware
 Size: 3" Dia x 1.4" H
 Weight/shipping: 1 lb/2 lbs

Ordering Information

240-200SZ	Silicon Pyranometer with mounting and leveling fixture, 10' cable
240-200SZ/50	Silicon Pyranometer with mounting and leveling fixture, 50' cable
240-200SZ/100	Silicon Pyranometer with mounting and leveling fixture, 100' cable
240-153	Tower Mount, 1' boom with tower mounting hardware
240-LI200SZ-A4	Amplifier PCB, 4-20 mA loop
240-LI200SZ-A5	Amplifier PCB, 0-5 V