

TOPDON ITC629

TOPDON ITC629 Thermal Camera User Manual

Model: ITC629

1. INTRODUCTION

The TOPDON ITC629 Infrared Imager is designed for quick and accurate diagnosis of temperature-related issues across various applications. This battery-powered thermal camera produces high-resolution images and precise single-spot measurements, making it ideal for fast and accurate troubleshooting. It features adjustable emissivity and a wide temperature range, converting infrared heat into visible images to analyze temperature differences.

2. PRODUCT OVERVIEW

The ITC629 thermal camera is a handheld device equipped with an infrared imaging sensor, a display screen, and control buttons for operation.



Figure 2.1: General view of the TOPDON ITC629 Thermal Camera.

WE PAY ATTENTION TO EVERY DETAIL



Figure 2.2: Detailed view of the ITC629 components, including the 3.2-inch screen, Micro USB port, 3GB memory, handheld grip, image capture key, battery compartment, infrared imaging sensor, auto focus, and protective cap.

3. SETUP

3.1 Battery Charging

The ITC629 thermal camera requires 1 Lithium Ion battery (included). For optimal battery lifespan, charge the device for at least two hours every three months, even if not in regular use.

3.2 Initial Power-On

Press and hold the power button to turn on the device. Allow a few moments for the system to initialize.

4. OPERATING INSTRUCTIONS

4.1 Basic Operation

Use the navigation buttons (MENU, ENTER, BACK, and arrow keys) to navigate through the device's interface and select options. The image capture key is typically located on the handle for convenient thermal image capture.

4.2 Image Resolution and Temperature Range

The ITC629 features a 220x160 infrared image resolution, allowing for clear thermal imaging. It has a wide test range of -4°F to 842°F (-20°C to 450°C), suitable for capturing a broad spectrum of temperatures.

BUILD THE TOOL OF YOUR DREAMS



220*160 Infrared Resolutions

Crisp and Clear Image Reveal



-20°C~450°C Temp. Range

Ideal for Recording Extreme Temp



0.07°C Temp. Sensitivity

Spot Subtle Temperature Change



Figure 4.1: Key features of the ITC629, including 220x160 infrared resolution, -20°C to 450°C temperature range, and 0.07°C thermal sensitivity.

4.3 Emissivity Adjustment

Emissivity can be adjusted from 0.01 to 1.00 to improve measurement accuracy based on the material being inspected. The device supports four object measurement modes: Coarse, Semi-matte, Semi-shining, and Shining. Adjusting emissivity according to the material's surface is crucial for accurate temperature results.

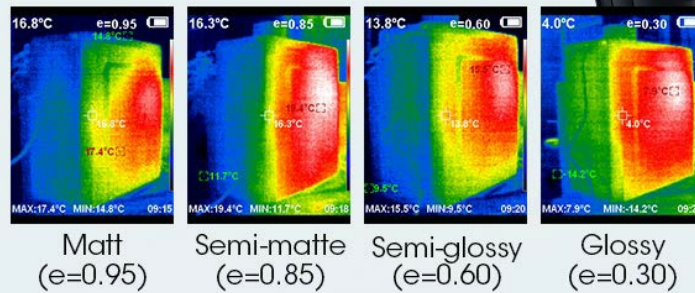
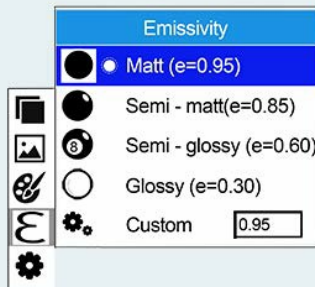
4.4 Color Palette Selection

Five color palettes are available for optimal visual comfort and analysis: Rainbow, Iron Oxide Red, Cold Color, White Heat, and Black Heat. Select the palette that best highlights the temperature differences for your specific application.

MAKES IT EASY FOR A FRESH SCENE



4 Types of Emissivity Adjustment



5 Color Scale Palettes

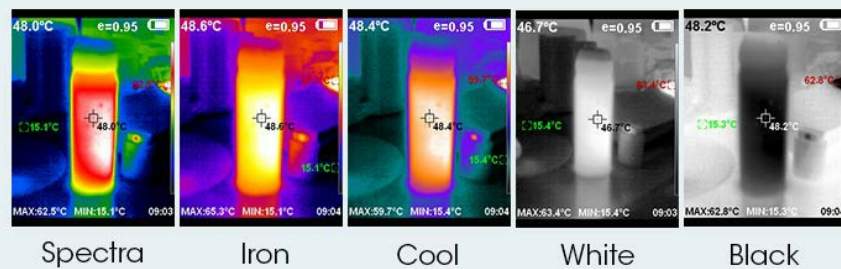
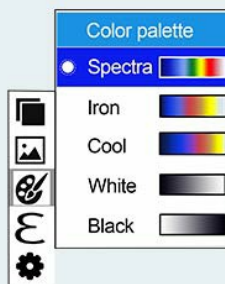


Figure 4.2: Display showing various emissivity settings (Matt, Semi-matte, Semi-glossy, Glossy) and color palettes (Spectra, Iron, Cool, White, Black) for thermal imaging.

4.5 Hot & Cold Spot Tracking

The automatic hot & cold spot thermal tracking technology intuitively displays the lowest and highest temperatures within the field of view, aiding in quick identification of critical areas.

AUTOMATIC COLD & HOT SPOT TRACKER

35x26 °
wide field of view



Figure 4.3: Screen displaying the automatic cold and hot spot tracker, highlighting temperature extremes within the image.

4.6 Applications

The ITC629 thermal imaging camera is suitable for a variety of professional and home applications, including:

- Car Inspections
- Heat Leak Detection
- Electrical Inspections
- Home Maintenance (Energy Auditing, Moisture Detection, HVAC, Plumbing)
- Firefighting
- Archaeology
- Traffic Management
- Farming
- Electronic Manufacturing

WORKS LIKE A CHARM



- **Electrical Inspections**
- **Moisture Detection**
- **HVAC**
- **Energy Auditing**
- **Wildlife Hunting**
- **Plumbing**

Figure 4.4: Examples of ITC629 applications, including car inspections, heat leak detection, electrical inspections, and home maintenance.

5. MAINTENANCE

5.1 Battery Care

To prolong battery life, ensure the thermal imaging camera is charged for at least two hours every three months, even during periods of non-use.

5.2 Cleaning

Use a soft, dry cloth to clean the camera body. For the lens, use a specialized lens cleaning cloth and solution to avoid scratches.

6. TROUBLESHOOTING

6.1 Inaccurate Temperature Readings

If the temperature reading appears inaccurate, verify that the emissivity setting is correctly adjusted for the material being tested. Different materials and surface finishes have varying infrared emissivity. Refer to the

emissivity table in the manual for guidance.

6.2 Misaligned Images in IR-VL Mode

When operating in IR-VL (Infrared-Visible Light) mode, both the visible light image and infrared image are displayed. If these images appear misaligned, calibration may be required, especially when the detecting distance changes. Refer to the image calibration instructions in the manual for proper adjustment.

6.3 Inability to Detect Objects Behind Walls

Generally, the thermal imager cannot directly detect objects behind solid barriers like walls that do not allow infrared rays to pass through. However, in many scenarios, it can indirectly detect hot water pipes behind a wall by observing the thermal distribution generated on the wall's surface as it heats up.

6.4 Device Fails to Boot Up

If the camera does not boot up or locks up during startup, ensure the battery is sufficiently charged. If the issue persists, contact customer support for assistance.

7. SPECIFICATIONS

Specification	Value
Product Dimensions	8.8 x 3.6 x 3.3 inches
Item Weight	2.2 pounds
Item Model Number	ITC629
Batteries	1 Lithium Ion battery required (included)
Infrared Image Resolution	220x160 pixels
Temperature Range	-4°F to 842°F (-20°C to 450°C)
Thermal Sensitivity	0.07°C
Field of View	35°x26°
Emissivity	Adjustable from 0.01 to 1.00
Best Test Distance	20cm-50cm

8. WARRANTY AND SUPPORT

8.1 Warranty Information

The TOPDON ITC629 Infrared Imager is backed by a 1-year warranty.

8.2 Customer Support

For any inquiries or assistance, please contact TOPDON customer support via email at support@topdon.com. You can also find timely assistance by searching for "TOPDON Official" on Facebook and contacting them via message during weekdays.

9. PRODUCT VIDEO

Watch the official product video to learn more about the capabilities and applications of the TOPDON ITC629 Infrared Thermal Camera.

Your browser does not support the video tag.

Video 9.1: What the ITC629 Infrared Thermal Camera Can Do for You. This video demonstrates various features and uses of the thermal camera.