

TOPDON®



TCView TC002

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TopInfrared

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## Brief

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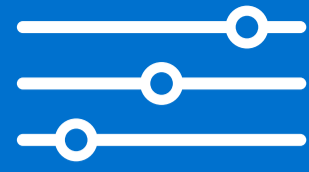
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# TCView TC002

The TC002 thermal imaging camera for smartphones provides top-notch accuracy for temperature detection, insulation inspection, and circuit board inspection. With an ultra-high resolution of 256x192, the TC002 delivers clear and detailed thermal images. It offers a temperature detection range of  $\pm 3.6^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ ), with an accuracy of  $0.1^{\circ}\text{C}$ ; and with its low power consumption of 0.35W, you can use it for extended periods of time without worrying about running out of battery. The high heat sensitivity of 40mk allows for precise temperature changes to be sensed.

Brief



# Specs

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## Specification



**Spectral Range:** 8~14μm  
**Resolution:** 256×192 Pixels  
**Pixel Size:** 12μm  
**NETD:** <40mK @25°C,  
**Frame Rate:** 25Hz

## Operating Systems



Compatible with iPhone & iPad

## Temperature

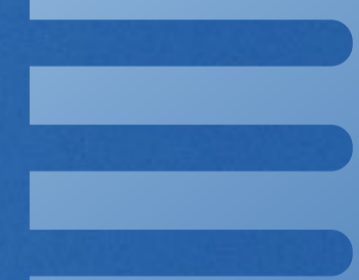
**Object Temperature Range:**  
-20~150°C (-4~302°F),  
150°C~550°C (302~1022°F)

**Accuracy:**  
Temperature Accuracy: ±3.6°F(2°C)  
Temperature Resolution: down to 0.1°C (0.1°F)



## Parameters

**Weight:** 30g  
**Dimension:**  
71\*42\*14mm (2.80\*1.65\*0.55 inch)  
**Cable Length:**  
50cm (19.69 inch)



Brief

## UNLIMITED ACCURACY, UNLIMITED CLARITY

The TC002 boasts a high-resolution of 256 x 192 pixels, providing clear and detailed thermal images of your target. Its high accuracy and clarity make it perfect for objects where surface temperature is difficult to distinguish.

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## BUILT FOR MOBILITY

The TC002 is compact and lightweight, measuring 2.8 inches by 1.65 inches by 0.55 inches, and weighing just 30 grams. Its portable design makes it easy to pair with iPhones and iPads, and the rugged aluminum case provides protection against drops, ensuring you can monitor temperature anywhere, anytime.

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## LOWER CONSUMPTION, LONGER BATTERY LIFE

The TC002 connects to your iPhone or iPad and is powered by the device; eliminating the need for a separate power source.

Its low power consumption of 0.35W ensures longer battery life, with 4-7 hours of usage on devices with a 3000-5000mAh battery.



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## IMPROVED TEMPERATURE RANGE AND ACCURACY

The TC002 boasts a wide temperature range of  $-4^{\circ}\text{F}$  to  $1022^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$  to  $550^{\circ}\text{C}$ ), making it suitable for temperature readings on a variety of objects. It also boasts serious accuracy, with a maximum deviation of  $\pm 3.6^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ ) or 2% of the actual temperature, and a temperature measurement resolution of  $0.1^{\circ}\text{F}$  ( $0.1^{\circ}\text{C}$ ).





Brief

# EXTENSIVE APPLICATIONS

The TC002's precise temperature measurement capabilities make it an ideal tool for a variety of industries and applications. It allows for safe temperature readings from a distance; making it suitable for home inspectors, HVAC technicians, electricians, automotive technicians, and even farmers looking to monitor crops and livestock.

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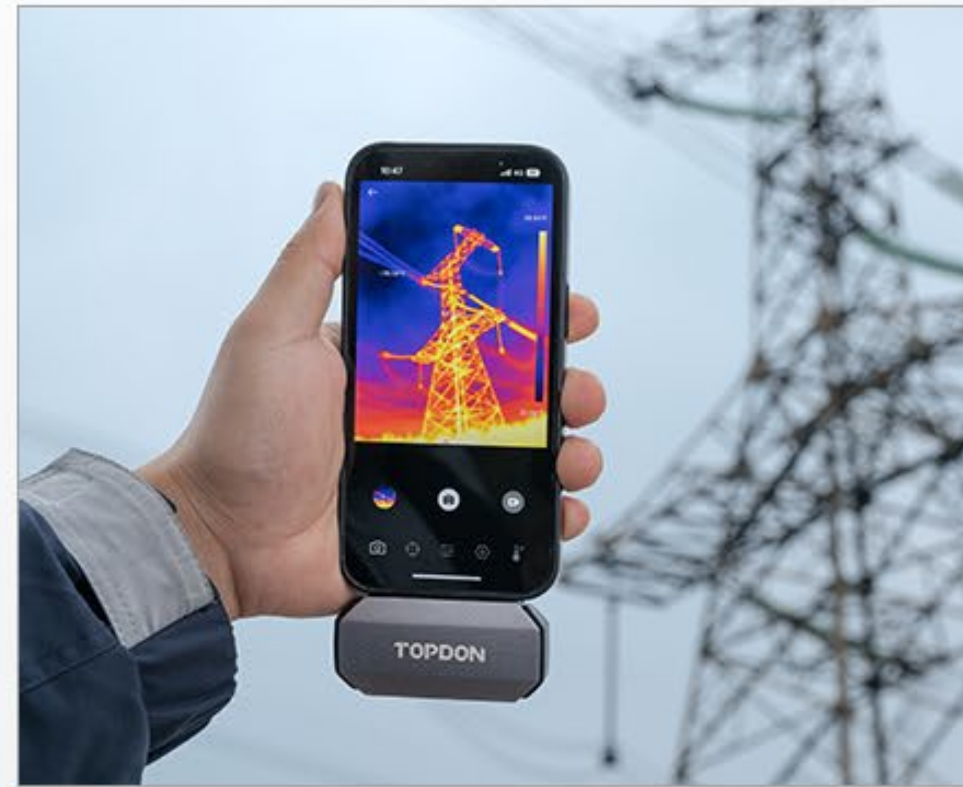
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Electrical Inspections



Boiler Inspections



Electrical Power Monitoring



HVAC Inspections



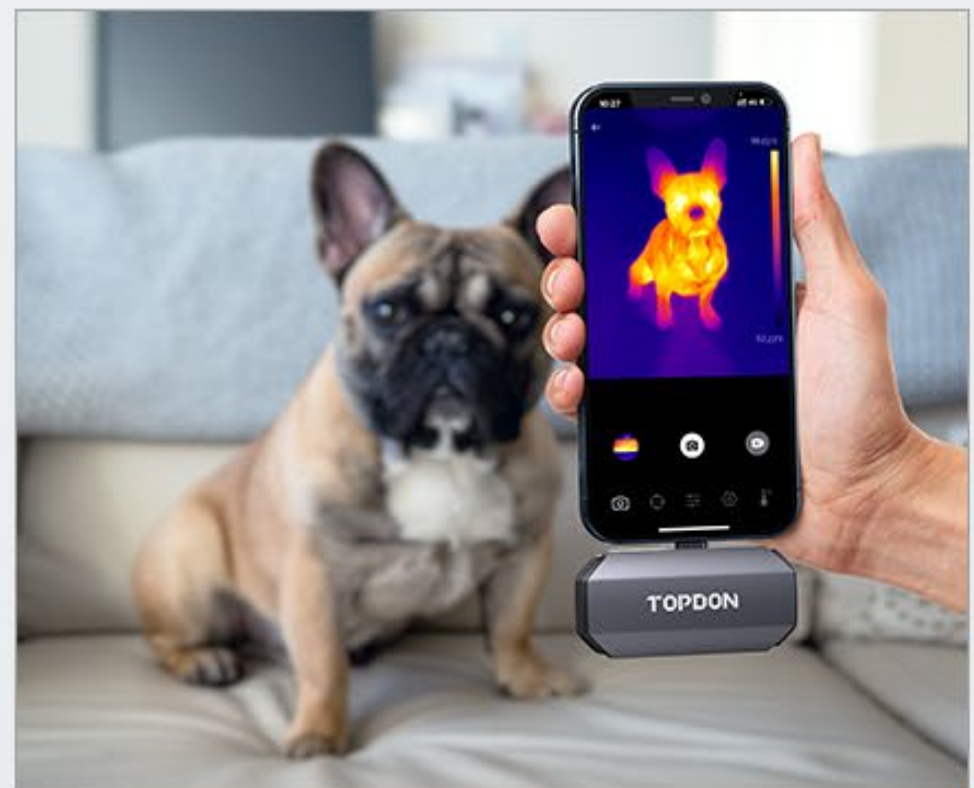
House Maintenance



Circuit Board Inspections



Vehicle Fault Inspections



Animal Observation

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# THERMAL IMAGE WITH MORE DETAILS

### Three Temperature-Reading Dimensions:

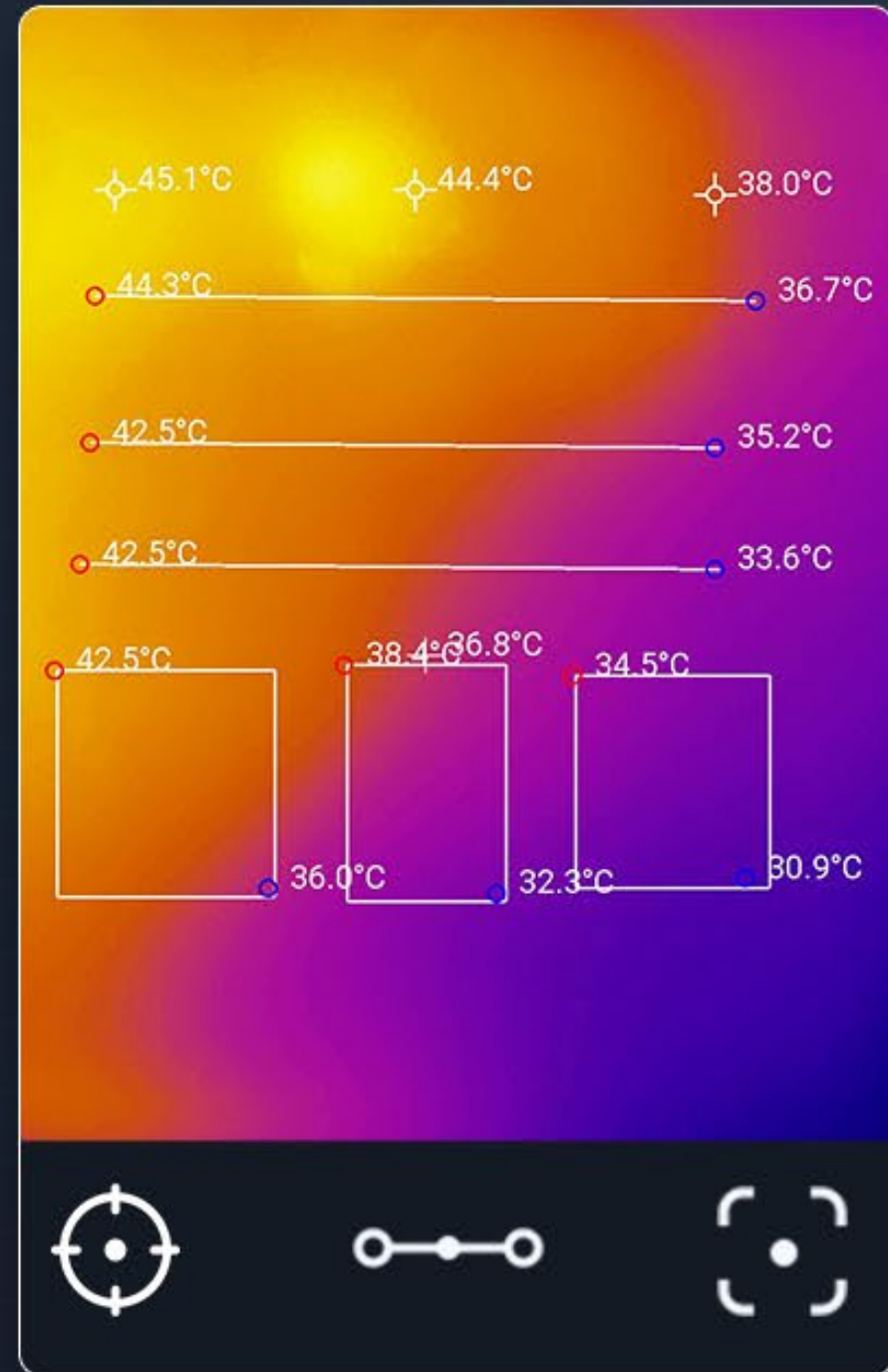
With the TC002 App, users can manually select from three different dimensions to check temperature: Point, Line (with highest and lowest readings), and Surface (with highest and lowest readings).

### Multiple Color Palettes:

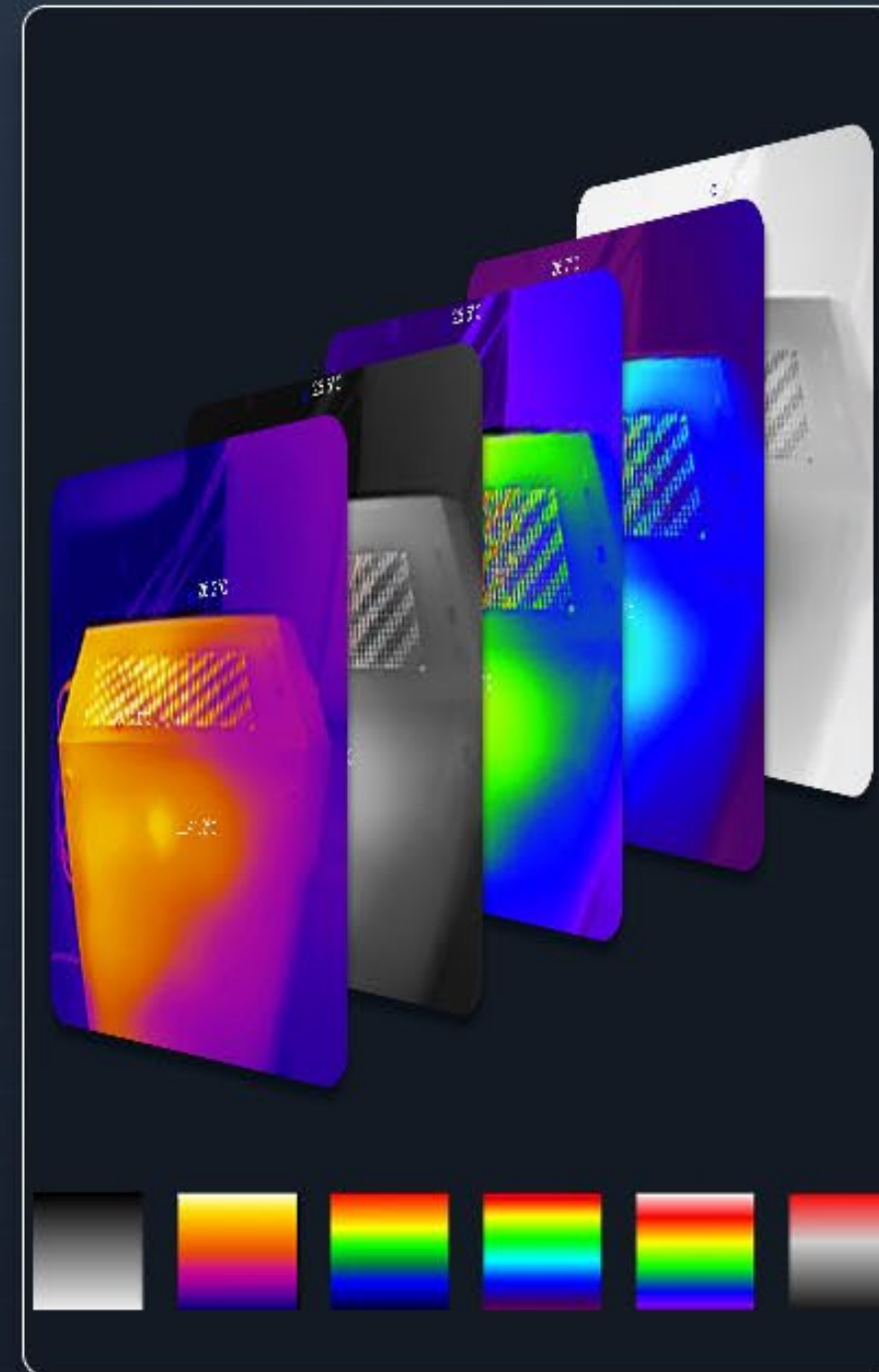
The TC002 offers 11 unique color palettes, allowing users to customize their temperature display to their preferred gradient colors.

### Image Enhancement:

Users can adjust the sharpness and contrast of the thermal image to achieve a customized view.



3 Temperature-Reading Dimensions



Multiple Color Palettes

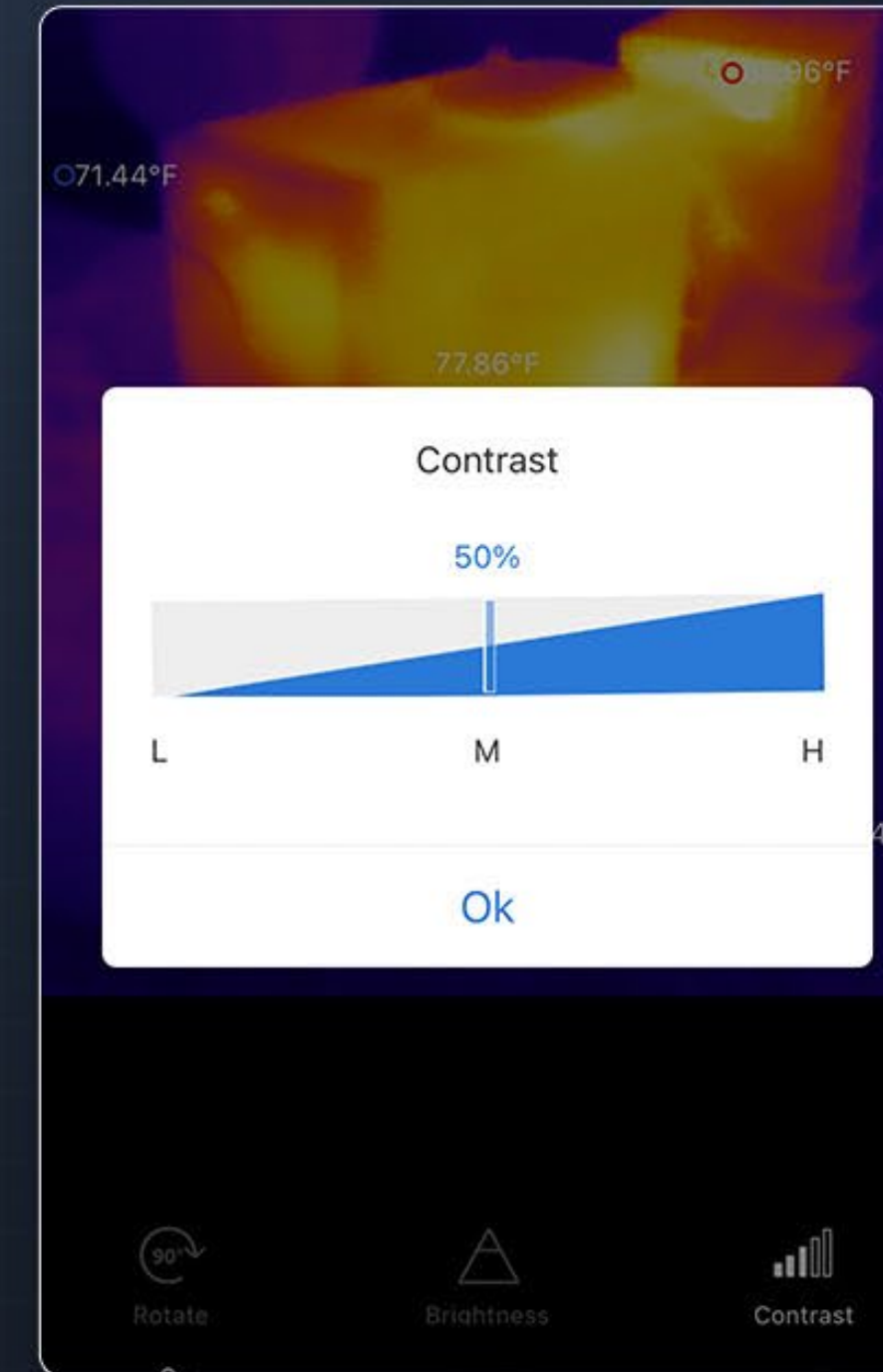


Image Enhancement



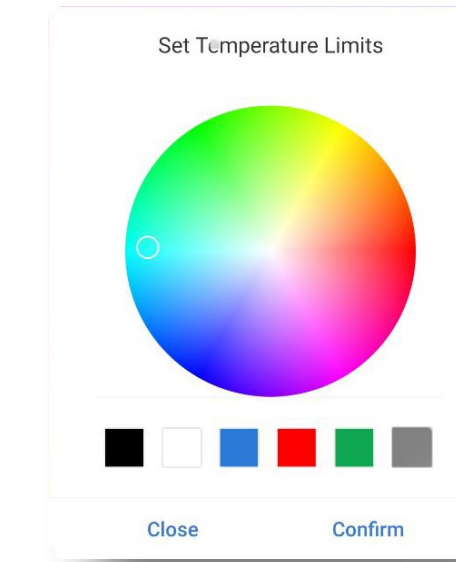
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# SMART TEMPERATURE ALERTS

Take full control by setting your preferred temperature limits, choosing from a variety of alert sounds, and customizing colors to match your preferences. Once your target area exceeds the defined limits, you'll receive clear visual cues with color differentiations and alert sounds. Keep ahead of temperature changes and respond swiftly with confidence.



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# ENHANCE YOUR REPORTS WITH INFRARED INSIGHTS

Effortlessly customize and generate professional infrared testing reports using our advanced software. Tailor your data, add watermarks, and adjust environmental parameters for personalized results. Share your expertise seamlessly and elevate your infrared testing capabilities! We welcome your valuable feedback to make the software uniquely suited to your needs. Step into a future of possibilities with our innovative infrared solutions!

Specs

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TC20230802\_1703

Author  
TOPDON

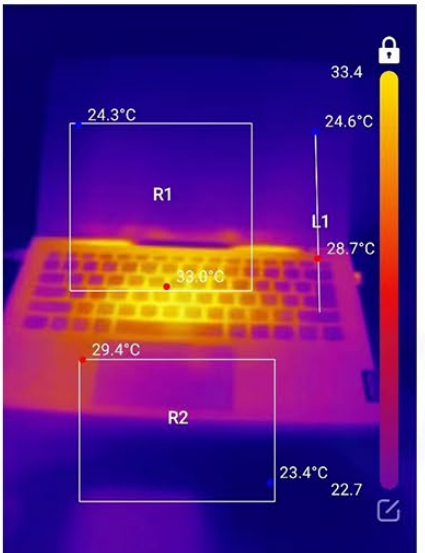
Location  
400 Commons Way, Suite A Rockaway

time  
2023.08.02 17:03

**Detection Requirements**

Ambient Temperature	30.0°C
Ambient Humidity	75.2%
Test Distance	0.25m
Emissivity	0.95

**Infrared Data**



**Dot(P)**

Name	Value
P1 Temperature	25.0°C
P1 Note	Computer temperature

**Line(L)**

Name	Value
L1 Lowest Temperature-Highest Temperature	24.6°C~28.7°C
L1 Ave. Temp	26.4°C
L1 Note	Over temperature
L2 Lowest Temperature-Highest Temperature	26.7°C~32.7°C
L2 Ave. Temp	30.0°C

**Plane(R)**

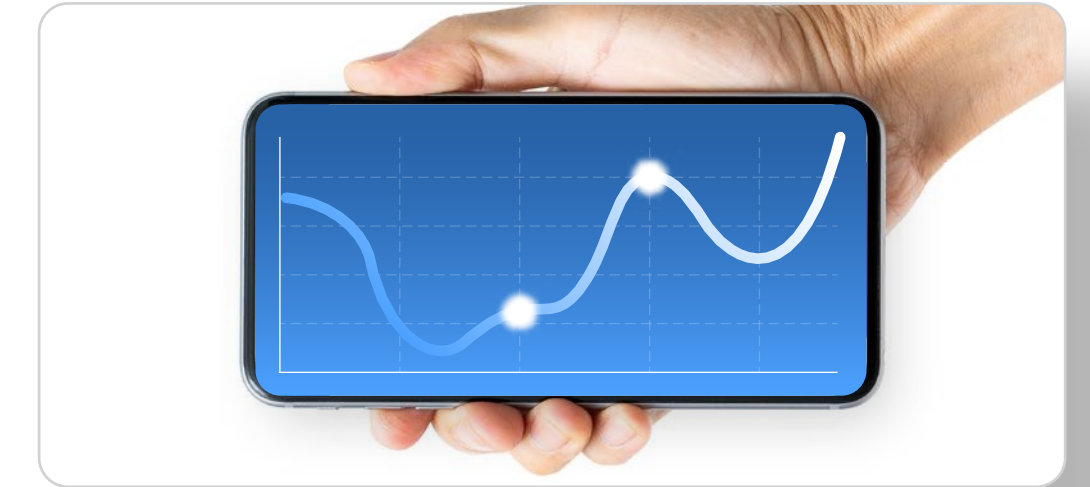
Name	Value
R1 Lowest Temperature-Highest Temperature	24.3°C~33.0°C
R1 Ave. Temp	27.3°C
R2 Lowest Temperature-Highest Temperature	23.4°C~29.4°C
R2 Ave. Temp	26.2°C

Brief

# INTUITIVE AND GRAPHICAL WAVEFORM

The TC002 thermal camera can take continuous temperature readings and store the data in its accompanying app. This data can then be used to calculate the high, low, and average temperatures of objects within its field of view over a certain period of time; allowing users to visualize the data in the form of a waveform graph.

Note: Support data export in Excel format.



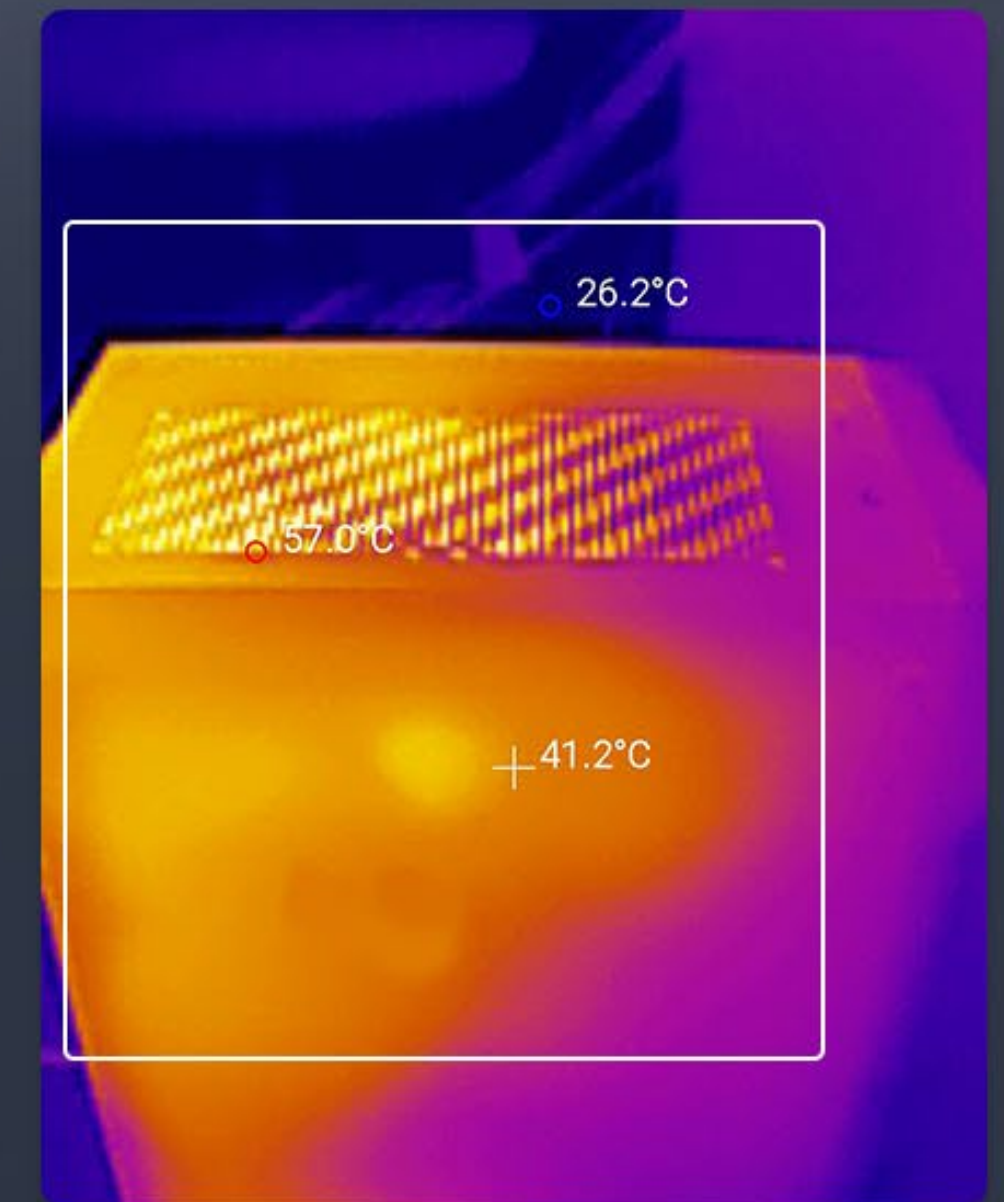
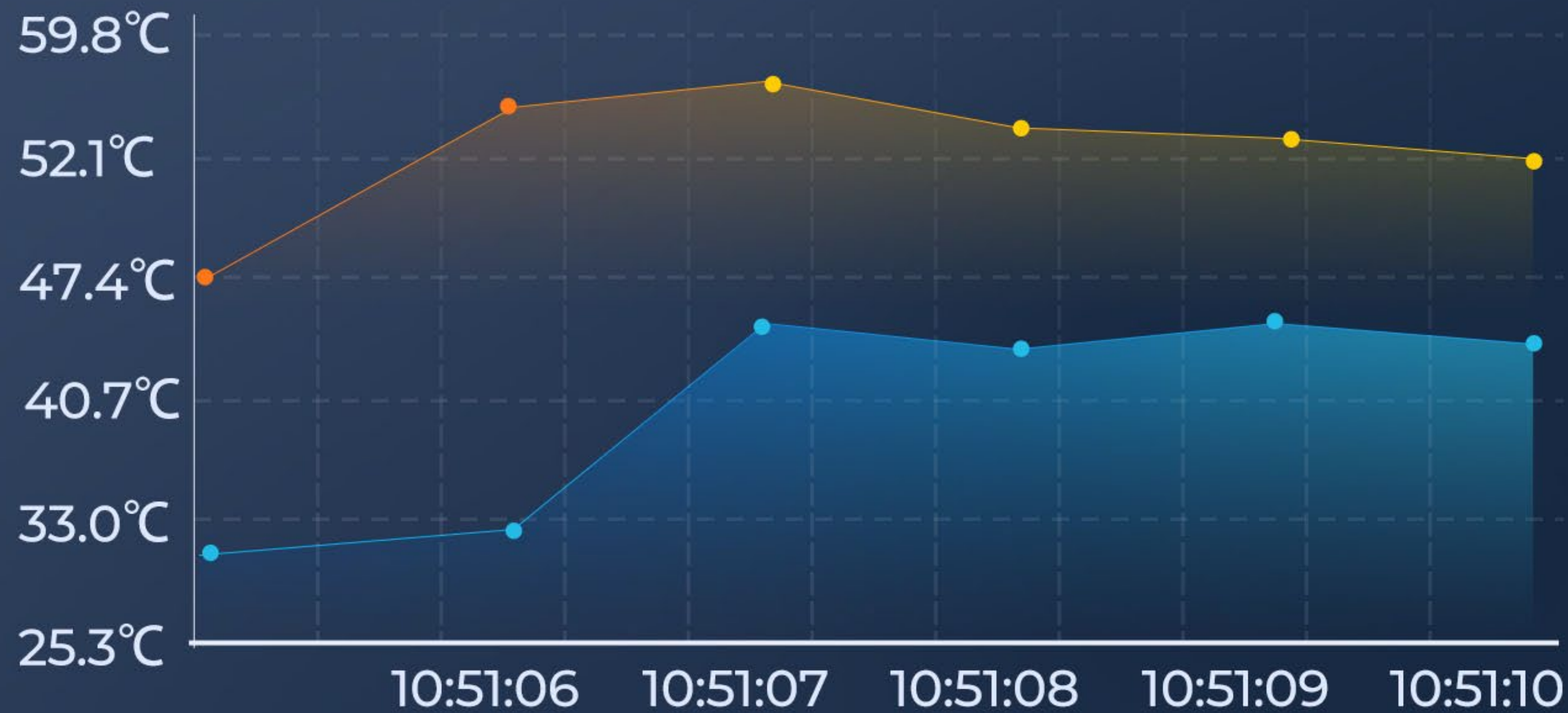
## Features

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# TC002 Functions

Turns Your iPhone Into An Infrared Thermal Camera.

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Read temperature of more objects ranging of  $-4^{\circ}\text{F}$  to  $1022^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$  to  $550^{\circ}\text{C}$ ).



Manually select 3 dimensions to check temperature: Point, Line(Highest and Lowest), Surface(Highest and Lowest).



DIY max and min limits, and corresponding colors to view temperature intuitively.



Adjust image sharpness and contrast to make the field of view clearer.

What's In The Box?



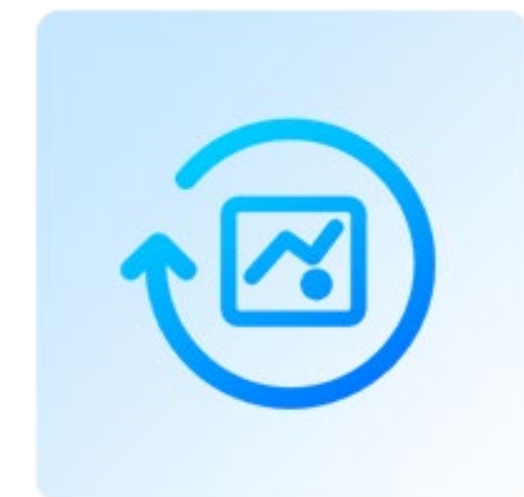
Monitor Temperature Change by Waveform Graph



Choose from a variety of color palettes for more creative possibility.



Display a clear thermal image with ultra-high IR resolution of  $256 \times 192$ .



Manipulate images with rotation and Picture-in-Picture options.

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# What's In The Box?



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**What's In The Box?**

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<b>TC002 Thermal Imaging Camera</b>  x 1	<b>Carrying Case</b>  x 1	<b>Multifunctional Adapter Cable</b>  x 1	
<b>Package Box</b>  (Front)	 (Inner) x 1	<b>Quick User Guide</b>  x 1	<b>Cleaning Cloth</b>  x 1

MODEL	TC001	TC002	TC003	TC004	TC005
SPECIFICATIONS					
Display screen	NA	NA	5-inch, 854*480 touchscreen	2.8 inch, 320*240 screen	
Operating system	NA	NA	Android	Linux	Linux
Compatible systems	Android/Windows devices	iOS devices	Android/Windows devices	Standalone use/ Windows devices	Standalone use/ Windows devices
Storage	NA	NA	2GB RAM+32GB storage	2GB RAM+16GB TF card	
Battery type	NA	NA	Built-in 5000 mAh battery	Built-in 5000 mAh battery	Built-in 5000 mAh battery
Charging time	/	/	3h	4h	
Standby time	/	/	4h	12h	
Operating temperature	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C	
Operating voltage	5V	5V	5V	5V	5V
Measuring range	-20 ~550 °C (-4 ~ 1022°F)	-20 ~ 550 °C (-4 ~ 1022°F)	-20 ~550 °C (-4 ~ 1022°F)	-20-350 °C (-4 ~ 662°F)	-20 ~ 550 °C (-4 ~ 1022°F)
Temperature resolution	0.1°C	0.1°C	0.1°C	0.1°C	
Temperature units	Celsius, Fahrenheit	Celsius, Fahrenheit	Celsius, Fahrenheit	Celsius, Fahrenheit, Kelvin	
Measuring modes	Dot, line, plane	Dot, line, plane	Dot, line, plane	Center spot/hot spot/ cold spot	Center spot/hot spot/ cold spot
Measuring accuracy	±2°C or ±2%	±2°C or ±2%	±2°C or ±2%	±2°C or ±2%	
Gross weight (g)	220	220	900	1100	1100
Device weight (g)	30	30	367	520	520
Package Sizes (mm)	140*102*46	140*102*46	221*140*186	280*165*120	280*165*120
LED flashlight	NA	NA	Yes	Yes	
Visible light camera	NA	NA	2-megapixel low-light night vision camera	NA	2 megapixels
Infrared light resolution	256*192	256*192	256*192	256*192	
Image modes	Thermal Imaging, PIP,	Thermal Imaging, PIP,	Thermal Imaging, Visible, Dual Light, PIP	Thermal Imaging	Thermal Imaging, Dual Light, Visible, Picture-in-Picture
Pseudo color bar	9 colors	11 colors	9 colors	4 colors (white hot, black hot, iron, rainbow)	7 colors (white hot, black hot, lava, iron, rainbow, rainbowHC, RdCy)
Frame rate	25Hz	25Hz	25Hz	20Hz	
NETD	<40mK	<40mK	<40mK	<40mK	
Spectral range	8 – 14µm	8 – 14µm	8 – 14µm	8 – 14µm	
FOV	56.0°×42.2°×71.3°	56.0°×42.2°×71.3°	56.0°×42.2°×71.3°	52.5°x 39.5°	
Focal range	3.2mm(0.25m)	3.2mm(0.25m)	3.2mm(0.25m)	3.2mm(0.25m)	
Tripod screw hole	/	/	Yes	Yes	
Drop, impact, and vibration	2m	2m	1.5m	2m, impact 25g (IEC 60068-2-27), vibration 2.5g (IEC60068-2-6)	
Waterproof	/	/	IP54	IP54	
High/low temperature alarms	Available soon	Available soon	Available soon	Yes	
Video recording	Yes	Yes	Yes	Yes	
Video transfer via USB	Yes	No	Yes	Yes	
PC-based analysis software	Yes	No	Yes	Supports imagery analysis with PC	
Auto shutdown	/	/	Yes	5 mins, 10 mins, 20 mins, Off	
Languages	English, Chinese, Japanese, French, Spanish, Italian, Portuguese, German, Polish, Russian, Dutch, Czech, Ukrainian	English, Chinese, Japanese, French, Spanish, Italian, Portuguese, German, Polish, Russian, Dutch, Czech, Ukrainian	English, Chinese, Japanese, French, Spanish, Italian, Portuguese, German, Polish, Russian, Dutch, Czech, Ukrainian	13 languages (English, Traditional Chinese, Korean, Japanese, French, Spanish, Italian, Portuguese, German, Polish, Russian, Hungarian, Turkish)	



Brief



## FAQs

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### Question

Why isn't the TC002 responding after being connected to my iOS device?

Features

### Answer

Please follow these steps to troubleshoot the issue:

- a)** Verify that your iOS device has iOS 11 or later, and is an iPhone 7 or newer.
- b)** Confirm that you have downloaded the TopInfrared app and granted necessary permissions.
- c)** Try unplugging and reconnecting the TC002. If the issue persists, please contact after-sales personnel.

Functions

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# FAQs

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## Question

Why isn't the TC002 working after using the extension cable to connect to my iOS device?

Features

## Answer

Make sure to connect the female end of the cable to the TC002 before connecting the male end to your iOS device. Failure to do so may result in the TC002 not being recognized.

---

Functions

## Question

Can the TC002 detect objects through walls, glass, or water?

What's In  
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## Answer

No, the TC002 uses infrared detection in the 8-14  $\mu\text{m}$  wavelength range and can only measure surface temperatures.

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# FAQs

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## Question

Why does the temperature reading increase when the device gets closer to the object?

Features

## Answer

Infrared radiation attenuates when passing through the atmosphere. The longer the distance, the greater the attenuation. Thus, the accuracy of temperature measurement at a distance will decrease. To ensure accuracy of measurement, please go to Personal Information- Settings - Temperature Correction - Distance to Spot, and input the actual distance (max: 5m) to get the corrected temperature.

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Functions

## Question

Is the TC002 compatible with Android devices?

## Answer

No. The TC002 is ONLY compatible with iOS mobile devices.

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## FAQs

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### Question

While I'm using the thermal imaging function, why is there a clicking sound with a frozen screen, once every few dozens of seconds?

Features

### Answer

To ensure measurement accuracy, the TC002 performs periodic internal temperature calibration every few dozen seconds. This process is controlled by a micro-motor and causes a clicking sound and a brief screen freeze. To disable the internal calibration function, go to the TC002 app's Personal Information section and turn off Auto Shutter.

Functions

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### Question

What's In  
The Box?

What external factors will affect the infrared temperature measurement?

### Answer

The factors are as follows:

- a)** Emissivity of the target object surface.
- b)** Ambient temperature: the object will reflect the infrared rays emitted by surrounding objects, which affects the temperature measurement of the object itself.
- c)** Atmospheric temperature: the atmosphere also emits infrared rays.
- d)** Atmospheric transmittance: the infrared rays emitted by the object are attenuated in the atmosphere.
- e)** Distance: the longer the distance, the greater the attenuation of the infrared rays emitted by the object in the atmosphere.

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