








Solar Radiation Sensors









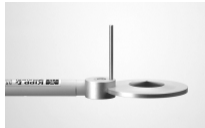
Pyranometers, quantum sensors, and net radiometers








The solar radiation sensors that Campbell Scientific offers come in a variety of designs: pyranometers, net radiometers, quantum sensors, and pyrhemometers. These sensors measure various aspects of the energy imparted by the sun on the Earth's surface. A leveling fixture fitted with a bubble level may be required to accurately install solar radiation sensors.

		<i>ISO Classification</i>	<i>Spectral Range</i>	<i>Sensitivity</i>	<i>Operating Temperature Range</i>
<p>CS320 Digital Thermopile Pyranometer</p> <p>Popular</p> 		Class C (second class)	385 to 2105 nm (50% points)	0.057 mV/W/m ²	-50° to +50°C
<p>CS310 Quantum (PAR) Sensor</p> <p>Popular</p> 		—	389 to 692 nm ±5 nm (wavelengths where response is greater than 50% of maximum)	0.01 mV per μmol m ⁻² s ⁻¹	-40° to +70°C
<p>SR20-T2-L ISO Secondary Standard Pyranometer with 10K Thermistor</p> <p>Popular</p> 		Spectrally flat Class A (secondary standard) pyranometer (ISO 9060:2018)	285 to 3000 x 10 ⁻⁹ m (20% transmission points)	7 to 25 x 10 ⁻⁶ V/(W/m ²)	-40° to +80°C

		<i>ISO Classification</i>	<i>Spectral Range</i>	<i>Sensitivity</i>	<i>Operating Temperature Range</i>
SR30-L Secondary Standard Pyranometer with RS-485 Modbus Communications and Integrated Heating and Ventilation 	Popular	Hemispherical Solar Radiation: Spectrally flat Class A (secondary standard) ISO 9060:2018	Hemispherical Solar Radiation: 285 to 3000 x 10 ⁻⁹ m	Hemispherical Solar Radiation: Digital output	Hemispherical Solar Radiation: -40 to +80°C (rated)
CMP10-L ISO Secondary Standard Pyranometer 	Popular	Class A (secondary standard)	285 to 2800 nm	7 to 14 μV/W/m ²	-40° to +80°C
SMP10-L Radiation Sensor with Digital RS-485 Output 	Popular	Class A (secondary standard)	285 to 2800 nm (50% points)	2-wire RS-485 Modbus	-40° to +80°C
SR05-L ISO 9060 Second Class Pyranometer with Analog and RS-485 Modbus Communications 		Spectrally flat Class C (second class) ISO 9060:2018	285 to 3000 x 10 ⁻⁹ m	—	-40° to +80°C
LP02-L Pyranometer 		ISO 9060:2018 spectrally flat Class C (second class)	285 to 3000 nm	15 μV/W/m ² (nominal)	-40° to +80°C
SR11 First Class Pyranometer 		Class B (first class)	285 to 3000 nm	15 μV/W/m ² (nominal)	-40° to +80°C
SR20-D2-L Digital Secondary Standard Pyranometer 		Spectrally flat Class A (secondary standard) pyranometer (ISO 9060:2018)	285 to 3000 x 10 ⁻⁹ m (20% transmission points)	Digital output	-40° to +80°C

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MS-80-L Secondary Standard Pyranometer		<ul style="list-style-type: none"> ▶ ISO 17025 Class A pyranometer ▶ ISO 9060 Class A spectrally flat and fast-response pyranometer (secondary standard) 	285 to 3000 nm	~10 $\mu\text{V}/\text{W}/\text{m}^2$	-40° to +80°C
CMP3-L Pyranometer with Sun Shield		Class C (second class)	300 to 2800 nm	5 to 20 $\mu\text{V}/\text{W}/\text{m}^2$	-40° to +80°C
CMP6-L Pyranometer		Class B (first class)	285 to 2800 nm	5 to 20 $\mu\text{V}/\text{W}/\text{m}^2$	-40° to +80°C
CMP11-L Pyranometer		Class A (secondary standard)	285 to 2800 nm	7 to 14 $\mu\text{V}/\text{W}/\text{m}^2$	-40° to +80°C
CMP21-L Pyranometer		Class A (secondary standard)	285 to 2800 nm	7 to 14 $\mu\text{V}/\text{W}/\text{m}^2$	-40° to +80°C
CS301 Pyranometer		Class C (second class)	360 to 1120 nm	0.2 $\text{mV}/\text{W}/\text{m}^2$	-40° to +70°C
SP230SS Heated Pyranometer		Class C (second class)	360 to 1120 nm (wavelengths where response is 10% of maximum)	0.2 $\text{mV}/\text{W}/\text{m}^2$	-40° to +70°C
CS325DM-L Silicon Irradiance Reference Sensor		—	—	—	-35° to +80°C
NR-LITE2-L Net Radiometer		—	0.2 to 100 μm	10 $\mu\text{V}/\text{W}/\text{m}^2$ (nominal)	-40° to +80°C

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SN500SS Net Radiometer		—	<ul style="list-style-type: none"> ▶ Pyrgometer : 5,000 to 30,000 nm ▶ Pyranometer: 295 to 2685 nm (downward-looking) ▶ Pyranometer: 385 to 2105 nm (upward-looking) 	<ul style="list-style-type: none"> ▶ Pyranometer: 0.057 mV per W/m² (upward-looking) ▶ Pyrgometer : 0.12 mV per W/m² ▶ Pyranometer: 0.15 mV per W/m² (downward-looking) 	-50° to +80°C and 0 to 100% humidity
NR01-L 4-Component Net Radiometer		—	<ul style="list-style-type: none"> ▶ Pyrgometer: 4500 to 50,000 nm ▶ Pyranometer: 305 to 2800 nm 	10 to 40 μV W ⁻¹ m ²	-40° to +80°C
CNR4-L 4-Component Net Radiometer		—	<ul style="list-style-type: none"> ▶ Pyranometer : 305 to 2800 nm ▶ Pyrgometer: 4500 to 42,000 nm 	5 to 20 μV W ⁻¹ m ²	-40° to +80°C
CHP1-L Pyrheliometer		—	200 to 4000 nm	7 to 14 μV/W/m ²	-40° to +80°C
LI200R-L Pyranometer		—	400 to 1100 nm	0.13 kW m ⁻² mV ⁻¹ (typically)	-40° to +65°C
LI190R-L Quantum (PAR) Sensor		—	400 to 700 nm	Typically 5 to 10 μA per 1000 μmoles s ⁻¹ m ⁻²	-40° to +65°C

For comprehensive details, visit: www.campbellsci.com/solar-radiation 



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