

## 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.

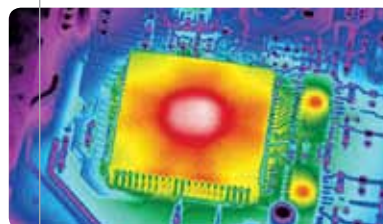
**FPA Windowing** – Provides high-speed windowing modes (up to 200 Hz with a 640 × 120 window) and digital control of image flow and recording to FLIR's R&D software.

**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 $\mu\text{m}$   |
| Resolution                         | 640 x 480  |
| Detector Pitch                     | 17 $\mu\text{m}$   |
| 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)<br>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)<br>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°)<br>24.5 mm (24°)<br>41.3 mm (15°)                      |
| Focus                              | Automatic or Manual (Motorized)                                      |
| Close-up / Microscopes             | Close-up 50 $\mu\text{m}$ , 100 $\mu\text{m}$                        |
| 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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