MILESEEY®

TR10

手持式红外热成像仪
Handheld Infrared Thermal Imager

使用说明书
User Manual

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Product Overview

Thank you for your purchase of the Mileseey TR10 handheld infrared thermal camera. To ensure optimal use and understanding of this device, please carefully read the user guide provided. The TR10 model boasts a suite of features designed for efficiency in maintenance and inspection tasks, making temperature detection more accurate and user-friendly.

Key Features of The TR10

● 2.8-Inch Color LCD Display: Offers an expansive viewing area to easily identify and analyze fault zones.
● Adjustable Emissivity: Allows for personalized settings to refine detection accuracy based on different materials.
● Image Capture and Storage: Equipped with the capability to take pictures and save them within a built-in 8GB memory, accommodating up to 30,000 images with temperature data for comprehensive analysis.
● Convenient Data Transfer: Features a USB connection for quick and easy export of images to PC terminals.
● Integrated Lithium Battery: Comes with a built-in battery and a TYPE-C charging interface, simplifying the charging process and data transfer.
● Automatic Hot and Cold Spot Tracking: Automatically identifies and locks onto the highest and lowest temperature points within a scene, enhancing diagnostic capabilities.
● Cross-hair display for easy targeting of measuring spot.
● Customizable Temperature Alarms: Enables setting of individual high and low temperature alarms, facilitating immediate attention to critical areas.
● Extensive Temperature Range Measurement: Capable of accurately measuring temperatures up to 550ºC, suitable for a variety of industrial applications.

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●Portable and User-Friendly Design: Ideal for professionals in maintenance and inspection, offering a practical solution for effective temperature monitoring and detection.

Safety Instructions

● To ensure the accuracy of your measurements and your safety, please use this product strictly according to the guidelines provided in the user manual. Please be aware that failing to adhere to these instructions may lead to damages that are not covered under our free warranty service.

● To clean the exterior of this device, gently wipe it with a damp cloth or a mild soap solution. Avoid using abrasive cleaners, isopropyl alcohol, or any solvents on the instrument's casing, lens, and windows, as these substances can cause damage.

● Avoid operating this product in environments that are flammable, explosive, high in steam or humidity, or contain corrosive substances. Using the device under these conditions could impair its performance and pose safety risks.

● Cease using the product immediately if it becomes damaged, has been dropped, or has been modified in any way. Continuing to use the product under these conditions may lead to inaccurate measurements and could compromise safety.

● Please adjust to the correct emissivity of the target material to obtain an accurate temperature readouts.

● During charging, the product's internal temperature increases, potentially affecting measurement accuracy. Therefore, it is advised not to perform measurements while the device is charging or immediately after charging.

● Due to power consumption potentially raising the product's internal temperature, to maintain measurement accuracy, please allow the device to warm up for 2 minutes before use if it has not been used for a long time.

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Appearance

1. USB-C Charging Port
2. LCD Screen
3. Picture Memory Record
4. Up/Down/Left/Right
Short Press to Navigate
5. Power on/off/Return
Long Press to Power on Or off
Short Press to Return
6. Settings
Short Press to Enter Setting Options
7. Thermal Camera
8. Picture Capturing
Short Press to Captures Pictures And Save

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Display Icon
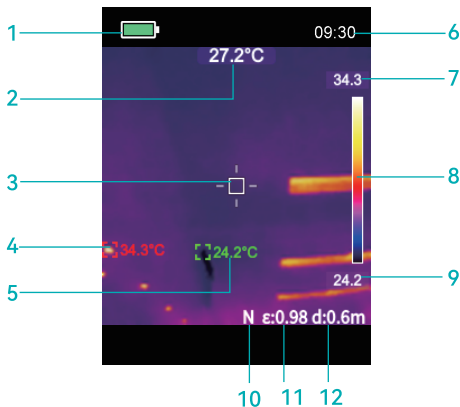
1. **Battery Status**
2. **Center Temperature**
3. **Center Point/Cross-Hairs**
4. **Max Temperature And Position**
5. **Min Temperature And Position**
6. **Time**
7. **Max Temperature On The Bar**
8. **Temperature Bar**
9. **Min Temperature On The Bar**
10. **N: Normal**
(Note: N will be shifted to H when High Temp Range is selected)
11. **Emissivity**
12. **Detection Distance**

Setting Interface

	Emissivity	0.98 >
	Distance	0.6m >
	Temp Range	>
	Temperature Units	>
	Palette	>
	HI/LO Alarm	>
	Display	>
	Display Brightness	>
	Date & Time	>
	Correction	>
	USB Mode	>
	Snap Mode	>
	Auto Power Off	>
	Language	>
	Format Disk	>

⟳ Factory Reset	>
ⓘ Dev Info	TR10

Setting Instructions

● Press Button **SET** to enter the settings menu.
● Navigate to your desired option using Button ▲ / ▼ (up/down), and press Button **SET** again to access the setting.
● Adjust values or select sub-options using Button ▲ / ▼.
● Confirm and save your changes by pressing Button **SET** .
● To return to the main settings menu, briefly press Button ⓞ .

Emissivity

Choosing the correct emissivity is crucial for accurate temperature measurements since it greatly influences the surface temperature readings. To set the emissivity value, press Button **SET** and navigate to the setting interface. Adjust the value using Button ▲ / ▼. Once the adjustment is complete, a short press of Button ⓞ will return you to the main settings menu.

⚙	≪
◎ Emissivity	0.98
◪ Distance	1.0m >
⦿ Temp Range	>
🌡 Temperature Units	>
📊 Palette	>
🌡 HI/LO Alarm	>

ε
0.98

7
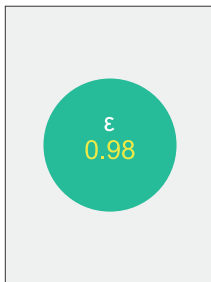
Note: Emissivity settings range from 0.01 to 0.99. For emissivity values of common materials, consult the table provided in the appendix.

Emissivity Of Common Objects

Materials	Emissivity	Materials	Emissivity
Wood	0.85	Black Paper	0.86
Water	0.96	Polycarbonate	0.8
Brick	0.75	Concrete	0.97
Stainless Steel	0.14	Copper Oxide	0.78
Adhesive Tape	0.96	Cast Iron	0.81
Aluminium Plate	0.09	Rust	0.8
Copper Plate	0.96	Gypsum	0.75
Black Aluminum	0.75	Paint	0.9
Human Skin	0.98	Rubber	0.95
Asphalt	0.96	Soil	0.93
PvC Plastic	0.93		

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Distance Setting

For enhanced accuracy in temperature detection, set the distance information prior to measurement. To adjust the distance, select the distance option and press Button **SET** to access the value setting interface. Use Button ▲ / ▼ to adjust the distance value within the range of 0.3 to 3 meters. Once the adjustment is complete, press Button ⓪ to return to the main settings menu.

⚙	≪
◎ Emissivity	0.98 ›
📐 Distance	1.0m ›
🎚 Temp Range	›
🌡 Temperature Units	›
🎨 Palette	›
🔔 HI/LO Alarm	›

D
1.0m

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Temp Range

To set the temperature range, select the Temp range option and press Button **SET** to enter the settings. Use Button ▲ / ▼ to toggle between Normal and High Temperature range options. Press Button **SET** to confirm your selection. To return to the main settings menu, press Button ⓞ . The Normal Temperature range is from −20ºC to 150ºC, and the High Temperature range is from 100ºC to 550ºC.

Note: Switching between temperature ranges takes around 10 seconds. Please wait for the device to complete the switch before proceeding with other operations or temperature measurements.

⚙	≪
◎ Emissivity	0.98 ›
🌊 Distance	1.0m ›
🌡 Temp Range	›
🌡 Temperature Units	›
📊 Palette	›
🔔 HI/LO Alarm	›

≪ Temp Range	
Normal(−20℃~150℃)	●
High(100℃~550℃)	

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Unit

To set the unit, select the Unit option and press Button **SET** to enter the settings. Use Button▲ / ▼ to toggle between ℃ and °F. Press Button **SET** to confirm your selection. Press▲ / ▼ to navigate to the ambient temperature setting, which enhances measurement accuracy for low emissivity materials, like metal or glass. Then Press Set button to enter the setting. Press▲ / ▼ to input the ambient temperature value. To return to the main settings menu, press Button ⓪ .

⚙		≪
◎ Emissivity		0.98 ❯
✑ Distance		1.0m ❯
⇅ Temp Range		❯
🌡 Temperature Units		❯
🎨 Palette		❯
🔔 HI/LO Alarm		❯

≪ Temperature Units	
℃	●
°F	
Ambient Temp	24.0℃

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Palette

To set the color palette, select the Palette option and press Button **SET** to enter the settings. Use Button ▲ / ▼ to toggle 8 color palettes (White Hot, Black Hot, Iron, Rainbow, Blend, Red Hot, Blue Hot, Green Hot) . Press Button **SET** to confirm your selection. To return to the main settings menu, press Button ⏸ .

⚙		≪
🎯	Emissivity	0.98 ›
📐	Distance	1.0m ›
🌡	Temp Range	›
🌡	Temperature Units	›
🎨	Palette	›
🔔	HI/LO Alarm	›

≪ Palette
White Hot 🟡
Black Hot
Iron
Rainbow
Blend
Red Hot

≪ Palette
Blue Hot
Green Hot

12
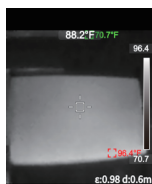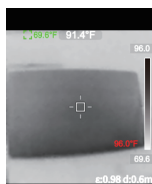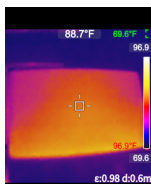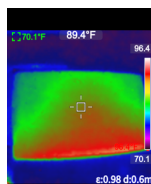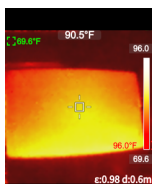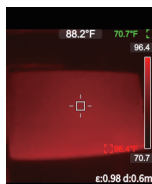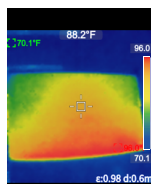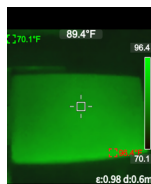
White Hot	**Black Hot**	**Iron**	**Rainbow**
Blend	**Red Hot**	**Blue Hot**	**Green Hot**

Notes: Short press Button ▲ / ▼ (up/down) can quick access the change of different color palettes.

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HI/LO Alarm

To adjust the High/Low temperature alarm settings, select the High/LO temperature option and press Button **SET** to enter the value setting interface. Press Button ▲ / ▼ again to toggle the High/Low temperature alarm on or off, and press button **SET** to confirm. Use Button ▲ / ▼ to adjust the temperature value, and press Button **SET** to confirm your setting. Once complete, press Button ⓘ to return to the main settings menu.

⚙		«
🎯 Emissivity		0.98 ›
📡 Distance		1.0m ›
🎚 Temp Range		›
🌡 Temperature Units		›
🎨 Palette		›
🔊 HI/LO Alarm		›

« HI/LO Alarm	
HI Alarm Enable	●
LO Alarm Enable	●
High Temp Alarm	30℃
Low Temp Alarm	29℃
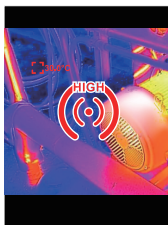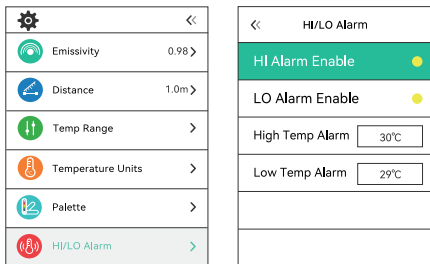
High Temp Alarm

Low Temp Alarm
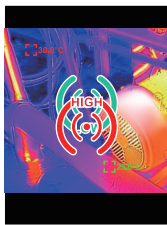
High Temp Alarm And Low Temp Alarm

Notes: The default setting value for the high temperature alarm threshold is always higher than that of the low temperature alarm.

Display Options

Select the Display Options and press Button **SET** to enter the setting interface. Press Button ▲ / ▼ scroll the different display elements and press Button **SET** to toggle the display elements on or off(High/Low Temp Dot, Center Dot, Palette(color bar), parameter(the set emissivity and distance)).
Once complete, press Button ⓞ to return to the main settings menu.

⚙	≪
➕ Display	>
🔆 Display Brightness	>
📅 Date & Time	>
⊕ Correction	>
🔌 USB Mode	>
📷 Snap Mode	>

≪	Display	
Hotspot		🟡
Coldspot		🟡
Centre Spot		🟡
Palette		🟡
Measure Parameter		🟡

Centre Spot
Palette
Hotspot
Coldspot
Measure Parameter

09:30
27.2°C
34.3
34.3°C 24.2°C
24.2
N ε:0.98 d:0.6m

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Brightness

To adjust the screen brightness, select the Brightness option and press Button **SET** to enter the settings. Use Button▲ / ▼ to cycle through the low, middle, and high brightness options. Confirm your selection by pressing Button **SET** , then press Button ⊚ to return to the main settings menu.

⚙	≪
⊞ Display	›
◉ Display Brightness	›
📅 Date & Time	›
◎ Correction	›
🔋 USB Mode	›
◉ Snap Mode	›

≪ Display Brightness	
Low	●
Mid	
High	

16
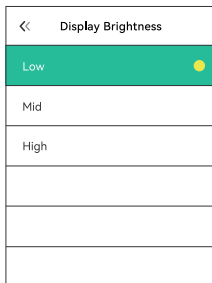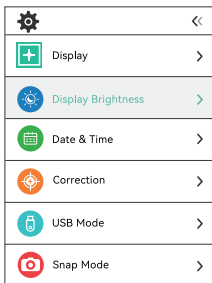
Date & Time

To set the date and time, select the date & time option and press
Button **SET** to enter the settings. Use Button▲ / ▼ to toggle between
the 12H and 24H formats. Navigate to the desired setting field using
Button ◀ / ▶ (left/right) . Adjust the value with Button ▲ / ▼ (up/down) .
Once complete, press Button ⓪ to return to the main settings
menu.

⚙ ≪	
⊞ Display ❯	
☀ Display Brightness ❯	24H
🗓 Date & Time ❯	2024 - 12 - 16
⊕ Correction ❯	14 : 18
🔓 USB Mode ❯	
◎ Snap Mode ❯	

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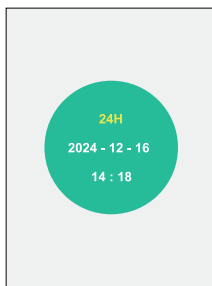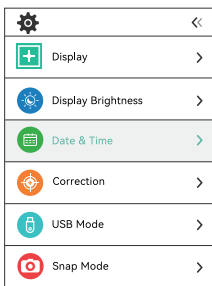
Correction

The image clarity may compromise due to the noises produced on thermal sensor after a period of use. Select the Correction option and press Button **SET** to process the correction to eliminate the noises, ensuring the optimal clarity of thermal image.

⚙		≪
➕	Display	›
☀	Display Brightness	›
🟢	Correction...	›
⊕	Correction	›
🔋	USB Mode	›
◎	Snap Mode	›

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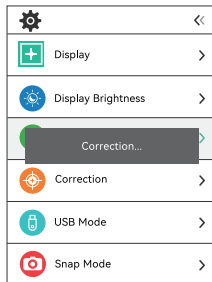
USB Mode

Select the USB Mode option and press Button **SET** to enter the setting interface. Press Button▲/▼ again to toggle the USB Disk and USB Camera, and press Button **SET** to confirm your setting. Once complete, press Button ⓘ to return to the main settings menu.
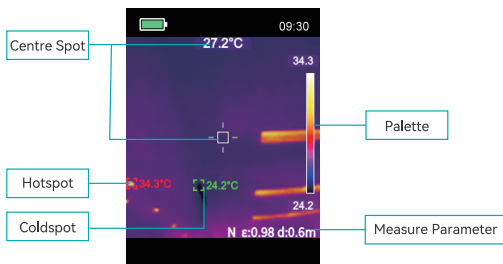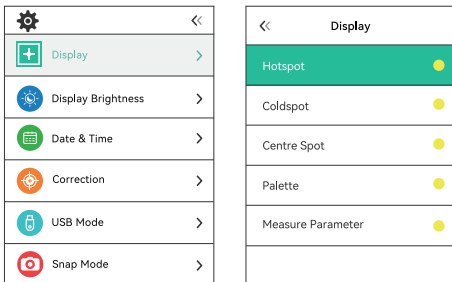
⚙	≪
➕ Display	>
🕹 Display Brightness	>
📅 Date & Time	>
⚙ Correction	>
🔋 USB Mode	>
📷 Snap Mode	>

≪	USB Mode
USB Disk	🟡
USB Camera	
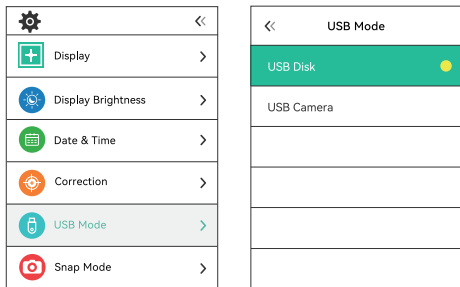
To access the PC software for viewing images and utilizing the real-time image screen projection function, please contact us at service@mileseey.com for the download link and installation instructions.

●1. Set the USB mode to USB Disk to browse pictures and analyze data on the PC software by connecting the device to a computer with the USB cable.

↻	💻 > U (G:) > Image > 202409		
	IRimg20240904120121.bmp	2024/9/4 3:00	BMP
	IRimg20240904120122.bmp	2024/9/4 3:00	BMP
	IRimg20240904120123.bmp	2024/9/4 3:00	BMP

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Note: To activate U-Disk mode, restart the thermal imager and then connect the USB cable. Do not rename the Image folder or image files to prevent reading errors.

● 2. In USB camera mode, connecting the USB data cable allows for real-time image projection on PC software For USB camera mode, ensure the thermal imager is turned off before connecting the USB cable. The device will automatically enter USB camera mode upon connection.

Note: Avoid unplugging the USB cable during screen projection. Close the projection software before disconnecting the USB cable after use.

Snap Mode

Select the Snap Mode option and press Button **SET** to enter the setting interface. Press Button **SET** again to toggle on/off the Alarm triggered option (picture captured when temperature exceeds the set threshold) and Time Triggered Option (picture captured every N seconds set), and press Button ▲ / ▼ to set the timing. Once complete, press Button ⏻ to return to the main settings menu.
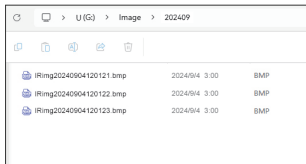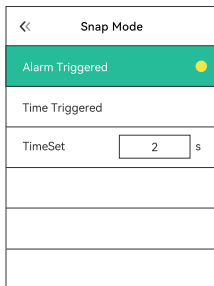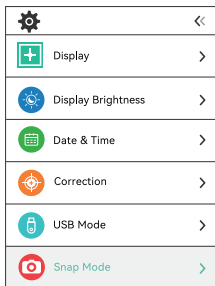
⚙	«
Display	›
Display Brightness	›
Date & Time	›
Correction	›
USB Mode	›
Snap Mode	›

« Snap Mode	
Alarm Triggered	●
Time Triggered	
TimeSet	2 s

20

Auto Power Off

To adjust the auto power off timing, select the Auto Power off option and press Button **SET** to access the settings. Use Button ▲ / ▼ to cycle through the time options (5Min/10Min/30Min/off). Confirm your selection by pressing Button **SET**, and press Button ⏻ again to return to the settings menu.

⚙	≪
ⓘ Auto Power Off	›
Ⓐ Language	›
💾 Format Disk	›
↺ Factory Reset	›
ⓘ Dev Info	TR10 ›

≪ Auto Power Off	
5 Min	🟡
10 Min	
30 Min	
Off	

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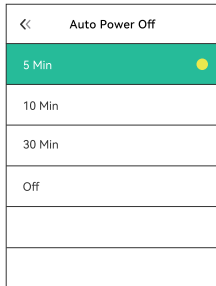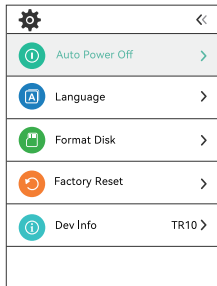
Language

To set the language, select the Language option and press Button SET to enter the settings. Use Button ▲ / ▼ to toggle different languages. Press Button SET to confirm your selection. To return to the main settings menu, press Button ⓞ .

⚙	≪
ⓘ Auto Power Off	›
Ⓐ Language	›
💾 Format Disk	›
↻ Factory Reset	›
ⓘ Dev Info	TR10 ›

≪	Language
English	●
Deutsch	
Français	
Italiano	
Español	
中文	

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Format Disk

To format the disk, select the Format Disk option and press Button **SET** to enter the settings. Use Button ▲ / ▼ / ◀ / ▶ to toggle between the "Yes/No" options. Confirm your choice by pressing Button **SET** , then press Button ⊚ to return to the main settings menu.

⚙	≪
ⓘ Auto Power Off	>
Ⓐ Language	>
🖫 Format Disk	>
↻ Factory Reset	>
ⓘ Dev Info	TR10 >

⚠

Format Disk?

Yes   No
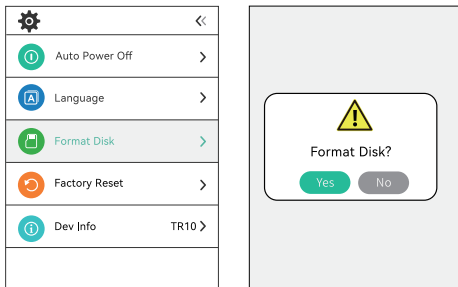
Note: Exercise caution when using the Format Disk function. Confirming this action will erase all data on the disk permanently.

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Factory Reset

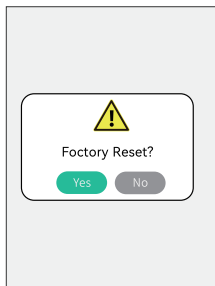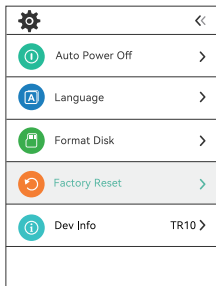To enable factory reset, select the Factory Reset option and press Button **SET** to enter the settings. Use Button▲ / ▼/◄ / ► to toggle between the "Yes/No" options. Confirm your choice by pressing Button **SET** , then press Button Ⓞ to return to the main settings menu.

Note: Exercise caution when using the Factory Reset function. Confirming this action will erase all data on the disk permanently.

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Dev Info

Access this option by pressing button **SET** to check the general developing information of the device.

⚙	«
ⓘ Auto Power Off	›
Ⓐ Language	›
💾 Format Disk	›
🔄 Factory Reset	›
ⓘ Dev Info	TR10 ›

Product: TR10
Version: V1.XX

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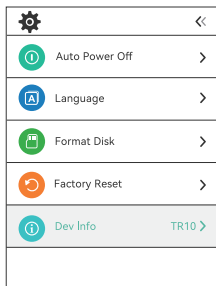
Browse Image

Click button 5 to capture thermal images with comprehensive thermal data, which will be automatically saved to the disk. Short press button ⏵ to enter the photo album, and press button **SET** to enter the photo album interface. Press button ▲ / ▼ to cycle through different pictures and press button **SET** to open specific picture. The pictures are listed in a chronological order.

≪ Album	1/1
📁 202409	
📁 202408	

≪ Photo	1/1
🖼 IRimg20240904120123	
🖼 IRimg20240904120121	

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Image Deletion

Once opening a specific picture, short press button **SET** to choose to delete a single picture or current photo album.
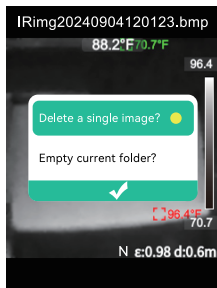
Specification

Model	TR10
NETD	< 50mK
Super-Resolution	192X192
Minimum Imaging Distance	0.3m
HFOV	50º×50º
IFOV	8.89 mrad
Frame Rate	25 Hz
Focal Length	1.35mm
Gross Storage Capacity	8GB
Usable Storabe Capacity	6GB
Output Port	Type-C
Battery	3.7V, 3000mAh Rechargeable Lithium
Temperature Measuring Range	-20ºC to 550ºC
Accuracy	±2ºC/+2%
Picture Storage Capacity	30,000
Picture Format	JPEG
PC Software	Support
PC Screen Projection	Support
Screen	2.8" LCD Display
Max Picture Size	240 x 240
Color Palettes	White Hot, Black Hot, Iron, Rainbow, Blend, Red Hot, Blue Hot, Green Hot
Dimensions	224*76*91mm
Net Weight	345g

Warranty Terms

Warranty Period:
◆This product has one year guarantee in the precondition of non-artificial damage.
Within the warranty period,certain maintenance costs will be charged under follwing cases:
◆Damages caused byimproper usage or maintenance of the machine;
◆The machine had been disassembled or mended by non-authorized third party;
◆Without the warranty card or purchase invoice;
◆The serial number on the warranty card is different with the one on product;
◆The serial number has been alterea or abraded;
◆Damaged by any force majeure factors,
◆Replacement of worn out accessories;
◆Damages caused by abnormal factors such as the temperature/humidity in usage;
◆Damages caused byimproper operation.

Please send machine with warranty card & purchase invoice to local dealer if maintenance needed.The warranty card will not be reissued if lost;please keep it carefully for maintenance.

MILESEEY ®

Contact Information

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