Cal Power
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FOTRIC
Sense the Digital Future

Portable and Easy to Use

Intuitive | Compact | Sharp Image | Precise measurement

FOTRIC TF3

Compact Thermal Imaging Camera

240x320
Infrared Resolution

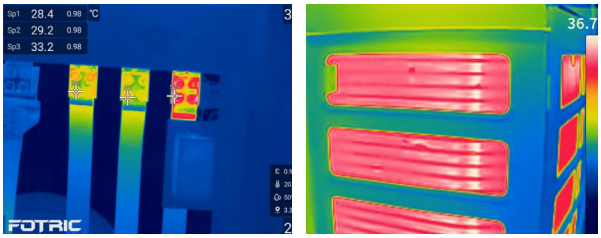
±2%/±2°C
Measurement Accuracy
Ceramic packaged detector

2MP
Industrial Grade Digital Camera

-20~450°C
Temperature Range

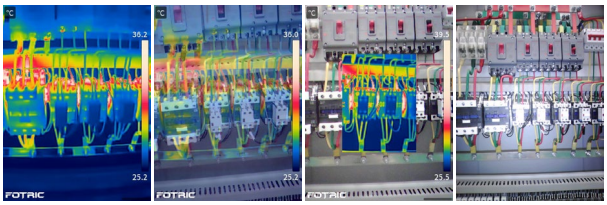
30Hz
Image Frame Rate

30mk
Thermal Sensitivity



240×320 IR Resolution, High Thermal Sensitivity

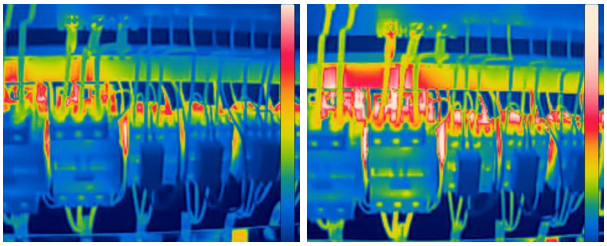
Clearer detail presentation makes it easy to quickly identify temperature distribution and abnormal areas, presenting more delicate and sharper image quality.



Thermal T-DEF® PIP Visible light

Four Image Modes

Supports four display modes: infrared image, visible light temperature measurement (T-DEF®), Picture-in-Picture and visible light image to meet the observation, positioning and analysis needs in different scenarios.



TWB(Off) TWB(On)

Histogram Temperature Gradient Imaging (T-TWB®)

Optimize picture performance under large dynamic range, automatically tone the image based on temperature distribution, and help users see more gradients and details in complex environments.

Focus-free Imaging

Point and shoot, intuitive design. Made for quick start and avoid temperature measurement deviations caused by inaccurate focus.

Compact and Lightweight

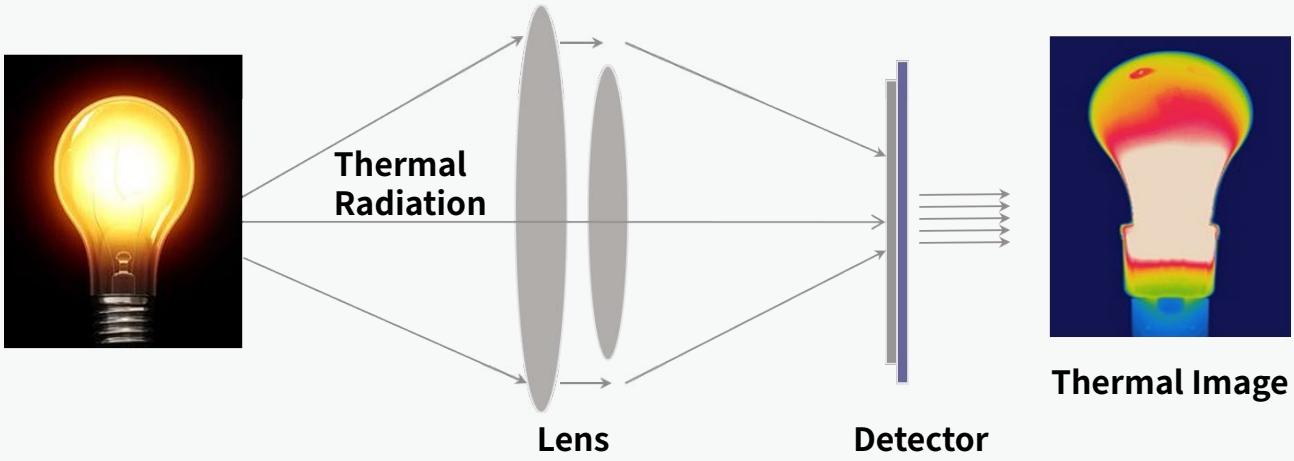
The compact body weighs only 430g, making it easy to carry and operate with one hand. Suitable for mobile, on-site inspections and long-term use.

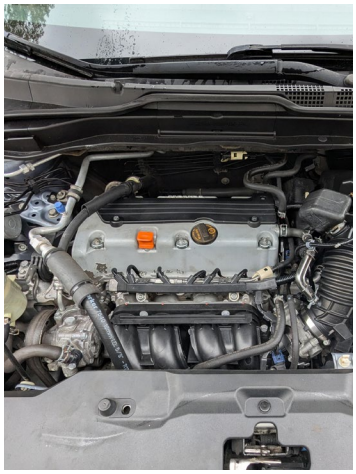
Large FOV

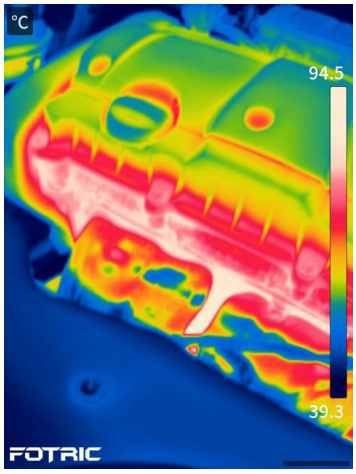
38° × 50° wide FOV for wider coverage, ideal for rapid inspection and short-range large-area measurement.

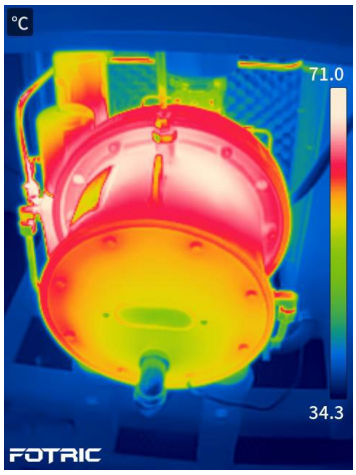
Thermal Imaging Principle

Thermal imaging cameras rely on passive imaging and are very safe to operate.









Thermal imaging camera is a "Temperature Camera"

Thermal imagers detect infrared energy emitted by objects and convert it into intuitive thermal images, making temperature differences visible at a glance. They quickly reveal overheating, poor connections, heat loss, and other hidden issues without physical contact.

Ideal for electrical inspection, equipment maintenance, building diagnostics, and home safety checks, thermal imagers provide full-scene temperature distribution, faster inspections, and reliable operation even in complete darkness.

Applications

Electrical equipment inspection

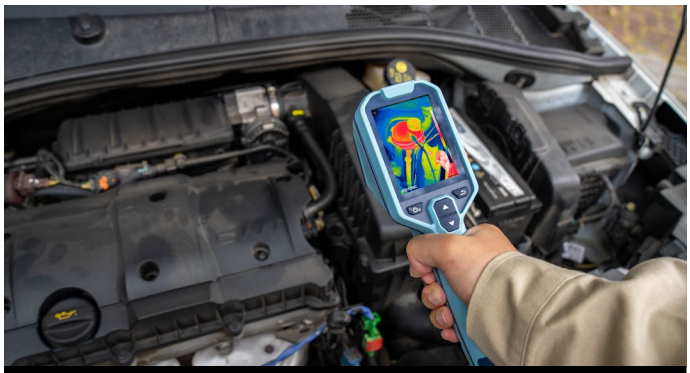
- Electrical circuits overload
- Loose or corroded electrical contacts
- Insulation failure

Mechanical equipment inspection

- Motors, pumps and fans inspection
- Bearing wear and lubrication failure detection
- Identify shaft misalignment

Building surface temperature inspection

- External wall water seepage detection
- Material insulation performance inspection
- Exterior wall cavity assessment



Car fault diagnosis

- Engine system temperature distribution
- Brake inspection
- AC outlet inspection

HVAC temperature diagnosis

- Condenser duct blockage detection
- Insulation condition inspection
- Water leakage location detection

Floor heating diagnosis

- Accurate location of leaks
- Identification of pipe blockage
- Identification of unevenly hot and cold pipes

Specification

Basic Parameters	
Infrared Resolution	240 × 320
Detector Type	Uncooled infrared focal plane detector with ceramic packaging
Thermal Sensitivity (NETD)	<30 mK @ 30°C
Spectral Response Range	8–14 µm
Frame Rate	30 Hz
Field of View (FOV)	38° × 50°
Spatial Resolution (IFOV)	2.76 mrad
Minimum Focus Distance	0.3 m
Focal Length	4 mm
Focusing Mode	Focus-free
Measurement Analysis	
Temperature Range	-20 to 450°C
Measurement Range	-20 to 120°C , 0 to 450°C
Temperature Accuracy	±2°C or 2%, whichever is greater (ambient temperature 15–35°C , target temperature >0°C , calibrated at 1 m)
Temperature Spot	Center spot
Measurement Box	Center box
Global Temperature Correction	Supports emissivity and target distance correction
Analysis Software	AnalyzIR professional thermal imaging analysis software
Image Display	
Display	3.2-inch, 640 × 480 pixels, IPS LCD display
Image Modes	Infrared image, visible-light temperature measurement (T-DEF®), picture-in-picture, visible light
Visible-light Temperature Measurement (T-DEF®)	Visible-light temperature measurement; adjustable infrared image transparency from 0% to 100%
Picture-in-Picture	Overlay the infrared image on the visible image
Palette	Supports 4 general palettes: Rain, Iron, Grey, Rainbow
Temperature Span Mode	Supports automatic temperature span adjustment; manual span adjustment supported (minimum 2°C)
High/Low Temperature Tracking	Special markers automatically track the highest and lowest temperatures in the measurement area
Color Alarm	Supports temperature-over-limit color alarm
High-Temperature-Difference Balanced Imaging (T-TWB®)	Optimized display for a wide dynamic range, revealing more details
Capture Functions	
Digital Camera	2 MP industrial-grade digital camera
Memory Card	TF card, hot-swappable, max. 32 GB
Image Format	jpg (thermal image), jpg (visible-light image)
On-device Gallery	Supports thumbnail browsing and preview

Data Connectivity	
USB Port	USB Type-C, compliant with USB 2.0 standard
Auxiliary Functions	
Software and Firmware Upgrade	Supports local upgrade via TF card
LED Illumination	Supports flashlight and strobe modes
Power System	
Battery Type	3.6 V, 4800 mAh rechargeable lithium battery
Battery Runtime	Continuous working time ⩾ 6.5 hours (actual runtime depends on ambient and usage conditions)
Charging Method	Supports direct charging via USB Type-C port
Charging Time	Charges to 90% in 2.5 hours
Power Saving Management	Auto power-off, auto screen-off
External Power Supply	Supports powering the device via USB Type-C port
Reliability and Certification	
Safety Standard	GB 4793.1 / EN 61010-1
EMC Compatibility	GB/T 18268.1 / EN IEC 61326-1
Protection Rating	IP54 (GB/T 4208 / IEC 60529)
Drop Resistance	Designed for 2 m drop resistance
Impact Resistance	25 g (GB/T 2423.5 / IEC 60068-2-27)
Vibration Resistance	2 g (GB/T 2423.10 / IEC 60068-2-6)
RoHS Compliance	Compliant
Flame Rating	UL94 HB
Physical Parameters	
Operating Temperature	-20 to 50°C
Storage Temperature	-40 to 70°C , without battery
Relative Humidity	<95% RH
Dimensions	222 mm × 74 mm × 77 mm
Weight	430 g
Housing Material	Rigid: PC+ABS; soft: TPE
Mounting Method	Supports UNC 1/4-20 interface connection to tripod
Warranty and Maintenance	
Warranty Period	1 year for the device
Recommended Calibration Interval	2 years
Languages	
Supported Languages	English, German, French, Spanish, Portuguese, Italian, Polish, Japanese, Korean, Traditional Chinese, Thai, Simplified Chinese
Standard Package	
Standard Package	Main unit, USB Type-C to USB cable, 32 GB TF card, quick start guide, color box, carrying pouch

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