



LWIR SCIENCE-GRADE CAMERA

FLIR A655sc™

With its uncooled, high-resolution detector and cutting-edge functionality, the FLIR A655sc helps researchers and scientists accurately quantify thermal patterns, leakage, dissipation, and other heat related factors in equipment, products, and processes in real-time.

www.flir.com/science

SUPERIOR IMAGE QUALITY & SENSITIVITY

Record crisp thermal images, even at high speeds

- Produce clearly detailed 640 x 480 thermal images using the maintenance free vanadium oxide (VoX) microbolometer
- Detect temperature differences as small as 50 mK
- Record 14-bit, full-frame data at up to 50 Hz, or 200 Hz with windowing

EASY, FLEXIBLE DATA COLLECTION

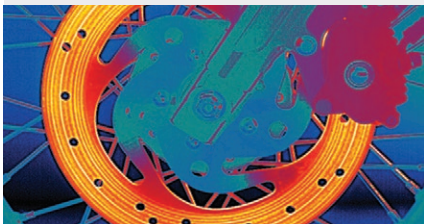
True plug and play connectivity simplifies data monitoring and sharing

- Fast image transfer over GigE Vision, using low-cost standard cables up to 100 meters
- Integrate with FLIR ResearchIR or third-party software seamlessly over Gigabit Ethernet connections
- Control the camera with GenICam protocol support

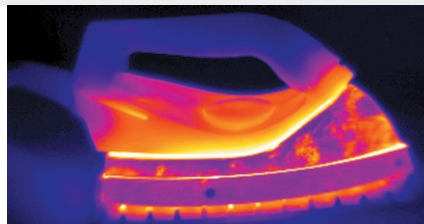
ADVANCED SOFTWARE COMPATIBILITY

Get more out of your data with advanced analysis tools

- Control and capture data directly into FLIR ResearchIR Max or MathWorks® MATLAB
- Stream data directly to a PC running software for live viewing, recording, analysis, and sharing.
- Integrate with your proprietary software through optional Software Developers Kit (SDK)



Motorcycle break testing.



Thermal quality control on domestic appliances.

IMAGING SPECIFICATIONS

System Overview FLIR A655sc

| | |
|----------------|--------------------------|
| Detector Type | Uncooled Microbolometer |
| Spectral Range | 7.5 – 14.0 μm |
| Resolution | 640 x 480 |
| Detector Pitch | 17 μm |
| NETD | <30 mK |

Imaging

| | |
|------------------------------------|---|
| Time Constant | <8 ms |
| Frame Rate (Full Window) | 50 Hz |
| Subwindow mode | User-Selected, 640 x 240 or 640 x 120 (Gigabit Ethernet Only) |
| Maximum Frame Rate (@ Min. Window) | 200 Hz (640 x 120) |
| Dynamic Range | 16-bit |
| Digital Data Streaming | Gigabit Ethernet (50/100/200 Hz) USB(25 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 | 6.5 mm (80°), 13.1 mm (45°), 24.6 mm (25°), 41.3 mm (15°), 88.9 mm (7°) |
| Focus | Automatic or Manual (Motorized) |
| Close-up / Microscopes | Close-up 25 μm , 50 μm , 100 μm |

Image Presentation

| | |
|--------------|----------------------------------|
| Digital Data | Via PC Using ResearchIR Software |
|--------------|----------------------------------|

General

| | |
|-----------------------------|--|
| Operating Temperature Range | -15°C to 50°C (572°F to 3,632°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 | 216 x 73 x 75 mm (8.5 x 2.9 x 3.0 in) |
| Mounting | ¼" -20 (on three sides), 2 x M4 (on three sides) |



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