



# Ti50 and Ti55 IR FlexCam® Thermal Imagers

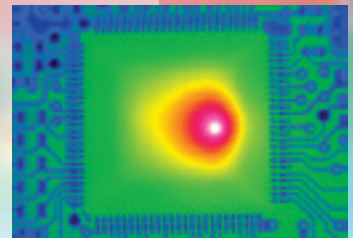
**The professional's choice when demanding the highest sensitivity**

Choose the Fluke Ti5x models when you need the best images. They feature 320 x 240 detectors with industry leading thermal sensitivity ( $\leq 0.07\text{ }^{\circ}\text{C NETD}$ ) for high resolution, ultra high-quality images. In addition, with a 60 Hz detector acquisition rate temperatures are displayed live on the large 5-inch color display.

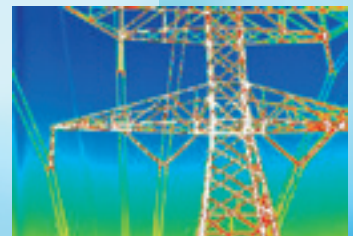


## Features

|  | Ti55FT                              | Ti55 | Ti50FT                           | Ti50 |
|--|-------------------------------------|------|----------------------------------|------|
| High resolution, low noise VOx detector for high quality images                                | 320 x 240                           |      |                                  |      |
| Temperature range to cover broad industrial applications                                       | -20 to +600 °C (-4 °F to 1112 °F)   |      | -20 to +350 °C (-4 °F to 662 °F) |      |
| High thermal sensitivity for viewing even the smallest temperature differences                 | $\leq 0.07\text{ }^{\circ}\text{C}$ |      |                                  |      |
| 180° articulating flexible lens to view images in every situation                              | ●                                   | ●    | ●                                | ●    |
| Choice of 3 interchangeable lenses to cover every application                                  | ●                                   | ●    | ●                                | ●    |
| Large 5" 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 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 light (digital) camera  | ●                                   | ●    | ●                                |      |
| IR-Fusion blending thermal and visible light images to easily pinpoint suspect components      | ●                                   | ●    | ●                                |      |
| IR/Visible Alarm function  | ●                                   | ●    |                                  |      |
| Laser pointer for easy targeting   | ●                                   | ●    | ●                                |      |
| Flash and torch light for high quality images in dark environments                             | ●                                   | ●    | ●                                |      |



Printed circuit board



Power/utilities



Electrical system

## Typical applications

- Predictive maintenance – Identify electrical and mechanical problems before they cause failure
- Power/utilities – Real-time analysis of substations, transmission lines and equipment
- Process monitoring – Real-time observation to ensure efficient and safe operation
- Research and development – Quantify heat patterns to improve product designs
- Electronic design – Close up circuit board analysis

# Specifications

|  | Fluke Ti55  | Fluke Ti50 |
|--|---|------------|
| <b>Imaging performance</b>   | <b>Thermal</b>  |            |
|  | Field of view (FOV)* 23° horizontal x 17° vertical  |            |
|  | Spatial resolution (IFOV)* 1.30 mrad  |            |
|  | Min focus distance* 0.15 m  |            |
|  | Thermal sensitivity (NETD) ≤0.07 °C at 30 °C  |            |
|  | Detector data acquisition / Image frequency 60 Hz/30 Hz   |            |
|  | Focus SmartFocus; one finger continuous focus   |            |
|  | IR digital zoom 2x, 4x, 8x 2x   |            |
|  | Detector type 320 x 240 Focal Plane Array, Vanadium Oxide (VOx) Uncooled Microbolometer with 25 micron pitch  |            |
|  | Spectral band 8 μm to 14 μm   |            |
|  | Digital image enhancement Automatic full-time enhanced  |            |
|  | <b>Visual (IR-Fusion models only)</b>   |            |
|  | 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, 8x 2x   |   |            |
| <b>Temperature measurement</b>   | Calibrated temperature range  |            |
|  | -20 °C to 600 °C (-4 °F to 1112 °F) in 3 ranges -20 °C to 350 °C (-4 °F to 662 °F) in 2 ranges                |            |
|  | Range 1 = -20 °C to 100 °C (-4 °F to 212 °F) Range 1 = -20 °C to 100 °C (-4 °F to 212 °F)                     |            |
|  | Range 2 = -20 °C to 350 °C (32 °F to 662 °F) Range 2 = -20 °C to 350 °C (32 °F to 662 °F)                     |            |
|  | Range 3 = 250 °C to 600 °C (482 °F to 1112 °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, isotherms, 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)   |   |            |
| <b>Image presentation</b>  | Digital display 5" 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    |            |
| <b>Optional lenses</b>   | <b>54 mm Telephoto lens</b>   |            |
|  | 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  |            |
|  | <b>10.5 mm wide angle lens</b>  |            |
| 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   |   |            |
| <b>Image and data storage</b>  | Storage medium Compact flash card stores over 1000 IR images (512 MB card standard)                           |            |
|  | File formats supported 14 bit measurement data included. Exportable JPEG, BMP, PCX, PNG, PSD.                 |            |
| <b>Interfaces and software</b>   | Interface Compact flash card reader included  |            |
|  | Software SmartView; Full analysis and reporting software included   |            |
| <b>Laser (IR-Fusion models only)</b>   | Classification Class II   |            |
|  | Laser targeting Laser dot visible on screen when blending thermal and visible image                           |            |
| <b>Controls and adjustments</b>  | 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             |            |
| <b>Power</b>   | Battery type Li-Ion smart battery, rechargeable, field-replaceable  |            |
|  | Battery operating time 3 hours continuous operation (2 hours for models with IR-Fusion)                       |            |
|  | Battery charging 2 bay intelligent charger powered via AC outlet  |            |
|  | AC operation AC adapter 110/220 VAC, 50/60 Hz -   |            |
|  | Power saving Automatic shutdown and sleep modes (user specified)  |            |
| <b>Environmental and mechanical design</b>   | 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 (HxWxD) 162 x 262 x 101 mm (6.6 in x 10.5 in x 4.0 in)  |            |
| <b>Other</b>   | Warranty 2 years  |            |

\*standard 20 mm Germanium lens



### Included accessories

- Heavy duty carrying case
- 2 rechargeable battery packs
- Battery charger
- AC adapter (for Ti55 model only)
- Video cable
- 512 MB compact flash card
- Compact flash card reader and USB cable
- PCMCIA compact flash card reader
- Neck strap
- SmartView reporting and analysis software on CD
- User manual on CD

### Ordering information\*

- Fluke Ti50-20 IR FlexCam Thermal Imager
- Fluke Ti50FT-20 IR FlexCam Thermal Imager with IR-Fusion
- Fluke Ti55-20 IR FlexCam Thermal Imager
- Fluke Ti55FT-20 IR FlexCam Thermal Imager with IR-Fusion

\*For ordering information of optional lenses check the Fluke web



To find out more about Fluke thermal imagers go to [www.fluke.com/thermography](http://www.fluke.com/thermography) or in the United States call **1-800-760-4523**.

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Visit the Fluke web site for complete specifications