

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.
- 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**