E-Series InfraRed Camera (240 x180 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
- Annotate Images with Voice
- 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

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
- Voice Comment Recording and Text - on images & can be integrated onto report
- Wireless Communication - Bluetooth® transmitter with METERLiNK™

Applications

- Electrical: Hot Fuses
- Motor: Internal Winding Problem
- Motor: Bearing Problem
### FLIR E50 Specifications

#### Imaging and optical data

- **Field of View (FOV) / Minimum Focus Distance:** 25° × 19° / 0.4 m (1.31 ft.)
- **Spatial Resolution (FOV):** 1.82 mm
- **Thermal Sensitivity / NETD:** < 0.05°C @ +30°C (+86°F) / 50 mK
- **Image Frequency:** 60 Hz
- **Focus:** Manual
- **Zoom:** 1×-4× continuous, digital zoom, including panning
- **Focal Plane Array (FPA) / Spectral range:** Uncooled microbolometer 7.5–13 µm
- **IR Resolution:** 240 × 180 pixels

#### Image presentation

- **Display:** Touchscreen, 3.5 in. LCD, 320 × 240 pixels
- **Image modes:** IR image, visible image, thermal fusion, picture in picture, thumbnail gallery
- **Thermal fusion:** IR images shown above, below, or within temperature interval on visual image
- **Picture in Picture:** Scalable IR area on visual image

#### Measurement

- **Objective temperature range:** –20°C to +120°C (–4°F to +248°F)
- **Accuracy:** ±2°C (±3.6°F) or ±2% of reading
- **0°C to +650°C (+32°F to +1202°F)
- **Focus:** Manual
- **Image frequency:** 60 Hz
- **Thermal sensitivity / NETD:** < 0.05°C @ +30°C (+86°F) / 50 mK
- **Spatial resolution (IFOV):** 1.82 mrad
- **Object temperature range:** –20°C to +120°C (–4°F to +248°F)
- **Measurement analysis:** Automatic, based on outputs of optics, window transmission and temperature
- **Measurement corrections:** Reflected temperature, optics 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:** Standard JPEG, including measurement data, on memory card
- **Image storage:** IR/visual images, simultaneous storage of IR and visual images
- **Built-in digital camera:** 3.1 Mpixel (2048 × 1536 pixels), and one LED light
- **Built-in digital camera:** FOV 53° × 41°

#### Data communication interfaces

- **Interfaces:** USB-mini, USB-A, Bluetooth, WV-FL, composite video
- **USB:** Device, Connect to external USB device
- **Bluetooth:** Communication with cell phone, PC, headset and external sensors
- **Video out:** Composite

#### Power supply

- **Battery:** Lithium, 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:** –10°C to +50°C (+14°F to +122°F)
  - **Storage temperature range:** –40°C to +70°C (+4°F to +158°F)
  - **Humidity (operating and storage):** 30% to 90% relative humidity / 25°C to +40°C (77°F to 104°F) / 2 cycles
  - **Encapsulation:** IP54 (IEC 60529)
  - **Rack IEC:** 110201 E50 datasheet_au
  - **Bump:** 25g (IEC 60607-2-29)
  - **Vibration:** 2g (IEC 60607-2-34)

#### Physical data

- **Camera weight, incl. battery:** 0.325 kg (11.2 lb.)
- **Camera size (L × W × H):** 246 × 97 × 184 mm (9.7 × 3.8 × 7.2 in.)
- **Tripod mounting:** UNC-20 adapter needed

#### Optional items and connecting media:

- **IR lens f = 30 mm, 15° incl. case**
- **IR lens f = 10 mm, 45° incl. case**

Optional Software Packages

FLIR Reporter Professional is a powerful software for creating compelling and professional, fully customized, easy-to-interpreter 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.

Software 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 and/or 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.

METER LiNK frees the Thermographer from the manual process of collecting field data

Collecting current measurements and associating them with the right component identified on an infrared image, can be a complicated and cumbersome process

Manual data collection results in unnecessary complexity and risk. METER LiNK eliminates this problem by allowing the thermographer to quickly take a current reading on an electrical target and associate those readings with the corresponding targets stored in an infrared image.

Infrared cameras quickly locate problems with electrical equipment

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