



Fluke Ti55FT and Ti50FT FlexCam® Thermal Imagers

Technical Data

The experts' choice for problem solving and preventive/predictive maintenance



Features

| | Ti55FT | Ti50FT |
|--|---|--|
| High resolution, low noise VOx detector for high quality images | 320 x 240 | |
| Temperature range to cover broad industrial applications | -20 °C to +600 °C (-4 °F to 1112 °F) | -20 °C to +350 °C (-4 °F to 662 °F) |
| High thermal sensitivity for viewing even the smallest temperature differences | ≤0.05 °C at 30 °C (50 mK) | ≤0.07 °C at 30 °C (70 mK) |
| 180 ° articulating flexible lens to view images in every situation | • | • |
| Choice of 3 interchangeable lenses to cover every application* | • | • |
| Large 5 inch high contrast color LCD for a clear picture independent of lighting conditions | • | • |
| Fully radiometric for detailed temperature analysis and tracking | • | • |
| SmartFocus for best image quality and accurate temperature measurements | • | • |
| Windows CE based menu structure for ease of use | • | • |
| Personalized instrument set-up for multiple person use | • | • |
| CompactFlash memory cards to store over 1000 IR images plus fully radiometric temperature data | • | • |
| SmartView® reporting and analysis software included | • | • |
| AutoCapture for making intermittent problems visible | • | • |
| On-board analysis functions | • | • |
| User defined text annotations for simplified reporting | • | • |
| Built-in visible (visual) light camera | • | • |
| IR-Fusion blending thermal and visible light images | • | • |
| IR/Visible Alarm function | • | • |
| Laser pointer for easy targeting | • | • |
| Flash and torch light for high quality images in dark environments | • | • |

The Fluke Ti55FT and Ti50FT models feature everything needed for virtually any thermography task.

Fluke FlexCam Thermal Imagers come standard with the patent-pending Fluke IR-Fusion® Technology fusing visual (visible light) images with infrared images. SmartView® IR analysis and reporting software is included with each purchase along with free software upgrades for the life of your product.

These models feature 320 x 240 detectors and temperature sensitivity (NETD) down to 0.05 °C (50 mK) in the higher end model.

Choose Fluke FlexCam Thermal Imagers when you need industry leading thermal sensitivity for high resolution, ultra high-quality images.

Typical applications:

- **Troubleshooting**—Pinpointing the location of specific problems in equipment and systems.
- **Preventive/predictive maintenance**—Identify electrical and mechanical problems before they cause failure.
- **Industrial maintenance**—Check whether repairs have been performed correctly.
- **Process monitoring**—Real-time observation to ensure efficient and safe operations.
- **Quality control**—Examine prototypes and refine thermal management designs.
- **Research and development**—Quantify heat patterns to improve product designs.
- **Electronic design**—Circuit board analysis.

*10 mm and 54 mm lenses are optional and are only available at time of initial order.

Detailed specifications

| | Fluke Ti55FT | Fluke Ti50FT |
|---|---|--|
| Imaging performance | | |
| Field of view (FOV)* | 23° horizontal x 17° vertical | |
| Spatial resolution (IFOV)* | 1.30 mrad | |
| Min focus distance* | 0.15 m (5.9 in) | |
| Thermal sensitivity (NETD) | ≤ 0.05 °C at 30 °C (50 mK) | ≤ 0.07 °C at 30 °C (70 mK) |
| Detector data acquisition/image frequency | 60 Hz/60 Hz | |
| Focus | SmartFocus; one finger continuous focus (manual) | |
| IR digital zoom | 2x, 4x, 8x | 2x |
| Detector type | 320 x 240 Focal Plane Array, Vanadium Oxide (VOx) Uncooled Microbolometer | |
| Spectral band | 8 μm to 14 μm | |
| Digital image enhancement | Automatic full time enhanced | |
| On camera operating modes | Full thermal, full visual light or merged thermal-visual images. Picture-in-Picture | |
| Visible light camera | 1280 x 1024 pixels, full color | |
| Visible light digital zoom | 2x, 4x | 2x |
| Temperature measurement | | |
| Calibrated temperature range | -20 °C to 600 °C (-4 °F to 1112 °F) in three ranges Range one = -20 °C to 100 °C (-4 °F to 212 °F) Range two = -20 °C to 350 °C (32 °F to 662 °F) Range three = 250 °C to 600 °C (482 °F to 1112 °F) | -20 °C to 350 °C (-4 °F to 662 °F) in two ranges Range one = -20 °C to 100 °C (-4 °F to 212 °F) Range two = -20 °C to 350 °C (32 °F to 662 °F) |
| Accuracy | ± 2 °C or 2 % (whichever is greater) | |
| Measurement modes | Centerpoint, center box (area min/max, average), moveable spots/boxes, user defined field/text annotations, automatic hot and cold point detection, visible color alarm above and below | Centerpoint, center box (area min/max, average) |
| Emissivity correction | 0.1 to 1.0 (0.01 increments) | |
| Image presentation | | |
| Digital display | 13 cm (5 in) diagonal large high-resolution digital display | |
| LCD backlight | Sunlight readable color LCD | |
| Video output | RS170 EIA/NTSC or CCIR/PAL composite video | |
| Palettes | Grayscale, grayscale inverted, blue red, high contrast, hot metal, ironbow, amber, amber inverted | |
| Optical lenses | | |
| 54 mm telephoto lens | High precision Germanium lens Field of view (FOV): 9° horizontal x 6° vertical | |
| | Spatial resolution (IFOV): 0.47 mrad | |
| | Min focus distance: 0.6 m (1.97 ft) | |
| 10.5 mm wide angle lens | High precision Germanium lens Field of view (FOV): 42° horizontal x 32° vertical | |
| | Spatial resolution (IFOV): 2.45 mrad | |
| | Min focus distance: 0.3 m (0.98 ft) | |

*Standard 20 mm Germanium lens

General specifications

| | Fluke Ti55FT | Fluke Ti50FT |
|--|---|--------------|
| Image and data storage | | |
| Storage medium | Compact flash card stores over 1000 IR images (1 GB card standard) | |
| File formats supported | 14 bit measurement data included. Exportable Images: bmp, gif, jpg, png, tiff; Data formats: comma separated (csv), tab separated (txt). | |
| Interface and software | | |
| Interface | Compact flash card reader included | |
| Software | SmartView; Full analysis and reporting software included | |
| Laser | | |
| Classification | Class II | |
| Laser targeting | Laser dot visible on screen when blending thermal and visible image | |
| Controls and adjustments | | |
| Set-up controls | Date/time, temperature units C/F, language, scale, LCD intensity (high/normal/low) | |
| Image controls | Level, span, auto adjust (continuous/manual) | |
| On-screen indicators | Battery status, target emissivity, background temperature and realtime clock | |
| Power | | |
| Battery type | Li-Ion smart battery, rechargeable, field-replaceable (two included) | |
| Battery operating time | Two hours continuous operation (per battery) | |
| Battery charging | Two bay intelligent charger powered via ac outlet | |
| Continuous ac operation | AC adapter 110/220 V ac, 50/60 Hz | — |
| Power saving | Automatic shutdown and sleep modes (user specified) | |
| Environmental and mechanical design | | |
| Operating temperature | -10 °C to +50 °C (14 °F to 122 °F) | |
| Storage temperature | -40 °C to +70 °C (-40 °F to 158 °F) | |
| Relative humidity | Operating and storage 10 % to 95 %, non-condensing | |
| Water and dust resistant | IP54 | |
| Weight (including batteries) | 1.95 kg (4.3 lb) | |
| Camera size (H x W x D) | 162 mm x 262 mm x 101 mm (6.5 in x 10.5 in x 4.0 in) | |
| Other | | |
| Warranty | Two-years | |

Ordering information

FLK-Ti50FT-20 IR FlexCam Thermal Imager with IR-Fusion
FLK-Ti55FT-20 IR FlexCam Thermal Imager with IR-Fusion

Included with product

Heavy duty carrying case, 2 rechargeable battery packs, battery charger, ac adapter (with Ti55FT only), video cable, 512 MB compact flash card, compact flash card reader and USB cable, PCMCIA compact flash card reader, neck strap, printed getting started guide, SmartView reporting and analysis, software on CD, complete user manual on CD



Fluke. *Not just infrared.
Infrared you can use.™*

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