

FLUKE®

TiR125, TiR110, TiR105 Building Diagnostic and the Ti100 General Use Thermal Imagers

Technical Data

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



Whether you're searching for air leaks, hidden moisture, construction defects, or other building issues, a Fluke thermal imager delivers a huge competitive advantage—it allows you to work faster and more efficiently, and document your findings.

Key features

- Exclusive IR-OptiFlex™ focus system—ensures that images are in good focus from 1.2 m (4 ft) and beyond for optimum image clarity and scanning convenience. For shorter distances change to manual mode with the touch of a finger (TiR110 and TiR125).
- 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 (TiR110 and TiR125).
- Find problems faster and easier with Fluke IR-Fusion® technology (TiR125, TiR110, TiR105). Accurately identify potential issues by combining digital and IR images.
- Capture additional measurements fast and conveniently from up to five wireless modules at once using your Fluke thermal imager and CNX™ wireless modules. (Ti100 only)
- Get further clarification with AutoBlend™ mode - the blending of a digital and partially transparent IR image into a single information-filled image (TiR125 only).
- Multi-mode video recording—focus-free video in visible light and infrared with full IR-Fusion (TiR110 and TiR125 only).
- Easily communicate the location of problems with the Electronic 8-Point Cardinal Compass (TiR125 and TiR110 only).

Spend less time in the field and more time growing your business with these new Fluke thermal imagers.



Building problems, defects and general maintenance



Energy audit, building inspection, and weatherization



Restoration, water damage, and roofing

IR-Fusion®

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

| | TiR125 | TiR110 | TiR105 | Ti100 |
|--|---|------------------------------|--|---|
| | Building diagnostics | | | 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) | ≤ 0.08 °C at 30 °C target temp (80 mK) | | | ≤ 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 +150 °C (-4 °F to +302 °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 |
| CNX™ Wireless enabled | — | | | Yes |
| Color alarms | High temperature, low temperature (dewpoint), and isotherm | Low temperature (dewpoint) | — | |
| 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 | |
| Centerpoint | Yes | | | |
| Centerbox (MIN/AVG/MAX) | Yes | — | | |
| Level and span control | Manual and auto | | | |
| Minimum span in auto mode | 2.5 °C | | | 5 °C |
| Minimum span in manual mode | 2.0 °C | | | 2.5 °C |
| Minimum IR focus distance | 15.25 cm (6 in) | | 122 cm (48 in) | |
| 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 parallax | ~45.7 – 55.9 cm (~ 18 in – 22 in) | | ~122 cm (48 in) | 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 | — | | |
| Multi-mode video recording (standard AVI with MPEG encoding) | Yes (AVI with MPEG encoding) | | — | |
| 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 | Included | Optional (accessory) | | |
| Charging power supply | Yes | | | |

*Assumes 50 % brightness of LCD

| | TiR125 | TiR110 | TiR105 | Ti100 |
|--|---|--------|--------|-------------|
| | Buidling diagnostics | | | General use |
| Drop test | 2 meter (6.5 feet) | | | |
| Ingress protection (IP) rating (IEC 60529) | IP 54 | | | |
| Est. calibration cycle | Two-years | | | |
| Multifunction card reader | Included | — | | |
| Memory storage | 2 GB SD memory card | | | |
| Direct download capability | mini USB direct download | | | |
| 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

| | |
|-----------------------|-------------------------------------|
| FLK-TiR125 9HZ | Building Diagnostics Thermal Imager |
| FLK-TiR110 9HZ | Building Diagnostics Thermal Imager |
| FLK-TiR105 9HZ | Building Diagnostics Thermal Imager |
| FLK-Ti100 9HZ | General Use Thermal Imager |

Included with product

Thermal imagers are shipped with ac power adapter, lithium ion smart battery (TiR125 includes two each—other models one 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, others on CD, SmartView® software and warranty registration card. TiR125 model also includes a two-bay charging base and a multi-format USB memory card reader.

Optional:

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

CNX wireless modules

| | |
|----------------------|--------------------------------|
| FLK-CNX i3000 | iFlex™ AC Current Clamp Module |
| FLK-CNX a3000 | AC Current Clamp Module |
| FLK-CNX v3000 | AC Voltage Module |
| FLK-CNX t3000 | K-Type Temperature Module |

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Not available in all countries.

For more information on CNX™ wireless thermal imagers and other CNX™ solutions go to **www.fluke.com/cnx**