



**FLUKE®**

# Ti50FT and Ti55FT IR FlexCam® Thermal Imagers

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

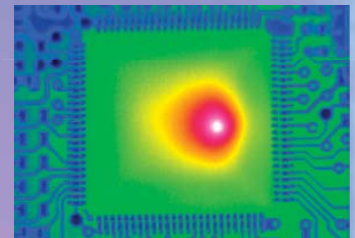
Choose the Fluke Ti5x models when you need the best images. They feature 320 x 240 detectors with industry leading thermal sensitivity ( $\leq 0.05 \text{ }^\circ\text{C NETD}$ ) for high resolution, ultra high-quality images. In addition, with a 60 Hz detector acquisition rate temperatures are displayed live on the large 5-inch color display.

## Features

	Ti55FT	Ti50FT
High resolution, low noise VOx detector for high quality images	320 x 240	
Temperature range to cover broad industrial applications	-20 to +600 °C	-20 to +350 °C
High thermal sensitivity for viewing even the smallest temperature differences	$\leq 0.05 \text{ }^\circ\text{C}$ (50 mk)	$\leq 0.07 \text{ }^\circ\text{C}$ (70 mk)
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	●	●

## Typical applications

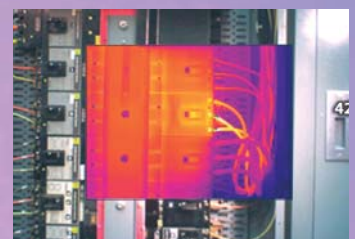
- Predictive maintenance – Identify electrical and mechanical problems before they cause failure
- Power/utilities – Real-time analysis of substations, transmission lines and equipment
- Process monitoring – Real-time observation to ensure efficient and safe operation
- Research and development – Quantify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



Printed circuit board



Power/utilities



Electrical system

# Specifications

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		Fluke Ti55FT	Fluke Ti50FT	
<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)	≤0.05 °C at 30 °C (50 mk)	≤0.07 °C at 30 °C (70 mk)	
	Detector data acquisition / Image frequency	60 Hz/60 Hz or 7.5 Hz/7.5 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</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	2x		
<b>Temperature measurement</b>	Calibrated temperature range	-20 °C to 600 °C in 3 ranges	-20 °C to 350 °C in 2 ranges	
		Range 1 = -20 °C to 100 °C	Range 1 = -20 °C to 100 °C	
		Range 2 = -20 °C to 350 °C	Range 2 = -20 °C to 350 °C	
		Range 3 = 250 °C to 600 °C	-	
	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> (Only available at time of purchase)	<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, PNG, GIF, TIFF.		
<b>Interfaces and software</b>	Interface	Compact flash card reader included		
	Software	SmartView; Full analysis and reporting software included		
<b>Laser</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 with IR-Fusion engaged)		
	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		
	Storage temperature	-40 °C to +70 °C		
	Relative humidity	Operating and storage 10% to 95%, non-condensing		
	Water and dust resistant	IP54		
	Weight (including batteries)	1.95 kg		
	Camera size (HxWxD)	162 x 262 x 101 mm		
<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 Ti50FT-20	IR FlexCam Thermal Imager with IR-Fusion
Fluke Ti55FT-20	IR FlexCam Thermal Imager with IR-Fusion

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



**Fluke.** Keeping your world up and running.®

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Visit the Fluke web site for complete specifications