# **\$FLIR**

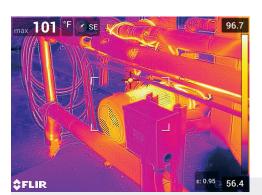


#### **ELECTRICAL/MECHANICAL APPLICATIONS**

# FLIR EXX-SERIES™

The FLIR E75, E85, E95, and the entry-level E53 Advanced Thermal Imaging 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 pixels resolution and a more vibrant LCD screen than any other pistol-grip 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.

www.flir.com/Exx-Series



# Improve Plant Reliability

Equipment failures are costly and can impact on-time delivery, so it's important to find hidden problems early

- High-resolution infrared detectors, up to 464 x 348, for crisp, detailed images
- Wide temperature ranges with optional calibrations up to 1500°C (2732°F)
- 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 cameras will help you diagnose and report electrical and mechanical failures before they lead to fires or explosions

- Detect temperature differences as small as <0.04°C (24° lens) for immediate identification of failing components
- Interchangeable lenses\* 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



# Make Your Work Easier

FLIR designed all four Exx-Series cameras with features that streamline your workday

- Rapid-response touchscreen 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

\*E75, E85, E95 models

# SPECIFICATIONS

Features By Camera	E53	E75	E85	E95	
IR Resolution	240 × 180 (43,200 pixels)	320 × 240 (76,800 pixels)	384 × 288 (110,592 pixels)	464 × 348 (161,472 pixels)	
UltraMax®	_	307,200 pixels	442,368 pixels	645,888 pixels	
Object Temperature Range	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F)	-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)	
Focus	Manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	
Field of View (FOV)	24° × 18°	42° × 32° (10 mm lens), 24° × 18° (18 mm lens), 14° × 10° (29 mm lens)	42° × 32° (10 mm lens), 24° × 18° (18 mm lens), 14° × 10° (29 mm lens)	42° × 32° (10 mm lens), 24° × 18° (18 mm lens), 14° × 10° (29 mm lens)	
Time-lapse (Infrared)	_	_	_	10 sec to 24 hours	
Laser Area Measurement	_	_	Yes	Yes	
Laser Distance Measurement	_	Yes, on-screen	Yes, on-screen	Yes, on-screen	
Measurement Presets	No measurement, center spot, hot spot, cold spot, 3 spots, hot spot-spot <sup>†</sup>	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	
Spotmeter	3 in live mode	3 in live mode	3 in live mode	3 in live mode	
Area	1 in live mode	1 in live mode	3 in live mode	3 in live mode	
Picture-in-Picture	Centered infrared area on the visual image	Resizable and movable	Resizable and movable	Resizable and movable	

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Detector Type and Pitch Uncooled microbolometer, 17 µm Thermal Sensitivity/NETD <0.04°C @ 30°C (86°F), 24° lens

Spectral Range 7.5 - 14.0 µm Image Frequency 30 Hz F-Number f/1.3Lens Identification Automatic Digital Zoom 1-4x continuous

### Image Presentation and Modes

Display 4", 640 × 480 pixel touch screen LCD with auto-rotation

Digital Camera 5 MP, 53° × 41° FOV

Color Palettes Iron, Grav. Rainbow, Arctic, Lava, Rainbow HC Image Modes Infrared, visual, MSX®, Picture-in-Picture

MSX® Embosses visual details on full resolution thermal image

# 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, insulation, and measurement Color Alarm (Isotherm) Above/below/interval/condensation/insulation

Compass, GPS Yes; automatic GPS image tagging

METERLINK® Yes; several readings Laser Pointer Yes; dedicated button

†Hot spot to center spot Delta measurement

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

# Image Storage

Storage Media Removable SD card (8 GB)

Image File Format

#### Video Recording and Streaming

Radiometric IR Video Real-time radiometric recording (.csq)

Recording

Non-Radiometric IR or Visual

Video

Radiometric IR Video Streaming

Non-Radiometric IR Video

Streaming

Communication Interfaces

Video Out

Additional Data

Battery Type

**Battery Operating Time** 

Operating Temperature Range

Storage Temperature Range Shock/Vibration/

Encapsulation; Safety

Weight/Dimension **Box Contents** 

Standard JPEG with measurement data included

H.264 to memory card

Yes, over UVC or Wi-Fi

H.264 or MPEG-4 over Wi-Fi; MJPEG over UVC or Wi-Fi

USB 2.0, Bluetooth, Wi-Fi, DisplayPort

DisplayPort over USB Type-C

Li-ion battery, charged in camera or on separate charger

Approx. 2.5 hours at 25°C (77°F) ambient temperature and typical use

-15°C to 50°C (5°F to 122°F) -40°C to 70°C (-40°F to 158°F)

25 g / IEC 60068-2-27, 2 g / IEC 60068-2-6, IP 54 / IEC 60529; EN/UL/CSA/PSE 60950-1

1 kg (2.2 lbs),  $27.8 \times 11.6 \times 11.3$  cm ( $11.0 \times 4.6 \times 4.4$  in)

Infrared camera with lens, battery (2 ea), battery charger, front protection, straps (hand, wrist), hard transport case, lanyards, lens caps, lens cleaning cloth, power supplies, 8 GB SD card, Torx wrench, cables (USB 2.0 A to USB Type-C, USB Type-C to USB Type-C, USB Type-C to HDMI)

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