FOTRIC Ti series Advanced Sharp View Thermal Camera Instruction Manual

FOTRIC

CONNECTING THE DIGITAL FUTURE

Scaling Excellence
Top-Tier Thermal Imaging
Ground-Level Price
FOTRIC Ti series

Contents

Robust and Versatile

TurboFocus® Intelligent Focus System
Combines thermal contrast AF, laser-assisted AF, continuous AF, touch AF, and manual focus to deliver fast, accurate, and quiet focusing.
Seamlessly aligns thermal and digital images for precise analysis.

Visible light fusion thermal image (50% transparency)

Robust Design

- 2-meter drop impact resistance makes a truly enduring equipment;
- With an IP54 protection rating, this device is built for demanding industrial environments.

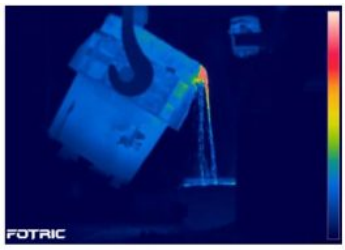

2-meter drop test

Meticulous Measurement Impeccable Imaging

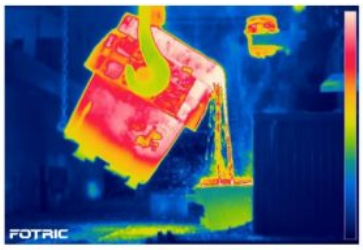
±2%/±2℃ Accuracy	-20℃ ~550℃ Measurement Range

Extraordinary Adaptability
Maintains ±2% accuracy under extreme temperature and high humidity conditions.

T-TWB®
Automatically adjusts the palette ribbon based on the pixel distribution across temperature ranges, offering a clearer view of temperature distribution for more efficient inspections.

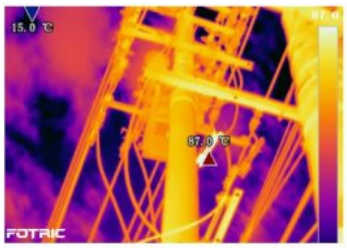


TWB OFF

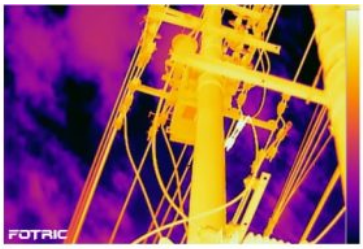


TWB ON

IREdge®
Enhances object contours and edges to improve visibility and differentiation from the background.



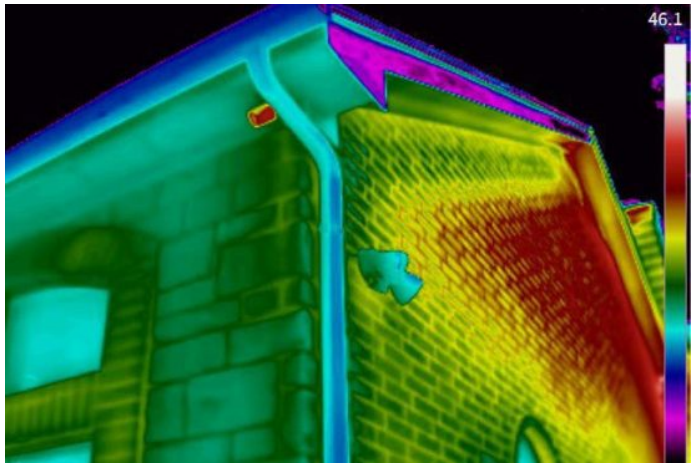
IREdge OFF



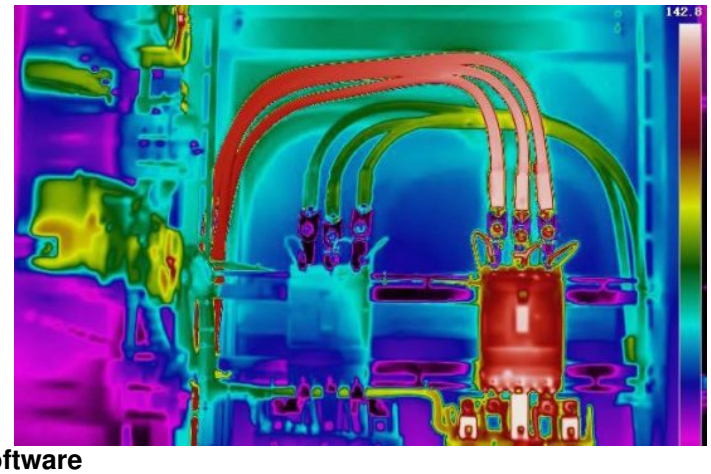
IREdge ON

Powerful Analysis, Swift Decision-making

Laser-assisted Area/Length Measurement
Equipped with a high-precision laser rangefinder, this system measures distances up to 50 meters with an accuracy of d*0.01% ± 2mm. It automatically calculates areas and lengths within the thermal image, ideal for building inspections and thermal loss assessments of large equipment.



On-device Analysis
Easily annotate images during inspections with the bookmark feature. Bookmarked images can be retrieved anytime for onboard analysis and streamlining your workflow.



Professional Analysis Software

AnalyzIR Venus software enables detailed data analysis, batch processing of inspection results, and instant report generation, enhancing the efficiency and professionalism of inspection workflows.

Specifications

Thermal Imaging Parameters

Model	Ti7	Ti5
Infrared Resolution	640*480	384*288
Super Resolution	1280*960	768*576
IR Detector Type	Uncooled infrared focal plane detector	Uncooled infrared focal plane detecto r
Thermal Sensitivity NETD)	<30mK@30°C	<40mK@30°C
Detector Pitch	17μm	17μm
Spectral Range	8~14μm	8~14μm
Image Frame Rate	30Hz	30Hz
Field of View (FOV)	44° *33°	
Spatial Resolution (IFOV)	1.2mrad	2mrad
Minimum Imaging Distance	0.1m	0.1m
Focal Length (mm)	14mm	8mm
Focus Mode	TurboFocus® system for continuous, laser-assisted, thermal contrast AF, touc h AF; Manual focus	
Lens Identification	Automatic Identification	

Unique Features

TurboFocus®	TurboFocus® Speedy Intelligent Autofocus system for continuous, laser distance, thermal contrast, and touch focus; Manual focus.
T-DEF®	Thermal and visible light image blend, transparency 0% ~100%
IREdge	Contour detail enhancement
T-TWB®	Tempetrature visual representation normalization option

Temperature Analysis

Model	Ti7	Ti5
Temperature Range	-20~120℃ (-4~248 ℉) 0~550℃ (32~1022 ℉) Intelligent range	
Measurement Accuracy	± 2℃ (3.6 ℉) or ± 2 %, whichever is greater ambient temperature at 1 5~35° C(59~95 ℉) , target object temperature >0° C, calibration at 1 meter)	
ROI Spot	12	6
ROI Line	3	3
ROI Area	12	6
Measurement Parameters	Emissivity, Partial emissivity, Reflected temperaure, Ambient temperature, Humidity, Distance and IR window compensation.	
On-device Analysis	Support	
PC Software	AnalyzIR®	

Image Display

Model	Ti7	Ti5
Display Screen	5 inch touch screen (1280 x 720)	
Image Mode	Thermal image, Digital Camera, Picture in Picture, and T-DEF®, High sensiti vity mode (only active when the lens is identified as a gas detection lens)	
Palettes	10	
Temp Span Mode	Auto (Minimum Temp Span 3℃ (5.4 ℉)), Manual (Minimum Temp Span 2℃ (3.6 ℉)), Touch-screen(Minimum Temp Span 2℃ (3.6 ℉).	
Color Alarms (temperature alarms)	High temperature, low temperature, and interval isotherms	
Image Overlay	Display global max, min, avg measurement parameters	
High/Low Temperature Tracking	Yes, for both global and ROI	
Digital Zoom	1-10x, continuous	1-8x, continuous

Capture Feature

Digital Camera	8MP industrial grade camera
Storage Card	Micro SD card, 64G, expandable up to 1TB
Time-lapse Capture	Set the time interval from 2 seconds to 1 hour to save the images of correspondin g modes in thermal image mode (IR image, T-DEF®, Picture-in Picture
Image Format	Radiometric thermal photo (JPEG.), non-radiometric digital camera photo
Gallery	Support viewing images and videos in the gallery as icons. Support previewing images and videos in the gallery. Support thermal image analysis in the gallery. Support filtering and deleting images and videos in the gallery

Data Connection

WiFi	Support 2.4GHz&5GH channel Support 802.11a/b/g/n/ac
Bluetooth	BT4.2 LE Support
USB	USB Type-C type USB 3.0 / 2.0 compliant
HDMI	Micro HDMI type HDMI 1.4 compliant Support 1080P imaging video streaming in 60Hz.

Auxiliary Features

Software and Firmware Upgrade	Support OTA remote upgrade and SD card local upgrade
Laser	Independent key activation; Laser level: 2; Wavelength: 635nm; Power: <1mW; Laser distance: 0.1~50m, Accuracy: d*0.01%±2mm.
Laser-assisted Area Measurement	Support
LED Flash Lamp	Support torch illumination and flash light mode

Power System

Battery	Rechargeable Li-ion, 7.4V, 3500mAh
Battery Operating Time	≥ 4 hours per battery(depends on the environment and workload)
Battery Charging System	Two-bay battery charger with LED display (12V, 3A)
Battery Charging Time	2.5 hours to 90% full charge
Energy Management	User-selectable screen-off modes
External Power Source	Support using DC 12V to power the device

Reliability and Certificates

Safety	EN 61010-1
Electromagnetic Compatibility	EN IEC 61326-1
Enclosure Rating	IP54(IEC 60529)
Drop	Engineered to withstand 2 meters (6.5 feet) drop with standard lens
Shock	25g(IEC 60068-2-27)
Vibration	2g(IEC 60068-2-6)
RoHS Compliant	Compliant

Physical Parameters

Operation Temperature	-20~50℃ (-4~122 ℉)
Storage Temperature	-40~70℃ (-40~158 ℉) without battery
Relative Humidity (Operation and Storage)	<95%RH
Dimensions	313mm*123mm*139mm
Weight	1.0kg (lens not included)
Battery Weight	150g
Casing Material	Hard plastic: PC+ABS, Soft plastic: TPE, Magnesium alloy, Aluminum alloy
Mounting Method	Support UNC 1/4-20 interface for tripod connection

Warranty

Warranty	2 years
Recommended Calibration Interval	2 years

Language

Language	English, Spanish, German, Traditional Chinese, Korean, Italian, Portuguese,Thai, French

Standard Configuration

Packaging	Infrared thermal imager, lens, lens cover, 2 batteries, battery charger, power adapter, USB type-C to USB interface cable,micro HDMI to HDMI interface cable, SD card, SD card reader, accessory bag (wrist strap, 2 wrist strap holders, 2 M4 * 8 screws, lanyard, Allen wrench), information bag (packing list,user manual, calibration certificate, warranty card), portable soft bag, portable hard case

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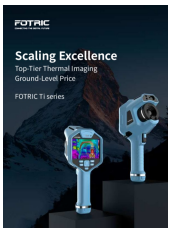
Documents / Resources

	FOTRIC Ti series Advanced Sharp View Thermal Camera [pdf] Instruction Manual Ti7, Ti5, Ti series Advanced Sharp View Thermal Camera, Ti series, Advanced Sharp View Thermal Camera, Sharp View Thermal Camera, View Thermal Camera, Thermal Camera, Camera

References

- FOTRIC | Infrared Thermal Imaging and Acoustic Imaging Camera Manufacturer
- User Manual