

FLIR A38/A68

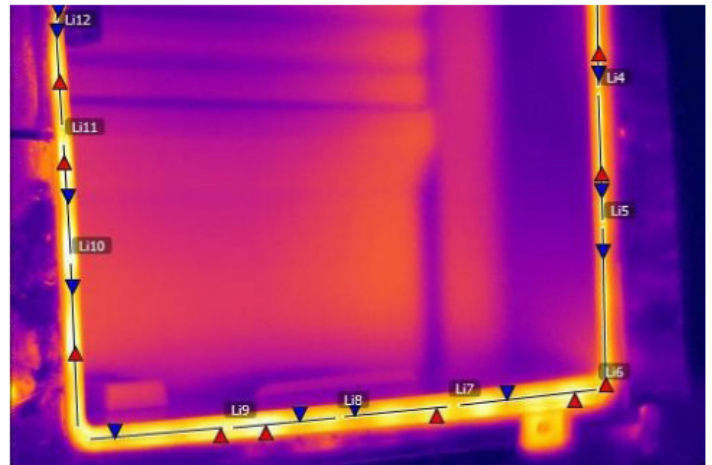
Thermal Cameras for
Machine Vision



FLIR A38/A68 thermal cameras are Teledyne FLIR's smallest uncooled long-wave infrared cameras for industrial automation and machine vision applications. Designed for use in process control and quality assurance, these thermal imaging temperature sensors provide visual temperature information to support key decision-making in applications where detecting small temperature variations is critical.

Standard vision camera protocols allow the cameras to integrate seamlessly into GenICam™ compliant software resulting in accelerated system development and solution deployment. The compact size and uncomplicated camera design deliver reliable and robust thermal imaging data. While straightforward connections with Power over Ethernet (PoE) and expanded operating temperature range make them ideal thermal cameras for easy installations in industrial environments.

www.flir.com/A38_A68



SIMPLIFIED SETUP FOR COMPLEX APPLICATIONS

Uncomplicated design results in reliable and robust thermal imaging data

- GigE Vision provides a simple image streaming interface
- GenICam compliance makes it easy to integrate camera into user-built software
- Compatible with 3rd party SDKs allows user to work in their preferred environment

EASY INTEGRATION INTO EXISTING SYSTEMS

Standard vision camera protocols accelerate development and solution deployment

- 60 Hz imaging frequency provides the high frame rates needed for numerous in-process applications
- 8- and 16-bit video streams meet the needs of most machine vision integrators
- Power over Ethernet (PoE) reduces cabling and installation complexity

SWaP-C OPTIMIZED

FLIR A38/A68 cameras are small, rugged, and affordable

- Compact 29 × 36 × 59 mm form factor allows the camera to fit into tight spaces and small enclosures
- Expanded operating temperature range ensures the cameras can function in a wider range of environments



SPECIFICATIONS

| Model | A38 (24° or 42° lens) | A68 (24° or 42° lens) | Environmental | | |
|----------------------------|---|---|----------------------------------|---|---|
| Infrared resolution | 320 × 240 pixels | 640 × 480 pixels | Operating temperature range | -35°C to 60°C (-31°F to 140°F) | -35°C to 60°C (-31°F to 140°F) |
| Thermal sensitivity (NETD) | <50 mK @ 25°C ambient | <50 mK @ 25°C ambient | Storage temperature range | -40°C to 80°C (-40°F to 176°F)* | -40°C to 80°C (-40°F to 176°F)* |
| Field of view (FOV) | 24° × 18.1° or 40.1° × 29° | 24.2° × 18.4° or 42.1° × 31.9° | Humidity (operating and storage) | Maximum 80% relative humidity, non-condensating | Maximum 80% relative humidity, non-condensating |
| Minimum focus distance | 0.4 m (1.3 ft) or 1.5 m (4.9 ft) | 2.0 m (6.6 ft) or 1.3 m (4.3 ft) | General | | |
| Focal length | 13 mm (0.51 in) or 8.1 mm (0.32 in) | 25 mm (0.98 in) or 14.2 mm (0.56 in) | Weight (without lens) | 67 g (2.4 oz) | 67 g (2.4 oz) |
| f-number | 1.0 or 1.1 | 1.2 or 1.24 | Size (without lens, L/W/H) | 59 × 29 × 36 mm (2.32 × 1.14 × 1.42 in) | 59 × 29 × 36 mm (2.32 × 1.14 × 1.42 in) |
| Image frequency | 60 Hz | 30 Hz | Tripod mounting | UNC ¼"-20 | UNC ¼"-20 |
| Focus | Fixed | Fixed | Color | Black | Black |
| Spectral range | 8–14 µm (LWIR) | 8–14 µm (LWIR) | | | |
| Detector pitch | 17 µm | 17 µm | | | |
| Ethernet | | | | | |
| Interface | Wired | Wired | | | |
| Connector type | RJ-45 | RJ-45 | | | |
| Ethernet, purpose | Control, image, and power | Control, image, and power | | | |
| Ethernet, type | Gigabit Ethernet | Gigabit Ethernet | | | |
| Ethernet, communication | GigE Vision / GenICam | GigE Vision / GenICam | | | |
| Ethernet, power | Power over Ethernet (PoE) | Power over Ethernet (PoE) | | | |
| Ethernet, standard | IEEE 802.3 | IEEE 802.3 | | | |
| Ethernet, protocols | GigE Vision | GigE Vision | | | |
| Pixel format | Mono8 or 16-bit/pixel | Mono8 or 16-bit/pixel | | | |
| Power | | | | | |
| Power consumption, typical | 12 V: 2.8 W 24 V: 2.8 W PoE (48 V): 3.5 W | 12 V: 2.8 W 24 V: 2.8 W PoE (48 V): 3.5 W | | | |
| Power consumption, maximum | 12 V: 4.4 W 24 V: 4.4 W PoE (48 V): 4.8 W | 12 V: 4.4 W 24 V: 4.4 W PoE (48 V): 4.8 W | | | |

*To avoid possible damage during storage, ensure that the sensor is not exposed to air. Use a lens cap or lens to cover the sensor.

Specifications are subject to change without notice.
For the most up-to-date specs, go to www.teledyneflir.com

For more information contact: Sales@TeledyneFLIR.com
or to find your local support number, visit: flir.com/contactsupport

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