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**FLUKE®**

# Ti50FT and Ti55FT IR FlexCam® Thermal Imagers

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

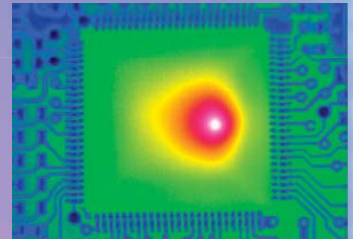
Choose the Fluke Ti5x models when you need the best images. They feature 320 x 240 detectors with industry leading thermal sensitivity ( $\leq 0.05$  °C NETD) for high resolution, ultra high-quality images. In addition, with a 60 Hz detector acquisition rate temperatures are displayed live on the large 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	$\leq 0.05$ °C (50 mk)	$\leq 0.07$ °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

# FLUKE®

		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 Range 1 = -20 °C to 100 °C Range 2 = -20 °C to 350 °C Range 3 = 250 °C to 600 °C	-20 °C to 350 °C in 2 ranges Range 1 = -20 °C to 100 °C Range 2 = -20 °C to 350 °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

Visit the Fluke web site for complete specifications



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