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› TOPDON TC001 Thermal Camera for Android - User Manual

TOPDON TC001

TOPDON TC001 Thermal Camera for Android - User Manual

Model: TC001

1. PRODUCT OVERVIEW

The TOPDON TC001 is a compact thermal imaging camera designed for use with Android smartphones, tablets, and PCs. It provides high-resolution thermal imaging and precise temperature detection for various applications.



Image: The TOPDON TC001 Thermal Camera connected to an Android smartphone, displaying a thermal image.

Key Features:

- **High-Resolution Imaging:** Features 256x192 thermal imaging, enhanced to 512x384 resolution with TISR technology for detailed thermal images.
- **Wide Temperature Range:** Capable of detecting temperatures from -4°F to 1022°F (-20°C to 550°C).
- **High Accuracy:** Provides temperature readings accurate within 3.6°F (2°C) or 2% of the object's actual temperature, with 0.1°C accuracy.
- **Low Power Consumption:** Consumes only 0.35W, extending operational hours when connected to a smartphone.
- **Multiple Measurement Dimensions:** Allows selection of Point, Line (Highest and Lowest), and Surface (Highest and Lowest) detection, with up to 3 areas per dimension.
- **9 Color Palettes:** Offers various color schemes to visualize temperature differences.
- **Image Enhancement:** Adjusts image sharpness and contrast for clearer views. Includes image rotation and fusion functions.
- **Compact Design:** Measures 2.8x1.65x0.55 inches and weighs 30 grams, making it highly portable.

- **Extended Connectivity:** Includes a 19.7-inch adapter cable for flexible use with Android devices and PCs.

2. SETUP INSTRUCTIONS

2.1 Device Compatibility

The TOPDON TC001 is compatible with Android smartphones and tablets that support OTG (On-The-Go) functions. It is also compatible with Windows laptops. **Note:** This device is not compatible with iOS devices, including iPhone 15.

2.2 Software Installation

1. **For Android Devices:** Download and install the "TC001 App" from the Google Play Store.
2. **For PC:** Download the dedicated software from the official TOPDON website.

2.3 Connecting the Device

1. Ensure your Android device has OTG functionality enabled.
2. Connect the TC001 thermal camera directly to your smartphone/tablet's USB-C port. If your device has a case, the included 19.7-inch adapter cable can provide more flexibility.
3. For PC connection, use the adapter cable to connect the TC001 to a USB port on your Windows laptop.
4. Once connected, launch the TC001 application on your device. The camera should automatically initialize.

LOW POWER CONSUMPTION, LASTS LONGER

Powered by connected devices, TC001 eliminates fear of running out of power outside with only 0.35W of consumption.

0.35W



Google Pixel 4

220 Minutes ⚡

Samsung Galaxy S21

313 Minutes ⚡⚡

Image: The TC001 Thermal Camera shown connected to both an Android phone and a Windows laptop, demonstrating compatibility.

3. OPERATING INSTRUCTIONS

3.1 Basic Operation

1. After connecting the TC001 and launching the app, the thermal image will appear on your screen.
2. Point the camera at the object or area you wish to measure.
3. The app will display real-time temperature readings.

3.2 Temperature Measurement Modes

The TC001 App allows for detailed temperature analysis:

- **Point Measurement:** Tap on the screen to get the temperature at a specific point.
- **Line Measurement:** Draw a line to display the highest and lowest temperatures along that line.
- **Surface Measurement:** Define an area to show the highest and lowest temperatures within that surface.

You can select up to three areas for each dimension, allowing simultaneous temperature readings in up to nine areas.



Image: A visual representation of the TC001's wide temperature measurement range.

3.3 Color Palettes

Choose from 9 different color palettes within the app to visualize temperature differences according to your preference or application needs. This helps in distinguishing hot and cold spots more effectively.

3.4 Image Enhancement and Fusion

- **Sharpness and Contrast:** Adjust these settings in the app to improve the clarity and detail of the thermal image.
- **Image Rotation:** Rotate the image view without physically rotating your phone, useful for awkward angles.
- **Image Fusion:** Combine the thermal image with a visible light image from your phone's camera. This feature helps in identifying the exact location of thermal anomalies.
- **Dual-Light Fusion Mode:** Precisely identifies even the smallest temperature differences by blending thermal and visual data.

ADJUSTABLE IMAGE VIEWS

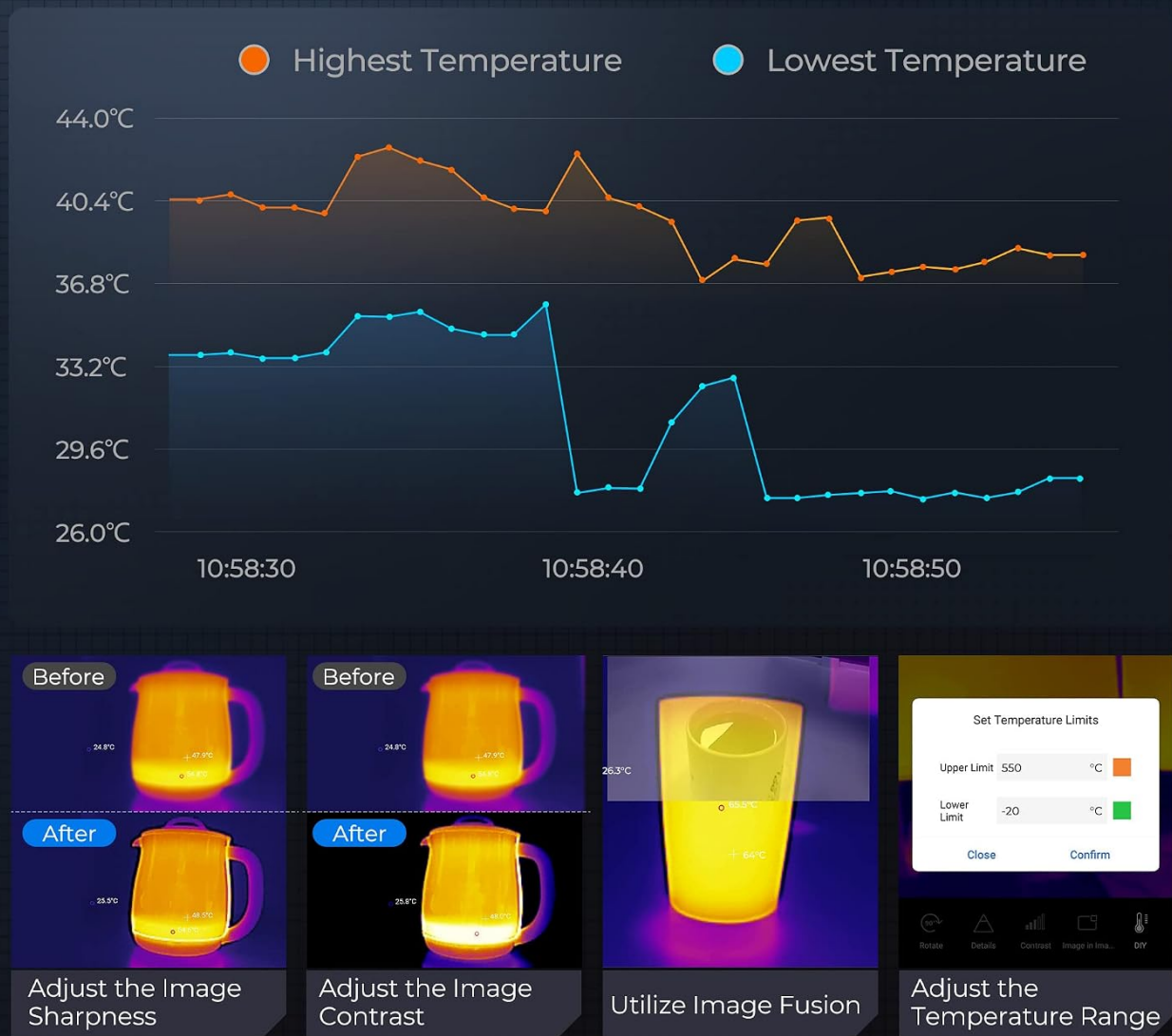


Image: The TC001 app interface demonstrating image adjustment features and temperature graphing.

3.5 Advanced Features

- **TISR Technology:** Enhances the thermal resolution from 256x192 to 512x384 for greater detail.
- **25Hz Refresh Rate:** Ensures smooth, lag-free thermal imaging, ideal for dynamic scenes.
- **Temperature Unit Switch:** Easily switch between Celsius (°C) and Fahrenheit (°F).
- **Time-lapse Feature:** Capture thermal changes over time without constant manual input.
- **Auto Shutter:** Automatically captures images based on predefined conditions.
- **Data Export:** Export thermal data and reports for further analysis on PC.

3.6 Official Product Videos

TC001 Thermal Camera for Android - Overview

Video: A detailed overview of the TOPDON TC001 Thermal Camera, demonstrating its features and applications on an Android device. (Duration: 4:05)

TC001 TOPDON Thermal Camera for Android - Quick Look

4. MAINTENANCE

4.1 Cleaning the Device

To maintain optimal performance and longevity of your TOPDON TC001, wipe the device clean with the provided wiping cloth or a soft, dry cloth. Avoid using abrasive cleaners or solvents that could damage the camera lens or housing.

4.2 Storage

When not in use, store the TC001 in its anti-dust EVA carrying bag to protect it from dust, moisture, and physical damage.

5. TROUBLESHOOTING

If you encounter issues with your TOPDON TC001, refer to the following common troubleshooting steps:

- **Device Not Detected:**

- Ensure your Android device supports OTG and that OTG is enabled in your phone's settings.
- Check the physical connection of the TC001 to your device or the adapter cable.
- Restart the TC001 App and/or your smartphone/PC.
- Try connecting the TC001 to a different compatible device to rule out device-specific issues.

- **App Crashing or Freezing:**

- Ensure the TC001 App is updated to the latest version.
- Clear the app's cache and data in your phone's settings.
- Ensure your device has sufficient free storage and RAM.

- **Inaccurate Temperature Readings:**

- Ensure the camera lens is clean and free from obstructions.
- Verify that the emissivity settings in the app are correctly configured for the material being measured.
- Avoid measuring through glass or highly reflective surfaces, as these can affect accuracy.

- **Poor Image Quality:**

- Adjust the sharpness and contrast settings within the app.
- Ensure the camera lens is clean.
- If using TISR technology, confirm your Android phone supports it for enhanced resolution.

If these steps do not resolve the issue, please contact TOPDON customer support.

6. SPECIFICATIONS

Feature	Specification
Brand	TOPDON

Feature	Specification
Model Name	TC001
Resolution	256x192 (512x384 with TISR technology)
Temperature Range	-4°F to 1022°F (-20°C to 550°C)
Accuracy	3.6°F (2°C) or 2% of actual temperature (0.1°C accuracy)
Power Consumption	0.35W
Connectivity Technology	USB-C
Dimensions	2.8 x 1.65 x 0.55 inches
Item Weight	30 Grams
Outer Material	Aluminum
Included Components	1* TC001 Thermal Camera, 1* Adapter Cable, 1* Carrying Bag
Product Care Instructions	Wipe Clean

7. WHAT'S IN THE BOX

Upon opening your TOPDON TC001 package, you will find the following items:

- 1x TOPDON TC001 Thermal Camera
- 1x Adapter Cable (19.7 inches)
- 1x Carrying Bag
- 1x Wiping Cloth
- 1x Quick User Guide



Image: All components included in the TOPDON TC001 product box.

8. WARRANTY AND SUPPORT

8.1 Warranty Information

TOPDON offers a 12-month warranty for the TC001 Thermal Camera. Additionally, a 30-day return policy is available. Please retain your proof of purchase for warranty claims.

8.2 Customer Support

For technical assistance, product inquiries, or warranty service, please contact TOPDON customer support. TOPDON is committed to providing high-quality service and support for its products.

- **Lifetime Technical Support**
- **24-Hour Email Support**
- **Hotline Service (8h*5)**

Refer to the official TOPDON website or the quick user guide for specific contact details.