

Fluke TiR2FT, TiR3FT and TiR4FT Thermal Imagers

**INFRARED
INC.**

Technical Data

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

See things both ways—Infrared and visual (visible light) images fused together communicating critical information faster and easier – traditional infrared images are no longer enough. IR-Fusion, a patent-pending technology, simultaneously captures a digital photo in addition to the infrared image and fuses together taking the mystery out of IR image analysis. IR-Fusion is standard on Fluke TiR2FT, TiR3FT and TiR4FT models

The new Fluke TiR2FT, TiR3FT and TiR4FT Thermal Imagers are the perfect imagers for building envelope, restoration and remediation, inspection and roofing applications.

- All Fluke imagers come with IR-Fusion® Technology both in camera and software (combines visible image with IR image in full screen or picture-in-picture views) for easy identification and reporting of problems
- Temperature range and thermal sensitivity optimized for building diagnostics applications
- Perfect for any application and budget
- Excellent thermal sensitivity for seeing even small temperature differences (which could indicate problems)
- Adjustable hand strap for left- or right-handed users
- Manufactured in the U.S.A.



IR-Fusion® Technology

Detailed specifications

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		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 Mode	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 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		
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		
Other	Warranty	Two years		

General specifications

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Temperature	Operating: -10 °C to 50 °C (14 °F to 122 °F) Storage: -40 °C to 70 °C (-40 °F to 158 °F) without batteries
Relative humidity	10 % to 95 % non-condensing
Display	5" large high-resolution digital display
Image Presentation	5" High Resolution Digital Display Sunlight Readable Color LCD RS170 EIA/NTSC or CCIR/PAL composite video
Controls and Adjustments	User selectable temperature scale (°C/°F) Language selection Time/date set Emissivity selection User selectable hot spot and cold spot on the image
Software	Smartview™ full analysis and reporting software included
Power	Battery: Li-Ion smart battery, rechargeable, field-replaceable Battery life: 2 hours continuous use Battery charging time using ac adapter/charger or dc car charger: 2 hours for full charge
AC operation/charging	AC adapter charger (110 V ac to 220 V ac, 50 Hz to 60 Hz), Charges battery while imager is operating. Universal ac mains adapters included
Power saving	Automatic shutdown and sleep modes (user specified)
Safety standards	CD Directive: IEC/EN 61010-1 2nd Edition Pollution Degree 2
Electromagnetic compatibility	EMC directive: EN61326-1 C-Tick: IEC/EN 61326 US FCC: CFR 47, Part 15 Class A
Vibration	2 G, IEC 68-2-29
Shock	25G, IEC 68-2-29 (1 m drop, 5 sides)
IP rating	IP54
Warrenty	Two-years
Calibration cycle	Two-years (assumes normal operation and normal aging)
Supported languages	English, Italian, German, Spanish, French, Russian, Portuguese, Swedish, Turkish, Czech, Polish, Finnish, Simplified Chinese, Traditional Chinese, Korean and Japanese



To find out more about Infrared, Inc. Thermal Imagers go to
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