

Fluke Industrial Thermal Imagers

Models: Ti32, Ti29 and Ti27. Three models specifically for industrial and electrical applications.

Technical Data



Proven
Practical
Performance

The P3 Series: Superior, not Superfluous. Fluke is how other tools are measured.



Ti27

- 240x180 IR resolution
- 43,200 total IR pixels

Ti29

- 280x210 IR resolution
- 58,800 total IR pixels

Ti32

- 320x240 IR resolution
- 76,800 total IR pixels





The greatest technological advancement in thermography may be how Fluke has made it so simple to capture images and analyze data right out of the box.

Superior image quality

Industry-leading thermal sensitivity and spatial resolution combined with a high definition display, creates the sharpest images in the industry.

One-handed, easy-to-use interface

With just a push of your thumb, go from one-handed manual smart focus to adding picture-in-picture and even add voice comments.

Torture tested™

Before a Fluke goes into your hands, we drop it from ours. Only Fluke thermal imagers are designed from the inside out to withstand a 6.5 ft drop.

Patented Fluke IR-Fusion®

(Picture-in-picture and auto blending)
Precision visible and IR image alignment allows Fluke
to offer the only on-camera blended infrared and visible
image to better diagnose issues.

Interchangeable lenses

Interchangeable wide-angle and IR-Fusion compatible telephoto lenses to cover any application.

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



Mechanical, electromechanical and general building maintenance.



Refractory insulation, tank and vessel levels, steam systems and traps,



Electrical
Unbalanced loads,
overloaded systems,
wiring mistakes or
component failure, etc.



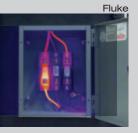
Patented Fluke IR-Fusion® Technology

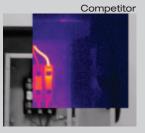
More than picture in picture

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 to you 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

	Ti32	Ti29	Ti27	
Temperature		1110		
Temperature measurement range	-20 °C to +600 °C (-4 °F to +1112 °F)			
(not calibrated below -10 °C)	-20 C to +000 C [-4 F to +1112 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	Yes			
Imaging performance				
Image capture frequency	9 Hz refresh rate or 60 Hz refresh rate depending upon model variation			
Detector type	Focal Plane Array, uncooled microbolometer, 320 x 240 pixels	Focal Plane Array, uncooled microbolometer, 280 x 210 pixels	Focal Plane Array, uncooled microbolometer, 240 x 180 pixels	
Thermal sensitivity (NETD)	≤ 0.045 °C at 30 °C target temp. (45 mK)		target temp (50 mK)	
Total pixels	76,800	58,800	43,200	
Infrared spectral band	7.5 μm to 14 μm (long wave)			
Visual (visible light) camera	Industrial performance 2.0 megapixel			
Minimum focus distance	45 cm (approx. 18 in)			
Standard infrared lens type				
Field of view		23 ° x 17 °		
Spatial resolution (IFOV)	1.25 mRad	1.43 mRad	1.67 mRad	
Minimum focus distance	15 cm (approx. 6 in)			
Optional telephoto infrared lens type				
Field of view		11.5 ° x 8.7 °	_	
Spatial resolution (IFOV)	0.63 mRad	0.72 mRad	0.84 mRad	
Minimum focus distance		45 cm (approx. 18 in)		
Optional wide-angle infrared lens ty	rpe	40.0 04.0		
Field of view	0.50 P. 1	46 ° x 34 °	0.04 P. I	
Spatial resolution (IFOV) Minimum focus distance	2.50 mRad	2.86 mRad	3.34 mRad	
	7.5 cm (approx. 3 in)			
Focus mechanism Manual, one-handed Smart Focus capability Image presentation				
Palettes				
Standard	Ironbow, Blue-Red, High Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted			
Ultra Contrast™	Ironbow, Dite-Red, Tight Contrast, Amber, Amber Ultra, Amber Inverted, Tight Netal, Orayscale, Orayscale Inverted Ironbow Ultra, Blue-Red Ultra, High Contrast Ultra, Amber Ultra, Amber Inverted Ultra, Hot Metal Ultra,			
	Grayscale Ultra, Grayscale Inverted Ultra			
Level and span	Smooth auto-scaling and manual scaling of level and span			
Fast auto toggle between manual	Yes			
and auto modes				
Fast auto-rescale in manual mode	Yes			
Minimum span (in manual mode) Minimum span (in auto mode)	2.5 °C (4.5 °F)			
IR-Fusion® information	5 °C (9 °F)			
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			
Full screen infrared	Three levels of on-screen IR blending displayed on LCD			
Color alarms (temperature alarms)	High-temperature alarm (user-selectable)			
Voice annotation	60 seconds maximum recording time per image; reviewable playback on imager			
Image capture and data storage				
	The Ti32, Ti29 and Ti27 allow users to adjust palette, blending, level, span, IR-Fusion® mode, emissivity, and reflected background temperature compensation, and transmission correction 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, or 3000 jpeg (.jpeg) images; transferrable to PC via included multi-format USB card reader			
File formats	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2)			
Export file formats w/SmartView®	No analysis software required for non-radiometric (.bmp and .jpeg) files			
software	BMP, DIB, GIF, JPE, JFIF, JPEG, JPG, PNG, TIF, and TIFF			
Memory review	Thumbnail view navigation and review selection			



General specifications

Operating temperature	-10 °C to +50 °C (14 °F to 122 °F)		
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Storage temperature	-20 °C to +50 °C (-4 °F to 122 °F) without batteries		
Relative humidity	10 % to 95 % non-condensing		
Display	9.1 cm (3.7 in) diagonal landscape color VGA (640 x 480) LCD with backlight and clear protective cover		
Controls and adjustments	User selectable temperature scale (°C/°F)		
	Language selection Time/Date set		
	Emissivity selection		
	Reflected background temperature compensation		
	Transmission correction		
	User selectable hot spot and cold spot, and center point on the image (other custom markers and shapes in SmartView® software)		
	High temperature alarm		
	User selectable backlight: "Full Bright" or "Auto"		
	Information display preference		
Software	SmartView® full analysis and reporting software included		
Batteries	Two lithium ion rechargeable smart battery packs with five-segment LED display to show charge level		
Battery life	Four+ hours continuous use per battery pack (assumes 50 % brightness of LCD)		
Battery charge time	2.5 hours to full charge		
AC battery charging	Two-bay ac battery charger (110 V ac to 220 V ac, 50/60 Hz) (included), or in-imager charging. AC mains adapters included.		
	Optional 12 V automotive charging adapter.		
AC operation	AC operation with included power supply (110 V ac to 220 V ac, 50/60 Hz). AC mains adapters included.		
Power saving	Sleep mode activated after five minutes of inactivity, automatic power off after 30 minutes of inactivity		
Safety standards	CSA (US and CAN): C22.2 No. 61010-1-04, UL: UL STD 61010-1 (2nd Edition), ISA: 82.02.01		
Electromagnetic compatibility	Meets all applicable requirements in EN61326-1:2006		
C Tick	IEC/EN 61326-1		
US FCC	CFR 47, Part 15 Class B		
Vibration	0.03 g2/Hz (3.8 grms), IEC 68-2-6		
Shock	25 g, IEC 68-2-29		
Drop	2 meter (6.5 feet) with standard lens		
Size (H x W x L)	27.7 cm x 12.2 cm x 17.0 cm (10.9 in x 4.8 in x 6.7 in)		
Weight (battery included)	1.05 kg (2.3 lb)		
Enclosure rating	IP54 (protected against dust, limited ingress; protection against water spray from all directions)		
Warranty	Two-years (standard), extended warranties are available.		
Recommended calibration cycle	Two-years (assumes normal operation and normal aging)		
Supported Languages	Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish		

Ordering information

FLK-Ti32 9 Hz Industrial-Commercial Thermal Imager, 9 Hz FLK-Ti32 60 Hz Industrial-Commercial Thermal Imager, 60 Hz FLK-Ti29 9 Hz Industrial-Commercial Thermal Imager, 9 Hz FLK-Ti29 60 Hz Industrial-Commercial Thermal Imager, 60 Hz FLK-Ti27 9 Hz Industrial-Commercial Thermal Imager, 9 Hz FLK-Ti27 60 Hz Industrial-Commercial Thermal Imager, 60 Hz



Included

Thermal imager with standard infrared lens; ac power supply and battery pack charger (including mains adapters); two, rugged lithium ion smart battery packs; 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

FLK-LENS/TELE1 Telephoto Infrared Lens FLK-LENS/WIDE1 Wide-angle Infrared Lens 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



Fluke. Not just infrared. Infrared you can use.™

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