

FLIR A655sc

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 A655sc brings affordable research and science thermal imaging and measurement to a whole new level.

Affordable, Compact, and Powerful – The A655sc 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 A655sc is ready to integrate with a variety of third-party analysis software packages.

Perfect for Research and Science

Applications – The A655sc helps you to see and accurately quantify heat patterns, leakage, dissipation, and other heat-related factors in equipment, products, and processes in real time.

Included Recording & Analysis Software – Remotely control the A655sc, record thermal snap-shots and movies, measure temperature from over 300,000 spots, create temperature verses time plots, and more with the included FLIR ExaminIR software.



Microchip



Medical



Space Shuttle

Imaging Specifications

Detector	A655sc
Detector Type	Uncooled Microbolometer
Spectral Range	7.5 – 14.0 μm
Resolution	640 x 480
Detector Pitch	17 μm
NETD	<50 mK
Imaging	
Time Constant	<8 ms
Frame Rate (Full Window)	50 Hz
Subwindow Mode	User-Selectable 640 x 240 or 640 x 120
Maximum Frame Rate (@ Min. Window)	200 Hz (640 x 120)
Dynamic Range	14-bit
Digital Data Streaming	Gigabit Ethernet (50/100/200 Hz) USB (25/50/100 Hz)
Command and Control	Gigabit Ethernet, USB
Measurement	
Standard Temperature Range	-40°C to 150°C (-40°F to 302°F) 100°C to 650°C (212°F to 1,202°F)
Optional Temperature Range	Up to 2,000°C (3,632°F)
Accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$ 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)
Close-up / Microscopes	Close-up 50 μm , 100 μm
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	0.9 kg (1.98 lb)
Size (L x W x H) w/o Lens	216 x 73 x 75 mm (8.5 x 2.9 x 3.0 in)
Mounting	1/4"-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.

A655sc Packages

A655sc ExaminIR Recording & Analysis Package:
A655sc, 24.5 mm (24°) Lens, Standard Temperature Calibration, ExaminIR Software

A655sc ExaminIR Max Recording & Analysis Package:
A655sc, 24.5 mm (24°) Lens, Standard Temperature Calibration, ExaminIR Max Software

*Ask your FLIR representative about additional packages



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