

# Infrared Radiometer

SI-111 standard FOV

SI-121 narrow FOV

For orders out of the USA add 10% to the list price

- Measures temperatures of road surfaces; plant canopies; soil, snow, and water surfaces
- Output follows fundamental physics of the Stefan-Boltzmann Law allowing for a version of the S-B equation to correct for the effect of sensor body temperature

## Specifications

		<u>Precision (SI-111)</u>	<u>Precision Narrow (SI-121)</u>
<b>Field of view</b>		22° half angle	18° half angle
<b>Output</b>	Target temp.	60 $\mu\text{V}$ per $^{\circ}\text{C}$ difference from sensor body	40 $\mu\text{V}$ per $^{\circ}\text{C}$ difference from sensor body
	Sensor body temp.	0-2500 mV	0-2500 mV
<b>Accuracy</b>	-10 to 65 $^{\circ}\text{C}$	$\pm 0.2$ $^{\circ}\text{C}$ absolute accuracy	
		$\pm 0.1$ $^{\circ}\text{C}$ uniformity	
		$\pm 0.05$ $^{\circ}\text{C}$ repeatability	
	-40 to 70 $^{\circ}\text{C}$	$\pm 0.5$ $^{\circ}\text{C}$ absolute accuracy	
		$\pm 0.3$ $^{\circ}\text{C}$ uniformity	
		$\pm 0.1$ $^{\circ}\text{C}$ repeatability	
<b>Optics</b>		Germanium lens	
<b>Wavelength range</b>		8-14 $\mu\text{m}$ (corresponds to atmospheric window)	
<b>Response time</b>		< 1 second to changes in target temperature	
<b>Input power</b>		2.5 V excitation	
<b>Operating environment</b>		-55 to 80 $^{\circ}\text{C}$ ; 0 to 100% RH (non-condensing) Water resistant, designed for continuous outdoor use	
<b>Datalogger channels</b>		1 differential (detector) and 1 single-ended (thermistor)	
<b>Cable</b>		4.5 m twisted, shielded 4 conductor wire with Santoprene casing. Extra cable \$2.95/m	
<b>Dimensions</b>		6 cm long x 2.3 cm diameter	
<b>Mass</b>		190 g	
<b>Warranty</b>		1 year against defects in materials and workmanship	