Infrared Radiation Measurement System

SIX-8001

The SIX-8001 Infrared Radiation Measurement System is an active heat source detection benchtop infrared thermal imager that visually identifies thermal defects or overall temperature distribution through thermal imaging and temperature measurement technology, while enabling process monitoring.

This system supports research applications including:

- PCB Thermal Analysis – Circuit board heat distribution studies
- Micro-component Inspection – Detection of micron-scale devices
- Material Stress & Temperature Rise Analysis – Thermal-mechanical behavior evaluation
- Thermal Performance Testing – Material property characterization
- Chemical Reaction Temperature Analysis – Process thermal monitoring
- Chemical Process Temperature Tracking – Industrial thermal supervision

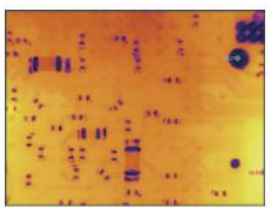
Features

- Real time Monitoring – Designed for continuous process inspection and data recording
- Adjustable Focus System – Delivers full-range clarity from macro to micro observation
- 50μm Resolution – High-resolution infrared imaging at microscopic level
- Professional PC Software – Generates comprehensive test reports with rich analytical content

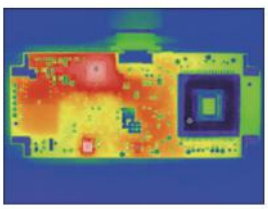
Applications

- PCB Thermal Profiling - Circuit board heat distribution analysis and hotspot identification
- Micro-component Thermal Inspection - Defect detection in micron-scale electronic components
- Material Thermo-mechanical Analysis - Stress-induced temperature rise evaluation
- Chemical Reaction Thermal Monitoring - Real-time temperature tracking of reactive processes
- Industrial Process Thermal Control - Precision temperature surveillance in chemical engineering

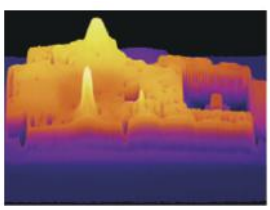
Effect Picture



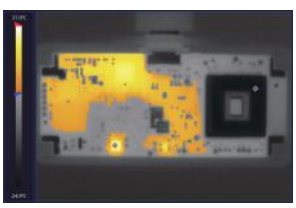
Macro measurement



Wide-angle measurement



3D effect



High-temperature search

Specifications

Item		Specifications
Imaging and Optical Data	Detector Type	Non-cooled vanadium oxide
	Pixel Size	12 μm
	Response Range	8~14μm
	Infrared Resolution	256×192 pixel
	Thermal Sensitivity	<50mK
	Image Frame Rate	25Hz
	Focus	6.8mm
	Field of View (FOV)	26° ×20°
	Focus Adjustment	Manual is supported
	Minimum Focusing Distance	3cm
	Minimum Pixel Detection Size	50μm
	Tesing Range	The height range of the holder structure: 1.4cm×1.05cm ~ 14cm×10.5cm
Temperature Measurement	Target Temperature Range	-20° C to +150° C
	Measurement Accuracy	±2° C to ±2%
	Temperature Measurement Mode	High/low temperature tracking, average temperature measurement, point-line-box temperature measurement, supporting 15 temperature measurement areas
	Alarm Function	Above threshold alarm, below threshold alarm
Specialized Analysis Software	Software Platform	PC, Windows 8 / Windows 10 / Windows 11, 64 bit system.
	Analysis Mode	Online real-time temperature measurement mode, offline data review mode
	False Color	White heat, black heat, red heat, iron red, rainbow
	Image Mode	Full temperature rendering, cold zone rendering, hot zone rendering, 3D heat map
	Temperature Curve	generate curves for any temperature points and supports the simultaneous display and comparison of 6 temperature curves on the same screen.
	Data Recording	generate any temperature-storable images, videos and perform detection tasks.
	Inspection Report	Automatically generated, including task description for detection, environmental parameters, 2D/3D thermal maps, and temperature curves
Adjustable Mounts and Platform	Camera Installation and Adjustment	Adjustable height for desktop holder, horizontal rotation adjustment; equipped with 1/4-inch tripod screw holes
	Holder Height Adjustment	3-30cm away from the workbench
	Platform Material	Insulation anti-static
Reliability	Storage Temperature	-20℃ ~+60℃
	Working Temperature	-10℃ ~+50℃
	Humidity	5%~95% Without condensation