FLIR SC600 Series

High-Resolution LWIR Science-Grade Infrared Camera

With its uncooled detector, high resolution, and all of the cutting-edge functionality scientists and researchers have come to expect from FLIR, the SC600 Series brings affordable research and science thermal imaging and measurement to a whole new level.

Affordable, Compact, and Powerful – *The SC600 Series provides over 300,000 pixels of accurate temperature measurement data.*

Uncooled Microbolometer Detector – *Maintenance-free and provides excellent longwave imaging performance.*
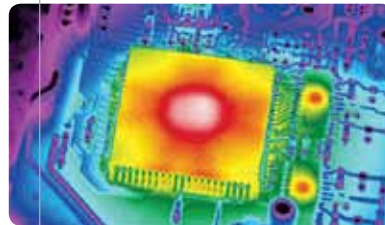
High Resolution – *640 × 480, 17 micron pixel detector provides great image detail and small spot size for accurate measurements of small temperature anomalies.*

Full Frame Rate – *Provides 14-bit data up to 50 frames per second at full frame 640 × 480 resolution.*

FPA Windowing – *Provides high-speed windowing modes (up to 200 Hz with a 640 × 120 window) and digital control of image flow and recording to FLIR's R&D software.*

Fully Compliant – *With both GenICam and GigE Vision protocols, the SC600 Series is ready to integrate with a variety of third-party analysis software packages.*

Perfect for Research and Science Applications – *The SC600 Series helps you to see and accurately quantify heat patterns, leakage, dissipation, and other heat-related factors in equipment, products, and processes in real time.*

Microchip

Medical

Space Shuttle

Imaging Specifications

Detector	SC645	SC655
Detector Type	Uncooled Microbolometer	
Spectral Range	7.5 – 13.0 µm	
Resolution	640 × 480	
Detector Pitch	17 µm	
NETD	<50 mK	
Imaging		
Time Constant	<8 ms	
Frame Rate (Full Window)	25 Hz	50 Hz
Subwindow Mode		User-Selectable 640 × 240 or 640 × 120
Maximum Frame Rate (@ Min. Window)	25 Hz (640 × 480)	200 Hz (640 × 120)
Dynamic Range	14-bit	
Digital Data Streaming	Gigabit Ethernet (25 Hz) USB (25 Hz)	Gigabit Ethernet (50/100/200 Hz) USB (25/50/100 Hz)
Command and Control	Gigabit Ethernet, USB	
Measurement		
Standard Temperature Range	–20°C to 150°C (–4°F to 302°F) 0°C to 650°C (32°F to 1,202°F)	
Optional Temperature Range	Up to 2,000°C (3,632°F)	
Accuracy	±2°C or ±2% of Reading	
Optics		
Camera f/#	f/1.0	
Available Lenses	13.1 mm (45°) 24.5 mm (24°) 41.3 mm (15°)	
Focus	Automatic or Manual (Motorized)	
Image Presentation		
Digital Data	Via PC Using ExaminIR Software	
General		
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)	
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)	
Encapsulation	IP 30 (IEC 60529)	
Bump / Vibration	25 g (IEC 60068-2-29) / 2 g (IEC 60068-2-6)	
Power	12/24 VDC, 24 W Absolute Max.	
Weight w/ Battery w/o Lens	0.7 kg (1.54 lb)	
Size (L × W × H) w/o Lens	216 × 73 × 75 mm (8.5 × 2.9 × 3.0 in)	
Mounting	¼"-20 (on three sides), 2 x M4 (on three sides)	

Back Panel

① Power Connector, Screw Terminal 2-pole: 10 – 30 VDC; 24 W Max.

② Gigabit Ethernet Port, 1000 MB, RJ-45 Connector: Control and image streaming.

③ USB2 HS Connector: Camera control and image streaming.

④ Digital I/O Connector, Screw Terminal 6-pole: Digital Out: 2 outputs, opto-isolated, 10–30 VDC supply, 100 mA. Digital In: 2 inputs, opto-isolated, 10–30 VDC.

SC600 Packages

SC645 ExaminIR Recording & Analysis Package: SC645, 24.5 mm (24°) Lens, Standard Temperature Calibration, ExaminIR Software

SC645 ExaminIR Max Recording & Analysis Package: SC645, 24.5 mm (24°) Lens, Standard Temperature Calibration, ExaminIR Max Software

SC655 ExaminIR Recording & Analysis Package: SC655, 24.5 mm (24°) Lens, Standard Temperature Calibration, ExaminIR Software

SC655 ExaminIR Max Recording & Analysis Package: SC655, 24.5 mm (24°) Lens, Standard Temperature Calibration, ExaminIR Max Software

*Ask your FLIR representative about additional packages