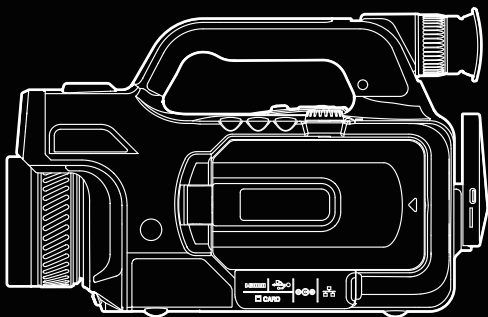


# OPTICAL GAS IMAGING CAMERA



## QUICK START GUIDE

EN

Thank you for choosing this product. Please read this Guide before use and properly keep it for future reference. We hope that the product meets your expectations.

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## FCC WARNING

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

## **IMPORTANT**

This User Guide is a general guide for a series of products, which means that the specific model product you receive may be different from the pictures in the Guide. The actual product received shall prevail. This User Guide is provided for the convenience of users to use and understand our products. We have made our best efforts to ensure that the content in the Guide is accurate, but we still cannot guarantee it is complete and perfect considering the continued update of our products. We reserve the right to revise the Guide from time to time without notice.

## CONSIDERATIONS

### DANGER

- 1) Charge the battery as instructed in the Guide and follow the charge steps and precautions. Incorrect charging can cause heating or damage of the battery or even cause personal injury;
- 2) Never attempt to open or disassemble the battery; if the battery leaks and the liquid enters eyes, immediately flush the eyes with water and then take necessary medical care.

### WARNING

- 1) When using the device, keep it as stable as possible and avoid violent shaking;
- 2) Do not use or store the device in an environment with a temperature exceeding the permissible operating or storage temperature range;
- 3) Do not directly expose the device to high-intensity thermal radiation sources, such as the sun, lasers and spot welders;
- 4) Do not block the holes on the device;
- 5) Do not strike, throw or shake the device and accessories;
- 6) Do not disassemble the device body; any attempt to disassemble it can damage it and void your warranty;
- 7) Do not spill soluble liquids or similar liquids on the device and cables to avoid damage to the device;
- 8) Do not use the device in an environment with a temperature exceeding the operating temperature of the device to avoid damage to the device;
- 9) Follow these steps when wiping the device:
  - Non-optical surfaces: Use a clean, soft cloth to wipe the non-optical surfaces of the riflescope if necessary;
  - Optical surfaces: Avoid dirtying the optical surfaces of the lens when using the riflescope, especially touching the lens with your hands, because the sweat on your hands will leave

marks on the lens glass and may corrode the optical coating on the glass surface; when the surface of the optical lens is contaminated, carefully wipe it with special lens tissue;

- 10) Do not place the battery in a hot environment or near a hot object;
- 11) Do not short-circuit the positive and negative poles of the battery;
- 12) Do not place the battery in a humid environment or water.

### CAUTION

- 1) Do not expose the device to dust or moisture; when using the device in an environment with water, prevent the water from splashing on the device; put on the lens cover when the device is not in use;
- 2) When the device is not in use, put it and all accessories in a special packing box;
- 3) Using the lens for a long time may cause a reduced contrast of the lens and a whitened screen. You can switch the display mode to LCD screen display and then switch it back after a period of time.

## Storage and Transportation

### Storage:

A packaged product shall be stored in a well-ventilated and clean environment with a temperature range of  $-40^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ , a relative humidity not exceeding 95%, and free of condensate and corrosive gas.

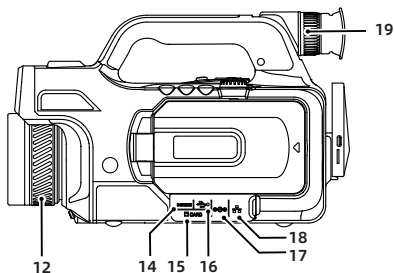
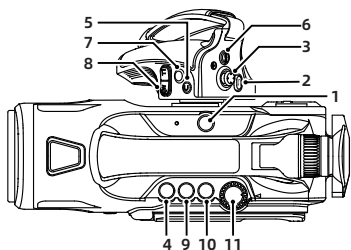
### Transportation:

During transportation and circulation, the product shall be protected from rain and water and placed flatwise. It shall be protected from violent vibration and impact. During handling, it shall be handled with care and cannot be tossed.

## ► Overview

The VOC optical gas imaging camera is a non-contact VOC gas leak detection instrument. It can quickly scan VOC natural gas pipelines and equipment, locate VOC gas leak points in real time intuitively using thermal images and measure the temperature, realizing rapid detection of VOC natural gas pipelines and equipment over long distances.

## ► Introduction to Product Parts



- 1 Overview
- 2 BACK
- 3 Multi-function key switch
- 4 Gallery
- 5 Auxiliary key
- 6 FOCUS
- 7 PHOTO
- 8 W/T key
- 9 A/M key
- 10 Eyepiece switching key
- 11 Mode switching knob
- 12 Focusing ring
- 14 HDMI interface
- 15 SD card slot
- 16 Type C port
- 17 Power port
- 18 Network port
- 19 Diopter adjusting ring

## ▶ Quick Operation Instructions

### I. Operation steps

1. Place the battery into the battery box.
2. Press and hold the POWER button to turn on the thermographic camera.
3. Set the language (first use).
4. Go to the real-time infrared interface and aim the thermographic camera at the target.
5. Click the center of the screen or press the FOCUS button to make the target image clear.
6. Press the PHOTO button to save the image or video.
7. Perform other operations by touch the screen or press buttons.

### II. Interface description



1. Status bar: Show the battery capacity.
2. Temperature measurement range: Display the temperature measurement range in the current mode, click to switch.



3. GDEM: The image enhancement mode which can be enabled to show the direction of gas flow more clearly
4. Time and date: Go to Settings-General-Date and Time to set the date and time.
5. Temperature measurement parameters: Set the reflected temperature, atmospheric temperature, relative humidity, target distance, atmospheric transmissivity, and other parameters for secondary temperature correction.
6. Palette: Set colors.
7. Analysis target: Set the analysis target, such as dots, lines, circles, and rectangles.
8. Isotherms: Upper isotherm, lower isotherm and isotherm within the range.
9. Settings: Conduct system settings.
10. LEVEL SPAN mode: Switch between automatic, semi-automatic and manual modes through the buttons or touch screen.
11. Switch the basic colors in real time.
12. Emissivity: Set the emissivity based on the target.
13. Shortcut menu: slide down the touch screen in the main preview interface to enter the shortcut menu.

### **III. Considerations**

1. Avoid direct sunlight on the object to be observed.
2. Do not directly expose the device to high-intensity thermal radiation sources, such as the sun, lasers and spot welders.
3. During the observation, make sure the target is clear; otherwise, you may get wrong measurement results.
4. Proper analysis of IR images requires technical knowledge of the application.

## Guide for Common Faults and Troubleshooting

Phenomenon	Causes	Measures
Failure to power on/off	The battery capacity is low	Charge the battery
	The battery is of poor contact	Take out the battery and replace into the battery box
	The external power is not properly connected	Pull the power plug and reinsert
Great difference between the battery capacity display and the actual consumption	The battery runs out	Replace with a fully charged battery
	The battery life expires	Replace with a new battery
The infrared image is not clear	The lens is covered with steam or contaminated	Use professional device to clean the lens
Incorrect temperature measurement	The temperature measurement parameters are incorrect	Change the parameter settings or restore the defaults
	Temperature measurement is performed immediately after the device is powered on	We recommend that you start temperature measurement 5-10min after the thermographic camera is powered on to ensure the accuracy
	The device is not calibrated for a long time	We recommend that you send the thermographic camera back to us for calibration once a year to obtain accurate temperature measurements
Failure to save files	Files cannot be saved	Delete the pictures and videos in the gallery
	The memory card is abnormal	Restart the device, format the card on the device or replace with a new memory card