



# FLIR E50

For electrical/industrial applications

## E-Series InfraRed Camera (240 x 180 IR Resolution) With on board Visual Camera, Picture-in-Picture, Thermal Fusion and Bright LED Light

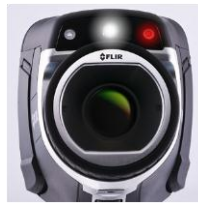
- 0.05°C @ 25°C Thermal Sensitivity
- Bright LED Light
- Text Annotation
- Picture-in-Picture (Scalable)
- Thermal Fusion
- 3.5" Touch-Screen LCD Display
- 4X Continuous Zoom
- Area Min/Max with Auto Hot/Cold Spot Marker
- Delta T - Differential Temperature



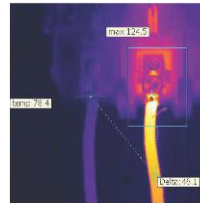
Thermal Fusion



Built-in Laser Pointer



Built-in Illuminator Light



Differential Temperature



### FLIR E50 Features

- **High Resolution IR Images** - 43,200 pixels (240 x 180) Infrared resolution
- **Visible Light Digital Camera** - 3MP resolution with flash provides sharp images regardless of lighting conditions
- **Thermal Fusion** - Blending of thermal and digital images in real-time
- **Scalable Picture in Picture (PIP)** - Displays thermal image superimposed over a digital image and is scalable to resize the thermal image
- **Bright LED Light** - Allows the visual camera and fusion to be used in poorly lit environments
- **Wide Temperature Range** - From -20° to +650°C targeting electrical and industrial applications
- **± 2% Accuracy** - reliable temperature measurement
- **Thumbnail Image Gallery** - Allows quick search of stored images
- **Li-Ion Rechargeable Battery** - lasts >5hrs continuous use; replaceable
- **Copy to USB** - Easy upload of images from camera to USB memory stick
- **Laser LocatIR™ Pointer** - Pinpoints a reference spot with a laser
- **Laser Marker** - Marks the point on the IR displayed image as to where the Laser pointer is targeting
- **IR Window Correction** - Software settings allow you to account for transmission loss through IR windows
- **Area (Min/Max) Mode** - Shows the Minimum or the Maximum Temperature reading within the selected area
- **Auto Hot/Cold Spot Marker** - Marks the area that automatically finds the hottest or coldest spot within the box
- **Text Annotation** - on images & can be integrated onto report
- **Includes** - Hard transport case, Infrared camera with lens, Battery, Calibration certificate, Camera lens cap, FLIR Tools software CD-ROM Handstrap, Memory card, Power supply, incl. multi-plugs Printed Getting Started Guide Printed Important Information Guide, USB cable, User documentation CD-ROM, Video cable, Warranty extension card or Registration card

### Applications



Electrical: Hot Fuses

Motor: Internal Winding Problem

Motor: Bearing Problem



Warranty extended to 2 years when the camera is registered

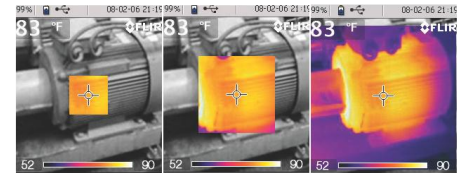
# FLIR E50 Specifications

| Imaging and optical data                                       |   |
|--|---|
| Field of view (FOV)/Minimum focus distance                     | 25° x 19° / 0.4m (1.31ft.)  |
| Spatial resolution (IFOV)                                      | 1.82 mrad   |
| Thermal sensitivity/NETD                                       | <0.05°C @ +30°C (+86°F) / 50mK  |
| Image frequency  | 60Hz  |
| Focus  | Manual  |
| Zoom   | 1-4x continuous, digital zoom, including panning  |
| Focal Plane Array (FPA)/Spectral range                         | Uncooled microbolometer / 7.5-13µm  |
| IR resolution  | 240 x 180 pixels  |
| Image presentation   |   |
| Display  | Touchscreen, 3.5in. LCD, 320 x 240 pixels   |
| Image modes  | IR image, visual image, thermal fusion, picture in picture, thumbnail gallery                       |
| Thermal fusion   | IR image shown above, below or within temp interval on visual image                                 |
| Picture in Picture   | Scalable IR area on visual image  |
| Measurement  |   |
| Object temperature range                                       | -20°C to +120°C (-4°F to +248°F)<br>0°C to +650°C (+32°F to +1202°F)                                |
| Accuracy   | ±2°C (±3.6°F) or ±2% of reading   |
| Measurement analysis   |   |
| Spotmeter  | 3   |
| Area   | 3 boxes with max./min./average  |
| Automatic hot/cold detection                                   | Auto hot or cold spotmeter markers within area  |
| Isotherm   | Detect high/low temperature/interval  |
| Difference temperature   | Delta temperature between measurement functions or reference temperature                            |
| Emissivity correction  | Variable from 0.01 to 1.0 or selected from materials list   |
| External optics/windows correction                             | Automatic, based on inputs of optics/window transmission and temperature                            |
| Measurement corrections  | Reflected temperature, optic transmission and atmospheric transmission                              |
| Set-up   |   |
| Color palettes   | Arctic, Gray, Iron, Lava, Rainbow and Rainbow HC  |
| Set-up commands  | Local adaptation of units, language, date and time formats  |
| Languages  | 21  |
| Storage of images  |   |
| Image storage  | Standard JPEG, including measurement data, on memory card Image storage mode                        |
| IR/visual images; simultaneous storage of IR and visual images |   |
| Built-in digital camera  | 3.1Mpixel (2048 x 1536 pixels), and one LED light   |
| Built-in digital lens data                                     | FOV 53° x 41°   |
| Data communication interfaces                                  |   |
| Interfaces   | USB-mini, USB-A, composite video  |
| USB  | • USB-A: Connect external USB device<br>• USB Mini-B: Data transfer to and from PC/streaming MPEG-4 |
| Video out  | Composite   |
| Power system   |   |
| Battery  | Lithion, 4 hours operating time   |
| Charging system  | In camera (AC adapter or 12V from a vehicle) or 2-bay charger                                       |
| Power management   | Automatic shutdown and sleep mode (user selectable)   |
| Environmental data   |   |
| 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)  |
| Humidity (operating and storage)                               | IEC 60068-2-30/24h 95% relative humidity +25°C to +40°C (+77°F to +104°F) / 2 cycles                |
| Encapsulation  | IP54 (IEC 60529)  |
| Bump   | 25g (IEC 60068-2-29)  |
| Vibration  | 2g (IEC 60068-2-6)  |
| Physical data  |   |
| Camera weight, incl. battery                                   | 0.825kg (1.82lb.)   |
| Camera size (L x W x H)  | 246 x 97 x 184mm (9.7 x 3.8 x 7.2in.)   |
| Tripod mounting  | UNC 1/4"-20 (adapter needed)  |
| Optional lens  |   |
|  | • IR lens f=30mm, 15° incl. case, IR lens f=10mm, 45° incl. case                                    |



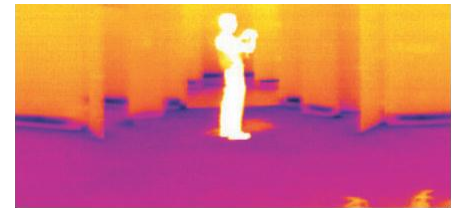
## Bright LED Light

Exclusive, built-in illuminator lamp sheds light on poorly lit sites. Low light areas like electrical cabinets, storage facilities, or night-time spots will create dark visual images that can hamper your ability to illustrate problems effectively. FLIR cameras ensure quality visual images regardless of job site lighting levels.



## Scalable Picture-in-Picture

Allows for easier identification and interpretation of infrared images. This advanced technology enhances the value of an infrared image by allowing you to overlay it directly over the corresponding visible image. This functionality combines the benefits of both the infrared image and visual picture at the push of a button. The scalability feature permits you to resize the thermal image as needed on a large 3.5" color display.



## Optional Software Packages

**FLIR Reporter Professional** is a powerful software for creating compelling and professional, fully customized, easy-to-interpret reports in a standard MS Word Document. You can create a report by simply Dragging and Dropping your images on a desktop icon or using the Wizards to guide you step-by-step through the process. The saved document is a 'live' report with full access to the analysis tools and temperature measurement data. The reports can be multi-page and include all of your IR inspection data - infrared and visual images, temperature measurements, voice comments and text notes.

**Softwares for Research & Development** Infrared cameras are successfully used in R&D applications to speed up and verify the design process, as well as enabling fast, non-invasive and precise detection of deficiencies. With **FLIR QuickPlot/ FLIR ResearchIR**, the benefits and use of an infrared camera can be further extended and allow more in depth analyses to be made.

**Panorama Function** allows you to conveniently piece together normal sized images to create one large image for a wide angle view of the area being measured by using **FLIR BuildIR** or **Reporter** Software package.

**LE Laboratory Equipment Sdn Bhd**  
509, Block A, Mentari Business Park,  
Jalan PJS 8/5, Bandar Sunway,  
P. O. Box 3172,  
47509, Subang Jaya, Selangor Darul Ehsan  
Malaysia  
Tel: 603-5621 1036      Fax: 603-5621 1037  
Email: sales@le.com.my  
Web: www.le.com.my

