MiLESEEY TR120E

MiLESEEY TR120 Thermal Imager User Manual

Model: TR120E | Brand: MiLESEEY

1. Product Overview

The MiLESEEY TR120 is a compact and cost-effective thermal imaging camera designed for a wide range of applications, from home inspections to electrical and mechanical fault detection. It features a 3.5-inch LCD screen, is rechargeable, and offers 6 color palettes for enhanced analysis. The device includes automatic hot and cold spot tracking, making it an invaluable tool for identifying temperature anomalies.



Figure 1: MiLESEEY TR120 Thermal Imager.

Key Features:

- **Wide Temperature Range:** Measures from -20°C to 400°C (-4°F to 752°F) with an accuracy of ±2°C.
- **High Resolution Imaging:** Equipped with a 120 × 90 pixel IR sensor (10800 pixels) for detailed thermal images.
- **Automatic Hot/Cold Spot Tracking:** Automatically identifies and displays the highest and lowest temperatures on the screen.
- **Multiple Color Palettes:** Offers 6 distinct color palettes (e.g., Rainbow, Iron Red, Lava) for better visualization and analysis of temperature differences.
- **Convenient Data Transfer:** Comes with a 32GB micro SD card for image storage and connects to a computer via Type-C cable for easy data transfer and analysis using dedicated PC software.
- **Enhanced Durability:** IP54 rated for protection against dust and moisture, and designed to withstand a 2-meter drop.
- **Integrated Lighting:** Features a 3W white LED light and a built-in Bullseye laser pointer for precise targeting and visibility in dark environments.

- **Adjustable Emissivity:** Allows for custom emissivity settings to ensure more accurate detection data.

Note: The MiLESEEY TR120 thermal camera features a Class 2 laser with a type of 635 nm and power less than 1 mW.

2. Setup Guide

2.1 Unpacking and Initial Inspection

Carefully unpack the MiLESEEY TR120 Thermal Imager and all included accessories. Verify that all components listed below are present and in good condition:

- MiLESEEY TR120 Thermal Imager
- 32GB Micro SD Card (pre-installed or separate)
- USB Type-C Cable
- User Manual

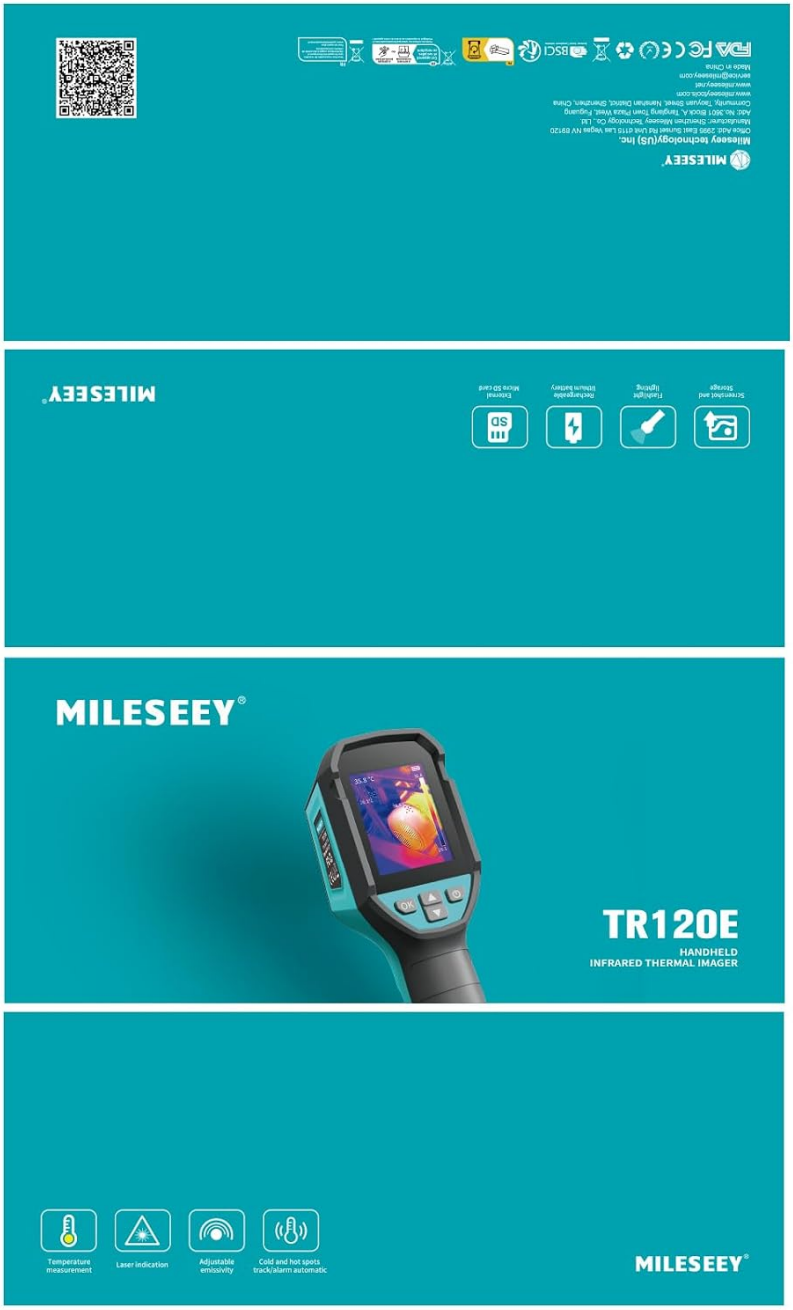


Figure 2: Package Contents.

2.2 Charging the Device

Before first use, ensure the thermal imager is fully charged. Connect the supplied USB Type-C cable to the charging port on the device and the other end to a compatible USB power adapter (not included) or a computer's USB port. The charging indicator on the device will show the charging status.

2.3 Inserting the Micro SD Card

The 32GB micro SD card is essential for storing thermal images. Locate the micro SD card slot, typically near the charging port. Gently insert the micro SD card until it clicks into place. Ensure it is inserted correctly to avoid damage.



Figure 3: Micro SD Card Storage.

3. Operating Instructions

3.1 Powering On/Off

To power on the device, press and hold the power button (usually marked with a circle and vertical line symbol) until

the screen illuminates. To power off, press and hold the power button again until the device shuts down.

3.2 Basic Temperature Measurement

Once powered on, the device will display a live thermal image. Point the camera at the object or area you wish to measure. The screen will show the temperature distribution, with specific temperature readings for hot, cold, and center points.



Figure 4: Fast Thermal Operation Overview.

3.3 Automatic Hot/Cold Spot Tracking

The TR120 automatically tracks and highlights the hottest and coldest points within the field of view. These points are indicated on the screen, along with their respective temperature values. This feature is crucial for quickly identifying potential issues like electrical faults or insulation gaps.

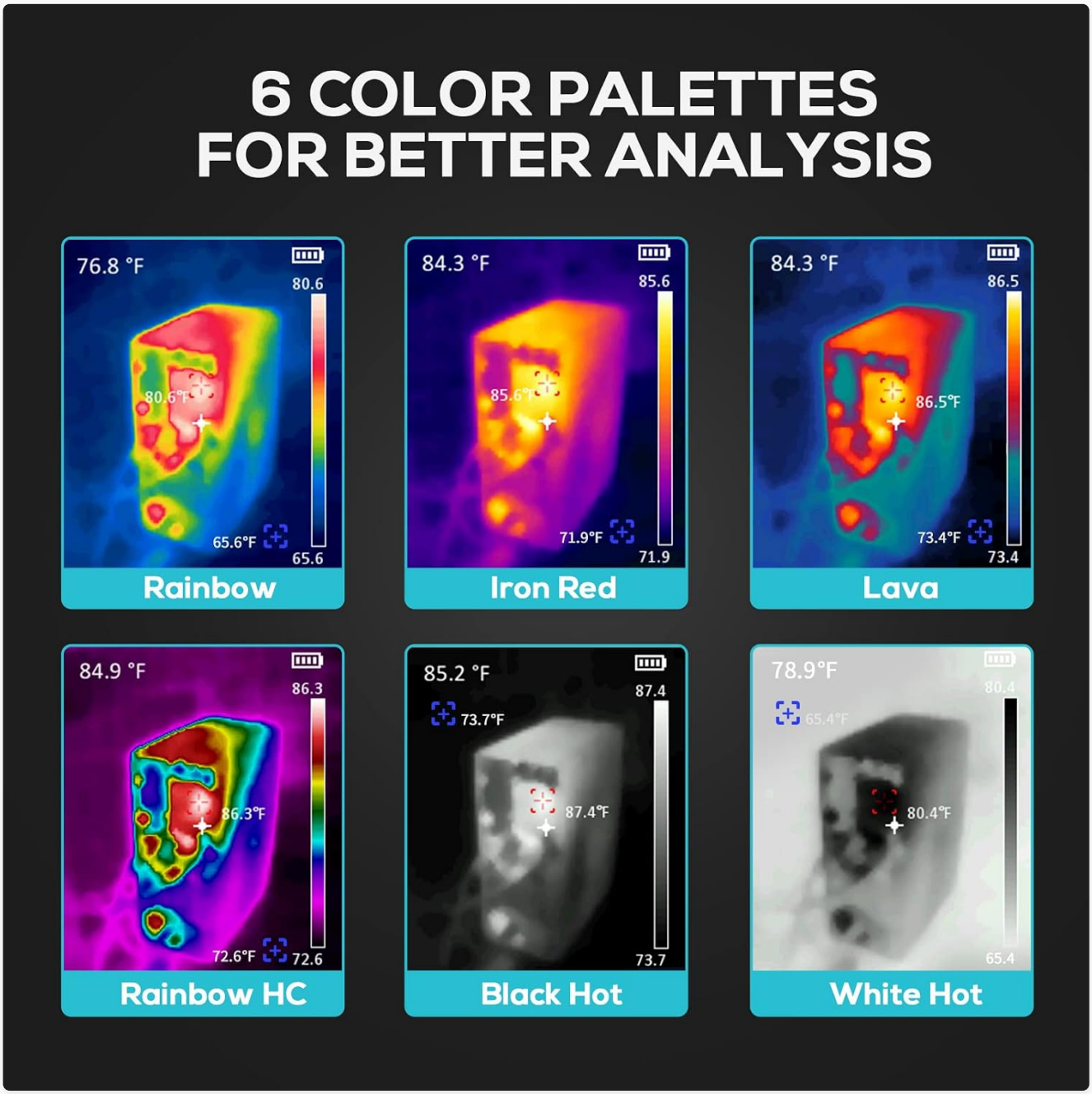


Figure 5: Automatic Hot/Cold Spot Tracking in use.

3.4 Selecting Color Palettes

The device offers 6 color palettes to visualize temperature differences. Different palettes can enhance the visibility of specific thermal patterns. Navigate through the menu to select the desired palette (e.g., Rainbow, Iron Red, Lava, Rainbow HC, Black Hot, White Hot) to best suit your application.



Figure 6: Available Color Palettes.

3.5 Using the Laser Pointer and LED Light

The built-in laser pointer helps pinpoint the exact measurement area. Activate it via the device's controls. The 3W white LED light provides illumination in dark environments, ensuring clear visibility of the inspection area.



Figure 7: Laser Pointer and LED Light Functionality.

3.6 Data Transfer and PC Analysis Software

To transfer images and perform detailed analysis, connect the TR120 to your computer using the Type-C cable. The device supports PC analysis software, which allows you to view, analyze, and share thermal images on a larger screen. Refer to the software's documentation for detailed instructions on its use.



Figure 8: USB Communication and PC Analysis Software.

4. Maintenance

4.1 Cleaning the Device

Regularly clean the exterior of the thermal imager with a soft, dry cloth. For stubborn dirt, a slightly damp cloth can be used. Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the device's casing or screen. Ensure the lens is kept clean and free of dust or smudges for accurate readings.

4.2 Battery Care

The TR120 uses a rechargeable Lithium-polymer battery. To prolong battery life, avoid fully discharging the battery frequently. If storing the device for an extended period, charge the battery to approximately 50% and store it in a cool, dry place. Recharge the battery every few months to prevent deep discharge.

4.3 Storage

Store the thermal imager in a clean, dry environment, away from extreme temperatures, direct sunlight, and high humidity. The IP54 rating provides protection against dust and splashing water, but the device should not be submerged or exposed to heavy rain.

5. Troubleshooting

5.1 Common Issues and Solutions

- **Device not turning on:** Ensure the battery is charged. Connect the device to a power source and try again. If the issue persists, contact support.
- **Inaccurate temperature readings:** Check that the lens is clean. Verify the emissivity setting is appropriate for the material being measured. Ensure there are no strong heat sources or reflections interfering with the measurement.
- **Cannot save images:** Check if the 32GB micro SD card is properly inserted. Ensure the card is not full. Try reformatting the card (this will erase all data on the card).
- **PC software not recognizing device:** Ensure the Type-C cable is securely connected to both the device and the computer. Try a different USB port or cable. Restart both the device and the computer.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please refer to the full user guide or contact MiLESEEY customer support.

6. Technical Specifications

Specification	Value
Model Name	TR120E
Brand	MiLESEEY
Battery Type	1 Lithium-polymer (included)
Product Dimensions (L x W x H)	23.8 x 9.5 x 8.56 cm
Product Weight	540 grams
Special Feature	Non-contact temperature measurement
Color	No color specified
Included Components	32g micro SD card, LCD screen, Type-C cable
Exterior Material	Plastic
Display Type	Digital
Upper Rated Temperature	752 Degrees Fahrenheit (400°C)
Laser Class	2
Laser Type	635 nm, Power < 1 mW

7. Warranty and Support

For information regarding product warranty, technical support, or spare parts availability, please contact MiLESEEY customer service directly. Details can typically be found on the manufacturer's official website or in the full user guide provided with your product.

You may also refer to the comprehensive user guide available online for more detailed information:

MiLESEEY TR120 Full User Guide (External Link)

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