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› TOPDON TC004 Mini Portable Thermal Camera User Manual

TOPDON TC004 Mini-EUSC

TOPDON TC004 Mini Portable Thermal Camera User Manual

Model: TC004 Mini-EUSC

1. INTRODUCTION

The TOPDON TC004 Mini is a multifunctional, portable infrared thermal camera designed for precise temperature measurement and thermal imaging. Equipped with advanced TISR image enhancement technology, it scales thermal images from 128x128 to 240x240 resolution, providing clearer details with a fast 25Hz refresh rate. This device is an ideal tool for various applications, including building inspection, HVAC troubleshooting, electrical and mechanical fault detection, and general home inspection.

Its robust design, extended battery life, and professional thermography features make it a reliable instrument for both professional and hobbyist use.



Figure 1: TOPDON TC004 Mini Thermal Camera with included accessories.

2. PACKAGE CONTENTS

Please verify that all items listed below are present in your package. If any items are missing or damaged, please contact TOPDON customer support.

- TOPDON TC004 Mini Thermal Camera

- USB-A to USB-C Charging Cable
- Lanyard
- Quick User Guide (Electronic version available via QR code)

Was ist im Lieferumfang enthalten?



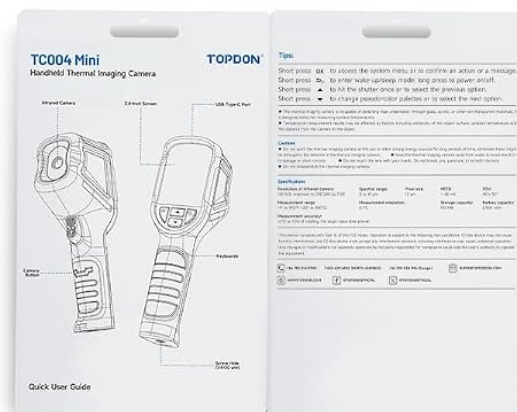
TC004 Mini
Wärmebildkamera



Aufhängeriemen



USB-A-auf-USB-C
-Kabel



Kurzbedienungsanleitung

Figure 2: All items included in the TOPDON TC004 Mini package.

3. KEY FEATURES

- **Enhanced Thermal Clarity:** Utilizes advanced TISR technology to upscale thermal images from 128x128 to 240x240 resolution, providing sharper and clearer details. Features a 25Hz refresh rate for smooth and accurate representations.

Verbesserte Wärmebilderfassung mit TISR

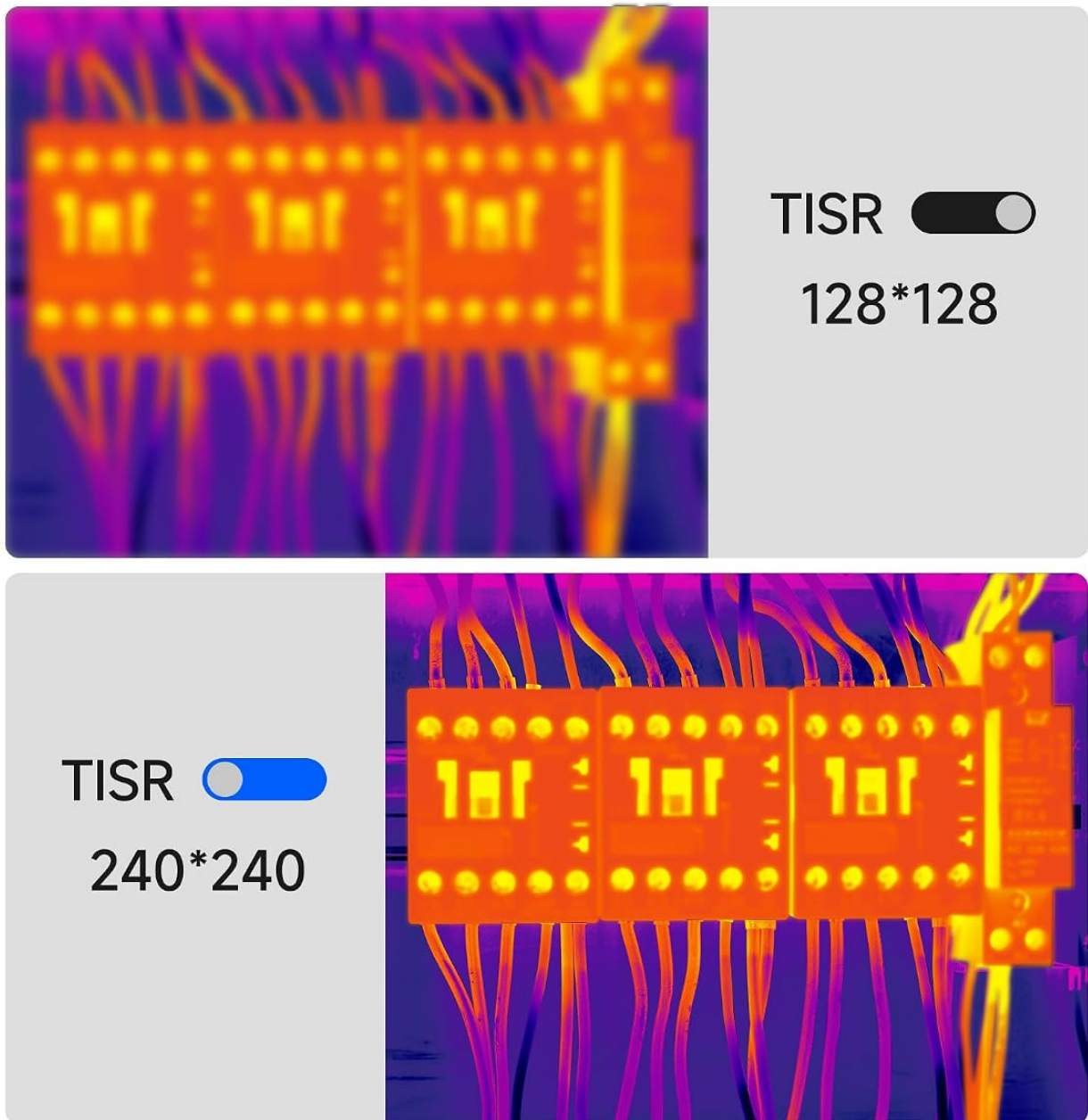


Figure 3: Enhanced thermal imaging with TISR technology.

- **Accurate Temperature Measurement:** Offers a wide temperature range from -20°C to 450°C (-4°F to 842°F) with an accuracy of $\pm 2^{\circ}\text{C}$ ($\pm 3.6^{\circ}\text{F}$). High sensitivity of $>40\text{mK}$ allows for detection of subtle temperature differences. Includes automatic detection of maximum, minimum, and center temperatures.
- **Effective Anomaly Detection:** The device emits visual warnings and automatically captures photos when temperatures exceed predefined limits, enabling quick localization and documentation of issues.

Warnungen bei hoher und niedriger Temperatur



Automatisch
Spot-Tracker



Temperaturbereich
-20 ~ 450°C



Figure 4: Visual warnings for high and low temperatures.

- **Extended Battery Life:** Equipped with a built-in 2900mAh rechargeable Li-ion battery, providing up to 15 hours of continuous operation. Features an auto-off option (5, 10, or 20 minutes) to conserve battery life.

15H Langlebige Verwendung



15STUNDEN

- Ununterbrochener Betrieb

2900mAh

15H

Figure 5: Long-lasting battery for extended use.

- **Portable and Durable Design:** Features a durable ergonomic grip for easy handling, a 1/4-inch tripod screw hole for quick setup, and resistance to drops from up to 2 meters. Rated IP54 for protection against dust and splashing water.

Ihr kompaktes Werkzeug



Figure 6: The compact and portable design of the TC004 Mini.

- **Multiple Color Palettes:** Choose from 5 different color palettes (White Hot, Black Hot, Rainbow, Iron, Red Hot) to best visualize temperature differences in your scene.

5 Farbpaletten

Wählen Sie die ideale Farbskala für Ihre spezielle Aufgabe



Figure 7: Five color palettes for diverse thermal imaging needs.

4. SETUP GUIDE

4.1 Initial Charging

Before first use, fully charge the TC004 Mini using the provided USB-A to USB-C cable and a compatible USB power adapter (not included). The charging indicator will show the battery status. A full charge ensures optimal performance and battery longevity.

4.2 Powering On/Off

- To power on: Press and hold the power button (usually located on the side or front) until the screen illuminates.
- To power off: Press and hold the power button again until the device shuts down.

4.3 Initial Settings

Upon first power-on or after a factory reset, you may need to configure basic settings:

- **Language:** Navigate to the settings menu to select your preferred language.
- **Temperature Units:** Choose between Celsius (°C), Fahrenheit (°F), or Kelvin (°K).
- **Emissivity:** Adjust the emissivity value (from 0.01 to 1.00) based on the material you are inspecting for accurate temperature readings. Consult an emissivity table for common materials.
- **Measurement Distance:** Set the approximate distance to the object being measured (e.g., 0.30m to 3m). This helps optimize image clarity and temperature accuracy, as the camera does not have autofocus.
- **Ambient Temperature:** Ensure the ambient temperature setting is accurate for precise measurements.

5. OPERATING INSTRUCTIONS

5.1 Taking Measurements

Point the TC004 Mini at the target object. The screen will display the thermal image along with temperature readings. The device automatically shows three temperature points:

- **Center Point:** Temperature at the center of the screen.
- **Auto-Hot Spot:** Automatically identifies and displays the highest temperature within the view.
- **Auto-Cold Spot:** Automatically identifies and displays the lowest temperature within the view.

5.2 Adjusting Color Palettes

Access the menu to cycle through the 5 available color palettes (White Hot, Black Hot, Rainbow, Iron, Red Hot). Select the palette that best highlights the temperature differences relevant to your inspection.

5.3 TISR Mode

Enable or disable TISR (Thermal Image Super Resolution) mode in the settings. TISR enhances the thermal image resolution from 128x128 to 240x240, providing a clearer and more detailed view of the thermal landscape.

5.4 High/Low Temperature Alarms

Set custom high and low temperature thresholds in the settings. When the detected temperature exceeds or falls below these thresholds, the device will provide a visual warning on the screen and can be configured to automatically capture an image.

5.5 Image and Data Management

- **Saving Images:** Press the capture button to save the current thermal image. Images are stored in standard JPG format.
- **Viewing Images:** Navigate to the "Album" or "Gallery" menu on the device to review saved images.
- **Transferring Data:** Connect the TC004 Mini to a computer using the provided USB-C cable. The device will appear as a removable storage device (e.g., "COBRA"). You can then copy or cut/paste image files to your computer. The internal memory capacity is approximately 481 MB.

6. MAINTENANCE

6.1 Cleaning the Device

- Use a soft, dry cloth to clean the exterior of the camera.
- For the lens, use a specialized lens cleaning cloth and solution to avoid scratches. Do not use abrasive cleaners or solvents.
- Ensure the device is powered off before cleaning.

6.2 Battery Care

- Recharge the battery regularly, even if the device is not in frequent use, to maintain battery health.
- Avoid completely draining the battery before recharging.
- Utilize the auto-off feature (5, 10, or 20 minutes) to conserve battery life during periods of inactivity.

6.3 Storage

Store the TC004 Mini in a cool, dry place, away from direct sunlight and extreme temperatures. Keep it in its original packaging or a protective case to prevent damage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Inaccurate Temperature Readings	Incorrect emissivity setting; incorrect measurement distance; significant ambient temperature changes.	Adjust emissivity based on target material. Set the correct measurement distance. Ensure ambient temperature setting is accurate.
Screen is Blank or Frozen	Low battery; device crash.	Charge the device. Perform a hard reset by holding the power button for an extended period (e.g., 10-15 seconds).
Cannot Transfer Files to PC	Faulty USB cable; incorrect connection mode; driver issues.	Ensure the USB cable is securely connected and not damaged. Try a different USB port or cable. Check if the device is recognized as a storage device on your computer.
Short Battery Life	Battery not fully charged; frequent use of high-power features; battery degradation over time.	Ensure the device is fully charged before use. Enable auto-off feature. Reduce screen brightness if possible.

If you encounter issues not listed here, please refer to the electronic user manual or contact TOPDON customer support for assistance.

8. SPECIFICATIONS

Feature	Specification
Model Number	TC004 Mini-EUSC
Infrared Resolution	128x128 (Upscaled to 240x240 with TISR)
Refresh Rate	25 Hz
Temperature Range	-20°C to 450°C (-4°F to 842°F)

Feature	Specification
Temperature Accuracy	±2°C or ±2% (whichever is greater)
Thermal Sensitivity (NETD)	<40 mK
Battery Type	1 Lithium-ion (included)
Battery Capacity	2900 mAh
Battery Life	Up to 15 hours continuous operation
Display Screen	2.8-inch, 320x240 visible light resolution
Internal Storage	Approx. 481 MB (for images)
Dimensions (L x W x H)	26 x 12 x 8 cm (10.2 x 4.7 x 3.1 inches)
Weight	470 grams (1.04 lbs)
Drop Resistance	Up to 2 meters
Ingress Protection (IP) Rating	IP54

9. WARRANTY AND SUPPORT

The TOPDON TC004 Mini Thermal Camera comes with a **one-year warranty** from the date of purchase, covering manufacturing defects and malfunctions under normal use. TOPDON also provides **lifetime technical support** for this product.

9.1 Electronic User Manual

For environmental protection, a printed manual is not included in the package. An electronic user manual is available for download:

1. Scan the QR code located on the back of the product packaging with your smartphone.
2. Once the TC004 Mini website opens, click the small arrow in the top right corner, under the shopping bag icon.
3. Click "Download" and select the desired manual.

9.2 Contacting Support

For technical assistance, warranty claims, or any other inquiries, please visit the official TOPDON website or contact their customer service directly. Refer to the Quick User Guide or the electronic manual for specific contact details.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question