

Fluke TiR1/R Thermal Imagers

Optimized for building envelope inspection, restoration and remediation and roofing applications.

The new Fluke TiR1 and TiR Thermal Imagers are the perfect imagers for any building application.

- Enhanced problem detection and analysis capabilities with patent-pending IR-Fusion® Technology – only available from Fluke.
- Optimized for tough environments
 - Engineered and tested to withstand a 2 meter (6.5 foot) drop
 - Withstands dust and water—tested to an IP54 rating
- Delivers the clear, crisp images needed to find problems fast
 - Identify the smallest temperature differences common in building and roofing applications with their optimized thermal sensitivity (NETD)
- High performance, low noise sensor provides high quality image and stable temperature reading
- Even the smallest details become visible with the large, widescreen full color LCD display
- 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 annotation comments are saved with the image. (TiR1 only)
- Store more than 3,000 screen images (.bmp format) or 1,200 IR-Fusion images on included 2 GB SD memory card.

New



Fluke TiR1/R specifications

	Fluke TiR1	Fluke TiR
Imaging performance		
Field of View (FOV)	23° horizontal x 17° vertical	
Minimum focus distance	Thermal lens: 15 cm (approx. 6 in), Visible (visual) light lens: 46 cm (approx. 18 in)	
Thermal sensitivity (NETD)	≤ 0.07 °C at 30 °C (70 mK)	≤ 0.1 °C at 30 °C (100 mK)
Minimum span (Auto/Manual)	5 °C / 2.5 °C	5 °C / 2.5 °C
Focus	Manual	
Detector size	160 x 120	
On camera operating modes	Picture-in-Picture (Blending is user selectable between MAX, MID and MIN) and full screen IR (Blending is user selectable between MAX, MED and MIN)	Full Picture-in-Picture and full screen IR
Visual (Visible light) camera	640 x 480 pixels, full color	
Temperature measurement		
Temperature range	-20 °C to +100 °C (-4 °F to +212 °F), 2 ranges	-20 °C to +100 °C (-4 °F to +212 °F)
Accuracy	± 2 °C or 2 % (whichever is greater)	± 5 °C or 5 % (whichever is greater)
Measurement modes	Center point and hot and cold markers	Center point
On-screen emissivity correction	Yes	No
Image presentation		
Digital display	9.1 cm (3.6 in) diagonal landscape color VGA (640 x 480) LCD	
LCD backlight	Selectable bright or auto	
Palettes	Ironbow, blue-red, high contrast, amber, hot metal, grey	Ironbow, blue-red, high contrast, grey
Image and data storage		
Fully radiometric	Yes	
Storage medium	2 GB SD card stores up to 3000 .bmp IR images or 1200 .IS2 IR-Fusion images	
File formats supported	Exportable to JPEG, BMP, GIF, PNG, TIFF, WMF EXIF, and EMF	
Voice memo recorder (voice annotation)	Yes	No
Software Controls and adjustments		
Software	SmartView ; Full analysis and reporting software included	
Set-up controls	Date/time, °C/°F, language, emissivity, hot spot and cold spot on image	Date/time, °C/°F, language
Language selection	English, German, French, Spanish, Portuguese, Italian, Swedish, Finnish, Russian, Czech, Polish, Turkish, Simplified Chinese, Traditional Chinese, Korean, Japanese	
Image controls	Smooth auto scaling and manual scaling	
On-screen indicators	Battery status, real time clock and center point temperature, range and span indication and high and low alarm settings	
Power		
Battery type	Internal rechargeable battery (included)	
Battery operating time	3 to 4 hours continuous operation	
Battery charging	2 hours with ac charger or dc car charger (charges battery while operating)	
AC operation	AC adapter/charger 110/230 V ac, 50/60 Hz	
Power saving	Automatic shutdown and sleep modes (user specified)	
Environmental and mechanical design		
Operating temperature	-10 °C to +50 °C (+14 °F to +122 °F)	
Storage temperature	-20 °C to +50 °C (-4 °F to +122 °F)	
Relative humidity	Operating and storage 10 % to 90 %, non-condensing	
Water and dust resistant	IP54	
Two meter (6.5 feet) drop test	Yes	
Protective lens cover	Yes	
Weight (including battery)	1.2 kg (2.6 lbs)	
Imager size (HxWxD)	267 mm x 127 mm x 152 mm (10.5 in x 5.0 in x 6.0 in)	
Other		
Warranty	Two-years	
EN 61010-1 2nd edition and EN61326-1	Yes	

TiR4FT, TiR3FT and TiR2FT IR FlexCam® Thermal Imagers

The experts' choice for building diagnostics

The Fluke TiR4FT, TiR3FT and TiR2FT IR FlexCam® Thermal Imagers are for professionals demanding the best and most thorough solution in building diagnostics applications

- Enhanced problem detection and analysis capabilities with patent-pending IR-Fusion® Technology – only available from Fluke.
- View crisp, clear images on large LCD screen
- Industry leading thermal sensitivity (≤ 0.05 °C NETD on TiR4FT) (≤ 0.07 °C NETD on TiR3FT and TiR2FT) provides solid resolution and ultra high-quality images.
- Easily view around obstructions with the 180 ° articulating lens
- Exceptional image resolution delivered with 320 x 240 focal plan array and 20 mm high quality germanium lens on TiR3FT and TiR4FT models (TiR2FT available with 160 x 120 FPA)
- SmartFocus allows for easy one finger continuous focus
- Generate fast, easy customizable reports with included SmartView™ software
- Intuitive, easy to use operation with Windows CE® interface.



Fluke TiR4FT, TiR3FT and TiR2FT specifications

	TiR4FT	TiR3FT	TiR2FT	
Imaging performance	Thermal			
	Field of view (FOV)*	23° horizontal x 17° vertical		
	Spatial resolution (IFOV)*	1.30 mrad	2.60 mrad	
	Minimum focus distance*	0.15 m		
	Thermal sensitivity (NETD)	≤ 0.05 °C at 30 °C	≤ 0.07 °C at 30 °C	
	Detector data acquisition / Image frequency	60 Hz		30 Hz
	Focus	SmartFocus; one finger continuous focus		
	IR digital zoom	2x, 4x, 8x	2x	
	Detector type	Focal Plane Array (FPA) Uncooled Microbolometer		
	Detector size	320 x 240 FPA		160 x 120 FPA
	Spectral band	8 µm to 14 µm		
	Digital image enhancement	Automatic full-time enhanced		
	Visual			
	On camera operating modes	Full thermal, full visual light or merged thermal-visual images. Picture-in-picture. Alarm.		
	Visible light camera	1280 x 1024 pixels, full color (1.3 Mega pixel)		
Visible light digital zoom	2x, 4x	2x		
Temperature measurement	Calibrated temperature range	-20 °C to 100 °C (-4 °F to 212 °F)		
	Accuracy	± 2 °C or 2 % (whichever is greater)		
	Measurement modes	TiR2FT/TiR4FT - Centerpoint, center box (area min/max, average) moveable spot, TiR3FT - Centerpoint, center box (area min/max, average)		
	Emissivity correction	0.1 to 1.0 (0.01 increments)		
Image presentation	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, iron		
Optional lens	10.5 mm wide-angle lens	High precision Germanium lens		
	Field of view (FOV)	42° horizontal x 32° vertical		
	Spatial resolution (IFOV)	2.45 mrad	4.9 mrad	
	Minimum focus distance	0.3 m		
Image and data storage	Storage medium	Compact flash card stores more than 1000 IR images (512 MB card standard)		
	File formats supported	14 bit measurement data included. Exportable BMP, GIF, JPEG, PNG, TIFF		
Interfaces and software	Interface	Compact flash card reader included		
	Software	SmartView; full analysis and reporting software included		
Laser	Classification	Class II		
	Laser targeting	Laser dot visible on screen when blending thermal and visible image		
Controls and adjustments	Set-up controls	Date/time, temperature units C/F, language, calibration range, LCD intensity (high/normal/low)		
	Image controls	Level, span, auto adjust, emissivity and background (continuous/manual)		
	On-screen indicators	Battery status, target emissivity, background temperature and realtime clock		
Power	Battery type	Li-Ion smart battery, rechargeable, field-replaceable		
	Battery operating time	Two hours continuous operation		
	Battery charging	2 bay intelligent charger powered via AC outlet		
	AC operation	AC adapter 110/220 VAC, 50/60 Hz (TiR2FT/TiR4FT only)		
	Power saving	Automatic shutdown and sleep modes (user specified)		
	DC operation	Vehicle 12 volt adaptor optional		
Environmental and mechanical design	Operating temperature	-10 °C to +50 °C (14 °F to 122 °F)		
	Storage temperature	-40 °C to +70 °C (-40 °F to 158 °F)		
	Relative humidity	Operating and storage 10 % to 95 %, non-condensing		
	Water and dust resistant	IP54		
	Weight (including batteries)	1.95 kg (4.29 pounds)		
	Camera size (HxWxD)	162 mm x 262 mm x 101 mm (6.5 in x 10.5 in x 4.0 in)		
Other	Warranty	Two-years		

*standard 20 mm Germanium lens



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