

FLIR Exx-Series™

Advanced Thermal Imaging Cameras for Electrical and Mechanical Applications



reddot award 2017
best of the best

FLIR E75, E85, and E95 cameras offer the superior resolution and range performance needed to quickly identify hot spots and discover potential points of failure in electrical distribution and mechanical systems. With up to 161,472 pixel resolution and a larger, more vibrant LCD screen than any other pistol-grip thermal camera, the Exx-Series makes it easier than ever to diagnose problems – even at a distance. Avoid costly shutdowns and lost production time through regular predictive maintenance routines with these rugged, intuitive cameras.

Improve Plant Reliability

Equipment failures are costly and can impact on-time delivery, so it's important to have the right tools to find potential problems before they happen.

- High-resolution infrared detectors, up to 464 x 348, for crisp, detailed images
- Wide temperature ranges: -40°C to 120°C, 0°C to 650°C, 300°C up to 1500°C (E95)
- Superior spot-size performance for accurate temperature measurements on smaller, more distant targets
- Laser-assisted autofocus for precise identification of hot spots, even in cluttered scenes

Increase Plant Safety

The Exx-Series improves plant safety by helping you diagnose and report electrical problems before they result in fire or damage.

- Detect temperature differences down to 30 mK for immediate identification of failing components
- Interchangeable lenses, from wide angle to telephoto, offer complete coverage of near and far targets
- Lenses auto-calibrate with camera for the most precise temperature readings
- MSX® image enhancement adds the depth and detail to image

Designed to Make Your Work Easier

FLIR designed the E75, E85, and E95 to make your work faster, safer, and more efficient.

- Rapid-response touch screen with intuitive new user interface
- Convenient menu buttons allow for one-handed operation
- New folder and naming structure that makes finding images easier
- Connect over Wi-Fi to mobile devices or via METERLiNK® to FLIR clamps and multimeters

Key Features:

- 320 x 240 – 464 x 348 true native resolution
- Laser-assisted autofocus
- Wide temperature ranges, up to 1500°C
- Vibrant, 4" optically-bonded PCAP touchscreen with 160° viewing angle
- Wi-Fi, METERLiNK® connectivity
- Streamlined reporting features
- FLIR's industry-leading 2-5-10 warranty



Find problems quickly and eliminate costly plant shutdowns



Streamlined data collection and sharing speeds analysis and repairs



One-handed operation with convenient buttons helps maintain workplace safety

Specifications

| Features By Camera | E75 | E85 | E95 |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| IR Resolution | 320 x 240 | 384 x 288 | 464 x 348 |
| Object Temperature Range | -20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) Optional 300°C to 1000°C (572°F to 1830°F) | -20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) 300°C to 1200°C (572°F to 2192°F) | -20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) 300°C to 1500°C (572°F to 2732°F) |
| Time-lapse (Infrared) | No | No | 10 sec to 24 hours |
| Measurement Features by Camera | | | |
| Area Measurement Information | No | Yes | Yes |
| Spotmeter | 1 in live mode | 3 in live mode | 3 in live mode |
| Area | No | 3 in live mode | 3 in live mode |
| Common Features | | Exx-Series | |
| Detector Type and Pitch | Uncooled microbolometer, 17 µm | | |
| Thermal Sensitivity/NETD | < 0.03°C @ 30°C (86°F) | | |
| Spectral Range | 7.5 - 14.0 µm | | |
| Image Frequency | 30 Hz | | |
| Field of View (FOV) | 24° x 18° (17 mm lens), 42° x 32° (10 mm lens), 14° x 10° (29 mm lens) | | |
| F-Number | f/1.3, f/1.1 | | |
| Lens Identification | Automatic | | |
| Focus | Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual | | |
| Digital Zoom | 1-4x continuous | | |
| Image Presentation and Modes | | | |
| Display | 4", 640 x 480 optically-bonded PCAP touchscreen, with 400 cd/m ² surface brightness | | |
| Digital Camera | 5 MP, 53° x 41° FOV | | |
| Color Palettes | Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC | | |
| Image Modes | Infrared, visual, MSX®, Picture-in-Picture | | |
| Picture-in-Picture | Resizable and movable | | |
| MSX® | Embosses visual details on full resolution thermal image | | |
| UltraMax™ | Super-resolution process quadruples pixel count, activated in FLIR Tools+ | | |
| Measurement and Analysis | | | |
| Accuracy | ±2°C (±3.6°F) or ±2% of reading for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F) | | |
| Alarms | Moisture alarm, insulation alarm, measurement alarms | | |
| Color Alarm (Isotherm) | Above/below/interval/condensation/insulation | | |
| Laser Distance Measurement | Yes, on-screen | | |
| Measurement Presets | No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2 | | |
| Compass, GPS | Yes; automatic GPS image tagging | | |
| METERLiNK® | Yes; several readings | | |
| Image Storage | | | |
| Storage Media | Removable SD card (8 GB) | | |
| Image File Format | Standard radiometric JPEG, measurement data included | | |
| Video Recording and Streaming | | | |
| Radiometric IR Video Recording | Real-time radiometric recording (.csq) | | |
| Non-Radiometric IR or Visual Video | H.264 to memory card | | |
| Radiometric IR Video Streaming | Yes, over UVC or Wi-Fi | | |
| Non-Radiometric IR Video Streaming | H.264 or MPEG-4 over Wi-Fi MJPEG over UVC or Wi-Fi | | |
| Communication Interfaces | USB 2.0, Bluetooth, Wi-Fi | | |
| Video Out | DisplayPort over USB Type-C | | |
| Additional Data | | | |
| Battery Type | Li-ion battery, charged in camera or on separate charger | | |
| Battery Operating Time | Approx. 2.5 hours at 25°C (77°F) ambient temperature and typical use | | |
| 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) | | |
| Shock/Vibration/Encapsulation; Safety | 25 g / IEC 60068-2-27, 2 g / IEC 60068-2-6, IP 54 / IEC 60529; EN/UL/CSA/PSE 60950-1 | | |
| Weight/Dimensions w/o Lens | 1 kg (2.2 lbs), 27.8 x 11.6 x 11.3 cm (11.0 x 4.6 x 4.4 in) | | |
| Box Contents | | | |
| Packaging | Infrared camera with lens, battery (2 ea), battery charger with power supply, front lens and light protection, straps (hand and wrist), lanyards, lens caps (front and rear), lens cleaning cloth, 15 W3 A power supply, printed documentation, 8 GB SD card, Torx screwdriver, cables (USB 2.0 A to USB Type-C, USB Type-C to HDMI, USB Type-C to USB Type-C) | | |

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For the most up-to-date specs, go to www.support.flir.com