

**FLUKE®**

# Fluke Industrial/Electrical Thermal Imagers

Models: Ti25 and Ti10

## Technical Data



Ti10

Ti25

High performance thermal imagers have never been this affordable. This rugged. Or, this easy to use ... until **now**.

The perfect tools to add to your problem solving arsenal. Built for tough work environments, these high-performance, fully radiometric imagers are ideal for troubleshooting electrical installations, electro-mechanical equipment, process equipment, HVAC/R equipment and others.

- These Fluke thermal imagers come with enhanced problem detection and analysis capabilities with IR-Fusion® Technology. Simply scroll through the different viewing modes quickly to better identify trouble areas in Full IR thermal, picture-in-picture, or automatic blend visual and thermal images.
- Optimized for field use in harsh work environments
  - Engineered and tested to withstand a 2 m (6.5 ft) drop
  - Withstands dust and water—tested to an IP54 rating.
- Delivers the clear, crisp images needed to find problems fast.
- Identify even small temperature differences that could indicate problems with excellent thermal sensitivity (NETD).
- Intuitive, three-button menu is easy to use—simply navigate with the push of a thumb.
- No need to carry pen and paper—record findings by speaking into the camera. Voice comments are saved along with individual images for future reference



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 mistakes or component failure, etc.

**Fluke.** *Not just infrared, infrared you can use.®*

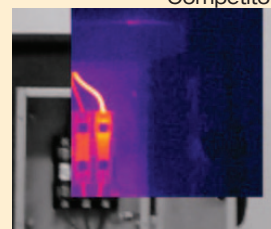
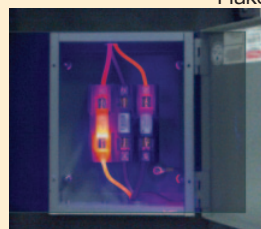
### Patented Fluke IR-Fusion® Technology

#### More than picture in picture

Infrared images alone can be difficult to understand, which is why Fluke pioneered IR-Fusion, a revolutionary marriage of visible and infrared images never before seen in commercial or industrial thermal imagers. Automatically capturing a visible image with every infrared image allows you to always know exactly what you're looking at.

#### Not all fusion is created equal

Don't be fooled by imitators. No other manufacturer can boast on-camera blending. Compare the images. Only Fluke has mastered the ability to create the industry's only transparent, perfectly blended and aligned visible and infrared images.



## Detailed specifications

	Ti25	Ti10
Temperature		
Temperature measurement range (not calibrated below -10 °C)	-20 °C to +350 °C (-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)	
On-screen emissivity correction	Yes	—
On-screen reflected background temperature compensation	Yes	—
On-screen transmission correction	—	
Imaging performance		
Image capture frequency	9 Hz refresh rate	
Detector type	160 X 120 Focal Plane Array, uncooled microbolometer	
Thermal sensitivity (NETD)	≤ 0.09 °C at 30 °C target temp. (90 mK)	≤ 0.13 °C at 30 °C target temp. (130 mK)
Visual (visible light) camera	Industrial performance 1.3 megapixel	
Minimum focus distance	46 cm (approx. 18 in)	
Field of view	23 ° x 17 °	
Spatial resolution (IFOV)	2.5 mRad	
Minimum focus distance	15 cm (approx. 6 in)	
Focus mechanism	Manual, one-handed Smart Focus capability	
Image presentation		
Palettes		
Standard	Ironbow, Blue-Red, High Contrast, Amber, Hot Metal, Grayscale	Ironbow, Blue-Red, High Contrast, Grayscale
Level and span	Smooth auto-scaling and manual scaling of level and span	
Fast auto toggle between manual and auto modes	Yes	
Fast auto-rescale in manual mode	Yes	
Minimum span (in manual mode)	2.5 °C (4.5 °F)	5 °C (9 °F)
Minimum span (in auto mode)	5 °C (9 °F)	10 °C (18 °F)
IR-Fusion® information		
Automatically aligned (parallax corrected) visual and IR blending	Yes	
Picture-In-Picture (PIP)	Three levels of on-screen IR blending displayed in center of LCD	100 % IR displayed in center of LCD
Full screen infrared	Three levels of on-screen IR blending displayed on LCD	100 % IR displayed on LCD
Color alarms (temperature alarms)	—	
Voice annotation	60 seconds maximum recording time per image; reviewable playback on imager	—
Image capture and data storage		
	The Ti25 allows user to adjust palette, blending, level, span, IR-Fusion® mode, emissivity, and reflected background temperature compensation on a captured image before it is stored.	—
Image capture, review, save mechanism	One-handed image capture, review, and save capability	
Storage medium	SD Memory Card (2 GB memory card will store at least 1200 fully radiometric (.is2) IR and linked visual images each with 60 seconds voice annotations, or 3000 basic bitmap (.bmp) images transferrable to PC via included multi-format USB card reader	
File formats	Non-radiometric (.bmp) or fully-radiometric (.is2)	
	No analysis software required for non-radiometric bitmap (.bmp) files	
Export file formats w/SmartView® software	BMP, DIB, GIF, JPE, JFIF, JPEG, JPG, PNG, TIF, and TIFF	
Memory review	Sequential image navigation and review	

## General specifications

<b>Operating temperature</b>	-10 °C to +50 °C (14 °F to 122 °F)
<b>Storage temperature</b>	-20 °C to +50 °C (-4 °F to 122 °F) without batteries
<b>Relative humidity</b>	10 % to 95 % non-condensing
<b>Display</b>	9.1 cm (3.7 in) diagonal landscape color VGA (640 x 480) LCD with backlight and clear protective cover
<b>Controls and adjustments</b>	User selectable temperature scale (°C/°F) Language selection Time/Date set Emissivity selection (Ti25 only) Reflected background temperature compensation (Ti25 only) User selectable hot spot and cold spot, and center point on the image (Ti25 only) (other custom markers and shapes in SmartView® software) User selectable backlight: "Full Bright" or "Auto"
<b>Software</b>	SmartView® full analysis and reporting software included
<b>Batteries</b>	Internal rechargeable battery pack (included)
<b>Battery life</b>	Three to four hours continuous use (assumes 50 % brightness of LCD)
<b>Battery charge time</b>	2.5 hours to full charge
<b>AC battery charging</b>	AC adapter/charger (110 V ac to 220 V ac, 50/60 Hz) (included), charges battery while imager is operating or turned off, ac mains adapters included.
<b>AC operation</b>	AC operation with included power supply (110 V ac to 220 V ac, 50/60 Hz). AC mains adapters included.
<b>Power saving</b>	Sleep mode activated after five minutes of inactivity, automatic power off after 30 minutes of inactivity
<b>Safety standards</b>	CSA (US and CAN): C22.2 No. 61010-1-04, UL: UL STD 61010-1 (2nd Edition), ISA: 82.02.01
<b>Electromagnetic compatibility</b>	Meets all applicable requirements in EN61326-1:2006
<b>C Tick</b>	IEC/EN 61326-1
<b>US FCC</b>	CFR 47, Part 15 Class B
<b>Vibration</b>	0.03 g2/Hz (3.8 grms), IEC 68-2-6
<b>Shock</b>	25 g, IEC 68-2-29
<b>Drop</b>	2 meter (6.5 feet)
<b>Size (H x W x L)</b>	26.7 cm x 12.7 cm x 15.2 cm (10.5 in x 5.0 in x 6.0 in)
<b>Weight (battery included)</b>	1.2 kg (2.6 lb)
<b>Enclosure rating</b>	IP54 (protected against dust, limited ingress; protection against water spray from all directions)
<b>Warranty</b>	Two-years (standard)
<b>Recommended calibration cycle</b>	Two-years (assumes normal operation and normal wear)
<b>Supported Languages</b>	Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish

## Ordering information

**FLK-Ti25 9Hz** Thermal Imager

**FLK-Ti10 9Hz** Thermal Imager

### Included

Thermal imager, ac power supply/battery charger (including mains adapters); SD memory card; multi-format USB memory card reader for downloading images into your computer; SmartView® software with free software upgrades for life; rugged, hard carrying case; soft transport bag; adjustable hand strap; printed users manual; warranty registration card.

### Optional accessories

**TI-CAR-CHARGER** Thermal Imager Vehicle Charger

**TI-VISOR** Thermal Imager Visor

**BOOK-ITP** Introduction to Thermography Principles Book

**TI-TRIPOD** Tripod Mounting Base Accessory



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Infrared you can use.™*

**Fluke Corporation**  
PO Box 9090, Everett, WA 98206 U.S.A.

**Fluke Europe B.V.**  
PO Box 1186, 5602 BD  
Eindhoven, The Netherlands

**For more information call:**  
In the U.S.A. (800) 443-5853 or  
Fax (425) 446-5116  
In Europe/M-East/Africa +31 (0) 40 2675 200 or  
Fax +31 (0) 40 2675 222  
In Canada (800)-36-FLUKE or  
Fax (905) 890-6866  
From other countries +1 (425) 446-5500 or  
Fax +1 (425) 446-5116  
Web access: <http://www.fluke.com>

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