

# FLUKE®

## Ti125, Ti110, Ti105 Industrial-Commercial and the Ti100 General Use Thermal Imagers

### Technical Data



The lightest, most rugged and easiest-to-use professional thermal imagers around.

A Fluke thermal imager can save you time and money by finding potential problems before they become costly failures. With the innovative features and functionality in the Fluke Ti125, Ti110 and Ti100 imagers, you can perform infrared inspections faster and more efficiently and thoroughly document problem areas for additional follow-up.

#### Key features

- Exclusive IR-OptiFlex™ focus system—ensures that images are in good focus from 1.2 meters (4 feet) and beyond for optimum image clarity and scanning convenience. For shorter distances change to manual mode with the touch of a finger (Ti110 and Ti125).
- Always have references handy—IR-PhotoNotes™ annotation system—Quickly identify and keep track of inspection locations by adding digital images of important information and surrounding areas (Ti110 and Ti125).
- Find problems faster and easier—IR-Fusion® with AutoBlend™ mode (Ti125 only)—Accurately identify potential issues by combining digital and IR images with AutoBlend. It blends digital and partially transparent IR images into a single information-filled image.
- Multi-mode video recording—focus-free video in visible light and infrared with full IR-Fusion. (Ti110 and Ti125 only).
- Easily communicate the location of problems with the Electronic Compass (8-Point Cardinal).

Spend less time finding problems and more time solving them with the innovative, rugged and easy to use Ti125, Ti110 Industrial-Commercial and Ti100 General Use Thermal Imagers.



Industrial, mechanical, electromechanical and general building maintenance.



Process, refractory insulation, tank and vessel levels, steam systems and traps, pipes and valves, etc.



Electrical, unbalanced loads, overloaded systems, wiring problems or component failure, etc.



#### Patented Fluke IR-Fusion® Technology

Enjoy the industry's only point-and-shoot IR-Fusion camera. Fluke patented technology provides the user with both a digital and an infrared image in one to precisely document problem areas.

#### IR-OptiFlex™ focus system

Scan for issues significantly faster than before with Fluke's revolutionary, ultra-rugged focus system. The IR-OptiFlex focus system gives you optimum focus by combining focus-free, ease-of-use with the flexibility of manual focus on the same camera.

**Detailed specifications**

|   | Ti125   | Ti110                                | Ti105  | Ti100            |
|---|---|--------------------------------------|--|------------------|
|   | Industrial-Commercial   |                                      |  | General use      |
| IR resolution (FPA size)                                    | 160 x 120 FPA Uncooled Microbolometer   |                                      |  |                  |
| Spectral band   | 7.5 µm to 14 µm (long wave)   |                                      |  |                  |
| Capture or refresh rate                                     | 9 Hz  |                                      |  |                  |
| NETD (Thermal sensitivity)                                  | ≤ 0.10 °C at 30 °C target temp (100 mK)   |                                      |  |                  |
| FOV (Field of view)   | 22.5 °H x 31 °V   |                                      |  |                  |
| IFOV (Spatial resolution)                                   | 3.39 mRad   |                                      |  |                  |
| Temperature measurement range (not calibrated below -10 °C) | -20 °C to +350 °C<br>(-4 °F to +662 °F)   | -20 °C to +250 °C (-4 °F to +482 °F) |  |                  |
| Temperature measurement accuracy                            | ± 2 °C or 2 % (at 25 °C nominal, whichever is greater)  |                                      |  |                  |
| Focus mechanism   | IR-OptiFlex™ focus system   |                                      | Focus-free 1.2 m (4 ft) and beyond                         |                  |
| IR-Fusion™ technology                                       | PIP, FULL IR, FULL VISIBLE, AutoBlend™  | PIP, FULL IR, FULL VISIBLE           | PIP (1.2 m (4 ft) to 4.6 m (15 ft)), FULL IR, FULL VISIBLE | No, full IR only |
| Color alarms  | High temperature, low temperature, isotherm   | High temperature                     | —  |                  |
| Standard palettes   | Blue-Red, Grayscale, Inverted Grayscale, High-contrast, Hot Metal, Ironbow, Amber, Inverted Amber |                                      | Blue-Red, Ironbow, Grayscale, Amber                        |                  |
| Ultra Contrast™ palettes                                    | Blue-Red, Grayscale, Inverted Grayscale, High-contrast, Hot Metal, Ironbow, Amber, Inverted Amber | Blue-Red, Grayscale, Ironbow         | —  |                  |
| Hot/cold markers  | Yes   | —                                    |  |                  |
| User definable spot markers                                 | Three on camera and in SmartView®   |                                      | in SmartView® only   |                  |
|   | Yes   |                                      |  |                  |
| Centerbox (MIN/AVG/MAX)                                     | Yes   | —                                    |  |                  |
| Level and span control                                      | Manual and auto   |                                      |  |                  |
| Minimum span in auto mode                                   | 5 °C  |                                      |  |                  |
| Minimum span in manual mode                                 | 2.5 °C  |                                      |  |                  |
| Minimum IR focus distance                                   | 15.25 cm (6 in)   |                                      |  | 1.2 m (4 ft)     |
| Weight  | 0.726 kg (1.6 lb)   |                                      |  |                  |
| Size  | 28.4 x 8.6 x 13.5 cm (11.2 x 3.4 x 5.3 in)  |                                      |  |                  |
| LCD display   | 3.5 inch diagonal (portrait format)   |                                      |  |                  |
| Visible camera  | 2 megapixel industrial-grade  |                                      |  | N/A              |
| Minimum automatic parallax correction                       | ~18-22 inches   |                                      |  | N/A              |
| IR-PhotoNotes™ annotation system                            | Yes (3 images)  |                                      | —  |                  |
| Laser pointer   | Yes   |                                      |  |                  |
| Torch   | Yes   |                                      |  | —                |
| Electronic (cardinal) compass                               | Yes   | —                                    |  |                  |
| Emissivity correction                                       | Yes   |                                      |  |                  |
| Transmission correction                                     | Yes   | —                                    |  |                  |
| Background (reflected) compensation                         | Yes   |                                      |  |                  |
| Voice annotation (audio)                                    | Yes (60 seconds) per image  |                                      | —  |                  |
| Multi-mode video output                                     | Streaming USB video output (infrared, visible and IR-Fusion modes)                                | —                                    |  |                  |
| Multi-mode video recording (standard avi w/ mpeg encoding)  | Yes (AVI with MPEG encoding, up to 5 minutes)   |                                      | —  |                  |
| Multi-mode video recording (radiometric .is3)               | Yes, radiometric .is3 for approx. 2.5 to 5 minutes depending upon thermal scene                   | —                                    |  |                  |
| Memory review   | thumbnail review  |                                      |  |                  |
| Battery (field-replaceable, rechargeable)                   | Two   | One                                  |  |                  |
| Battery life  | 4+ hours (each)*  |                                      |  |                  |
| External battery charging base                              | Yes   | Optional (accessory)                 |  |                  |
| Charging power supply                                       | Yes   |                                      |  |                  |

\*Assumes 50% brightness of LCD

|  | Ti125   | Ti110 | Ti105 | Ti100       |
|--|---|-------|-------|-------------|
|  | Industrial-Commercial   |       |       | General use |
| Drop test                                  | 2 meter (6.5 feet)  |       |       |             |
| Ingress protection (IP) rating (IEC 60529) | IP 54   |       |       |             |
| Recommended Calibration cycle              | Two-years   |       |       |             |
| Multifunction card reader                  | Included  | —     |       |             |
| Memory storage                             | 2 GB SD memory card   |       |       |             |
| Direct download capability                 | mini USB download direct to PC  |       |       |             |
| Operating temperature range                | -10 °C to +50 °C (14 °F to 122 °F)  |       |       |             |
| Storage temperature range                  | -20 °C to +50 °C (-4 °F to 122 °F)  |       |       |             |
| Operating humidity                         | Operating and storage 10 % to 95 %, Non-condensing  |       |       |             |
| Vibration and shock                        | 2G, IEC 68-2-26 and 25G, IEC 68-2-29  |       |       |             |
| Safety standards                           | CSA (US and CAN): C22.2 No. 61010-1-04, UL: UL STD 61010-1 (2nd Edition), ISA: 82.02.01   |       |       |             |
| C Tick                                     | IEC/EN 61326-1  |       |       |             |
| EMI, RFI, EMC                              | EN61326-1; FCC Part 5   |       |       |             |
| User manuals                               | Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, Turkish, Dutch, and Hungarian |       |       |             |
| Standard warranty period                   | Two-years   |       |       |             |
| Extended warranty and service plans        | Yes   |       |       |             |

## Ordering information

|                      |                                      |
|----------------------|--------------------------------------|
| <b>FLK-Ti105 9HZ</b> | Industrial-Commercial Thermal Imager |
| <b>FLK-Ti110 9HZ</b> | Industrial-Commercial Thermal Imager |
| <b>FLK-Ti125 9HZ</b> | Industrial-Commercial Thermal Imager |
| <b>FLK-Ti100 9HZ</b> | General Use Thermal Imager           |

### Included with product

Thermal imagers are shipped with ac power adapter, lithium ion smart battery (Ti125 includes 2 each—other models 1 each), USB cable, SD memory card, hard carrying case, soft transport bag, adjustable hand strap (left- or right-handed use), printed users manual in English, Spanish, French, German and Simplified Chinese, all other manuals on CD—total of 18, SmartView® software and warranty registration card. Ti125 model also include a two-bay charging base and a multi-format USB memory card reader.

### Optional:

|                       |  |
|-----------------------|--|
| <b>FLK-TI-VISOR2</b>  | Sun visor                                    |
| <b>FLK-TI-TRIPOD2</b> | Tripod mounting accessory                    |
| <b>BOOK-ITP</b>       | Introduction to Thermography Principles Book |
| <b>FLK-TI-SBC3</b>    | External charging base and power supply      |
| <b>FLK-TI-SBP3</b>    | Extra lithium-ion rechargeable smart battery |
| <b>TI-CAR CHARGER</b> | Thermal imager vehicle charger               |

**Fluke Europe B.V.**  
P.O. Box 1186  
5602 BD Eindhoven  
The Netherlands  
Web: [www.fluke.com](http://www.fluke.com)

**For more information call:**  
In Europe/M-East/Africa  
+31 (0) 40 2 675 200 or  
Fax +31 (0) 40 2 675 222

**Fluke (UK) Ltd.**  
52 Hurricane Way  
Norwich, Norfolk  
NR6 6JB  
United Kingdom  
Tel.: +44 (0) 20 7942 0700  
Fax: +44 (0) 20 7942 0701  
E-mail: [industrial@uk.fluke.nl](mailto:industrial@uk.fluke.nl)  
Web: [www.fluke.co.uk](http://www.fluke.co.uk)

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