

FOTRIC

Handheld Thermal Camera

Quick Start Guide

Preface

User Manual



Analysis Software



AnalyzIR Venus

Symbols

 Warning	 Caution	 Note
Potential death or serious injury inducing hazards	Potential danger of injury or property damage.	Provides additional information to emphasize the main text.

Safety Information

The purpose of this section is to ensure that the user uses the product properly to avoid danger or property damage.

Before using this product, please read this instruction manual carefully and keep it in a safe place for future reference

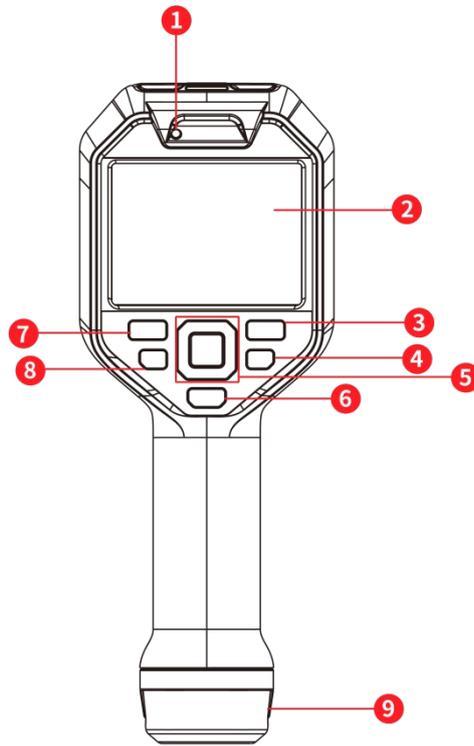
Warning:

- Never disassemble or modify the thermal camera battery. The battery is equipped with safety and protective devices which, if tampered with, may cause the battery to overheat and may also cause an explosion or burn. If the battery is leaking and the leak gets into your eyes, do not rub it, wash it with water and get immediate medical attention.
- Thermal cameras that use a laser pointer. Do not view the laser beam directly with the human eye. The laser beam can cause eye irritation.
- If the unit is not working properly, contact your dealer or our company and do not disassemble or modify the unit in any way (unauthorized modifications or repairs cause problems at your own risk).

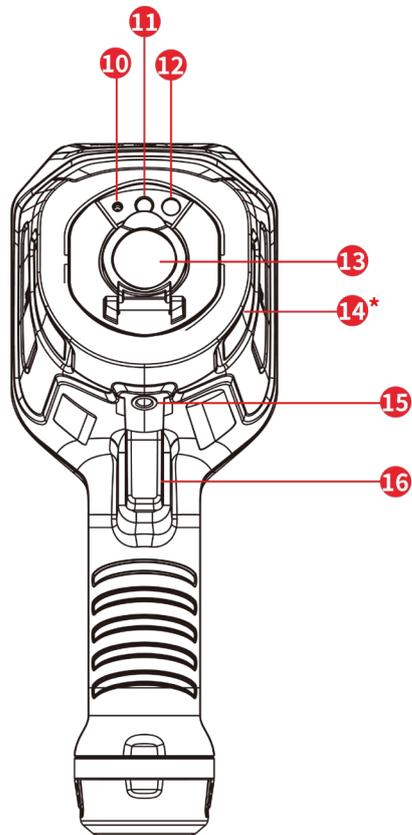
**Caution:**

- Avoid using the product in humid, dusty, extremely hot or cold environments, please refer to the product's parameter table for specific temperature and humidity requirements.
- Do not touch the sensor or lens directly to avoid staining and damage from oil and various chemicals. If cleaning is necessary, moisten a clean cloth and gently wipe off any dust. Close the lens cap when the thermal camera is not in use.
- When the thermal camera is turned on, it may take approximately 5–10 minutes for the camera to warm up before taking accurate readings.
- Avoid focusing or prolonged observation on the sun or objects with extremely high temperatures, as this may result in reduced sensor life damage or temporary black spots (minor cases can be recovered after calibrating the NUC, severe cases can result in permanent irreversible damage to the detector).
- Avoid damage to the sensor caused by over-range use of the device.
- It is strongly recommended to use the original power adapter, the specific requirements of the power adapter are shown in the product data sheet.
- To prevent the potential danger of data loss, always make a copy (backup) of your data on a computer.
- When storing the thermal camera, it is strongly recommended to use the original box and to keep it in a cool, dry, ventilated environment free from strong electromagnetic fields.
- When shipping the thermal camera, it is strongly recommended that it be shipped protected in its factory packaging
- Please only use the laser in an environment under 40 °C ambient temperature.

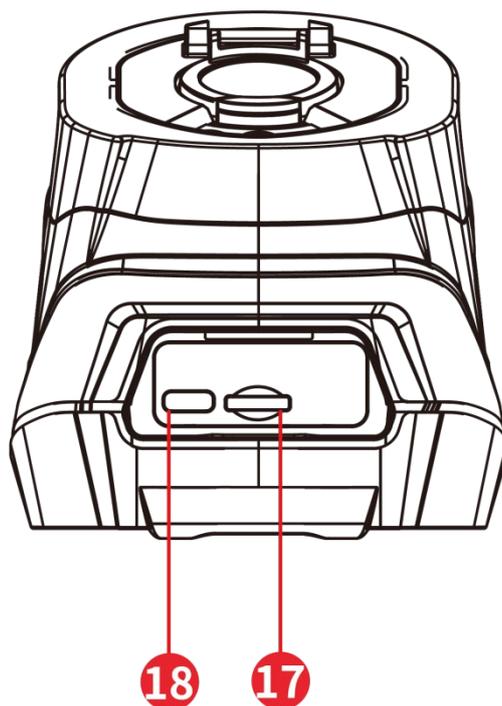
Front View



Rear View



Side View



1. Appearance



Notes

The appearance of different models of devices may vary. Please refer to the actual product.

Parts and interfaces

	Name	Function
1	Indicator LED	<ul style="list-style-type: none"> ● Green, blinking: charging ● Green, glowing: fully charged
2	Touch Screen	<ul style="list-style-type: none"> ● Display ● Touch screen operation
3	Gallery Button	Enter gallery
4	Back Button	Exit menu or back to the previous menu

5	Navigation Buttons	Menu mode <ul style="list-style-type: none"> ● Press ▲ , ▼ , ◀, ▶ to select parameters ● Press confirmation key to confirm
		Non-menu mode <ul style="list-style-type: none"> ● Press confirmation key to summon the menu
6	NUC Button	Short press : conduct Non-uniformity Calibration (NUC)
7	Power Button	<ul style="list-style-type: none"> ● Short press: power on/off device ● Long press: sleep/wake screen
8	Laser Button	<ul style="list-style-type: none"> ● Press to activate laser ● Release to deactivate laser
9	Battery	Lithium battery, for power supply
10	Laser Pointer	For laser indications
11	Digital Camera	Digital visible-light camera
12	LED Flash Light	<ul style="list-style-type: none"> ● Flash light : serve as a flash light when taking photos ● For illumination in dark environment
13	Infrared Lens	For infrared imaging
14*	Focus Ring(optional)	Rotate to adjust the clarity of images(not applicable for focus free models)
15	Tripod Connection Interface	For mounting on a tripod
16	Freeze and Capture Button	Capture images

17	SD Storage Card Interface	For inserting the SD card
18	USB Type-C Interface	For connecting to a USB Type-C cable for charging (explosion-proof models only) or data transmission

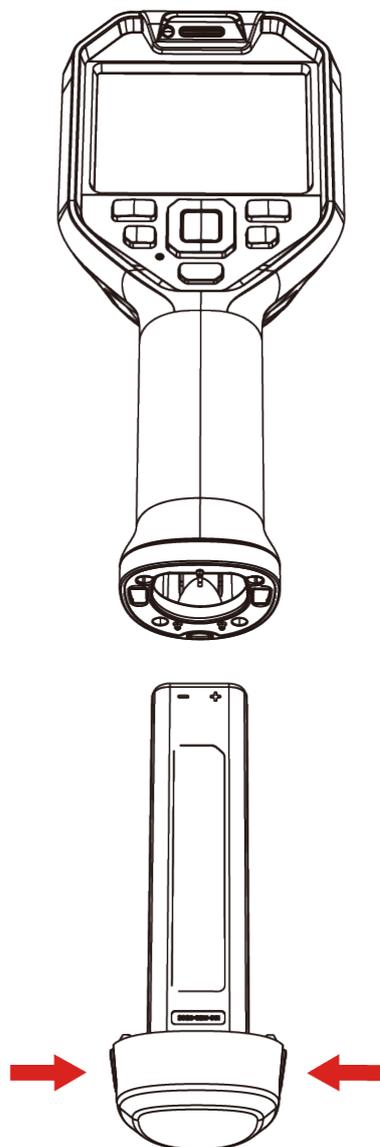
2. Inserting and Removing the Battery

2.1 Inserting the battery

Push the battery into the battery socket. When the battery is fully inserted, it will make a distinct 'click'.

2.2 Removing the battery

Turn off the device, squeeze the snatch of the battery and take it out.



3. Powering

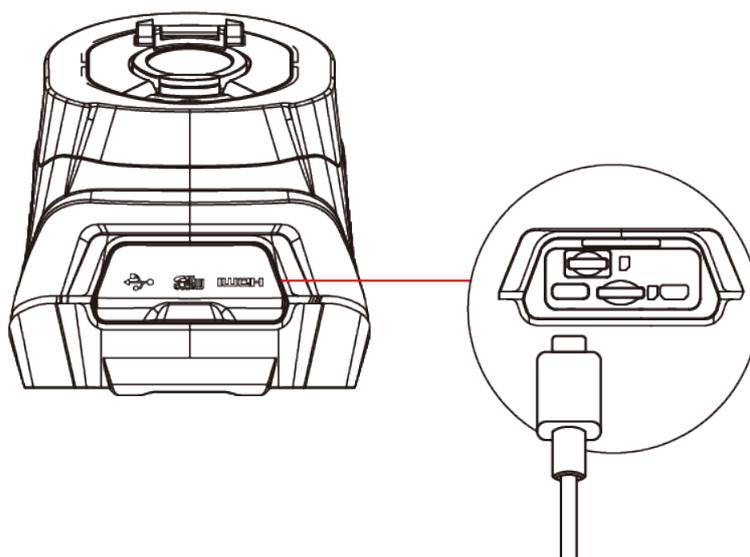
When using the thermal imager for the first time or when the power is low, please charge the thermal imager.

3.1 Charging directly with DC 5V

For expedient charging, directly charge the thermal imager through a DC 5V power adapter.

Operation Procedures

1. Insert the battery
2. Lift the cover for USB-C interface
3. Connect to a power source and start charging



4. Mounting on a tripod

If the user need to make prolonged observation or measurements, we advise mounting the camera on a tripod.

The device support connecting to a tripod via a UNC 1/4-20 interface. (17th item in the **Parts and interfaces** table)

5. Connecting to the Mobile and PC Software

Scan the following QR codes to download the PC and Mobile software



AnalyzIR Venus



EasyIR

1. For More Detailed Operation, Please Refer to the User Manual



Maintenance

- Temperature measuring equipment is recommended for temperature calibration measurement once every one to two years.
- Pay attention to keep the lens clean, use a soft non-woven cloth to gently wipe and brush away dust, or use an oil-free cotton cloth dipped in 96% concentration of ethanol, wring it out and wipe it gently, avoid wiping it hard to cause permanent damage to the lens.
- Please ensure that the battery is fully charged when storing for a long time.

Emissivity table

(for reference only)

Material Name	Surface Condition	Temperature(°C)	Emissivity(ϵ)
Aluminum	Non-oxidized	100	0.20
	Oxidized	100	0.55
Brass	Polished brown	20	0.40
	Unpolished	38	0.22
	Oxidized	100	0.61
Copper	Severely oxidized	20	0.78
Iron	Oxidized	100	0.74
	Rusty	25	0.65
Cast iron	Oxidized	200	0.64
	Non-oxidized	100	0.21
Wrought iron	Roughened	25	0.94
	Polished	38	0.28
Nickel	Oxidized	200	0.37
Stainless steel	Oxidized	60	0.85
Steel	Oxidized at 800°C	200	0.79
Common brick	Surface	20	0.93
Concrete	Surface	20	0.92
Glass	Polished plate	20	0.94
Lacquer	White	100	0.92
	Natural color black	100	0.97
Carbon	Smoke black	25	0.95
	Candle soot	20	0.95
	Graphite rough surface	20	0.98
Paint	Average of 16 colors	100	0.94
Paper	White	20	0.93
Sand	Surface	20	0.90
Wood	Polished	20	0.90
Water	Distilled water	20	0.96
Skin	Human	32	0.98
Pottery	Fine	21	0.90
	Abrasive	21	0.93

About this manual

This manual is used as a guide and the photos, graphics, icons and illustrations provided in the manual are for explanation and illustration purposes only and may differ from the specific product, please refer to the actual product. This manual may be updated by FOTRIC without notice due to product version upgrade or other needs. The trademarks and images used in this manual are for illustrative purposes only and are the copyright of the trademark owner.

Disclaimers

The products (hardware, software, etc.) provided in this manual may be defective, faulty or malfunctioning, and FOTRIC disclaims all warranties of any kind, express or implied, including, but not limited to, warranties of merchantability, satisfactory quality, fitness for a particular purpose, non-infringement of third party rights, etc. FOTRIC will not be liable for any special, incidental, consequential or indirect damages arising out of the use of this manual or our products. including, but not limited to, damages arising from loss of business profits, loss of data or documentation.

To the maximum extent permitted by law, our liability will not exceed the amount you paid for the product.

After the product is connected to the Internet, it may be exposed to risks including but not limited to network attacks, hacker attacks, virus infections, etc. The Company will not be responsible for any abnormal operation of the product, information leakage, etc. as a result, but will provide you with technical support in a timely manner.

Products can sense motion detection and fire events when properly installed and configured, but cannot prevent accidents or resulting personal injury or property damage.

Thermal imaging products are classified as export controlled by the U. S. Department of Commerce, Export Control Classification Number (ECCN) 6A003. b. 4. b. This product contains a focal plane array, Export Control Classification Number 61002. a. 3. f. This product may not be used in controlled countries (e. g. North Korea, Iran, Syria, Cuba, Sudan, etc.) and should not be brought into or used in controlled countries. Any loss or liability arising from the above actions will be borne by you.

When using this product, you are requested to strictly follow the applicable laws. You agree that this product is for civilian use only and shall not be used in violation of third party rights, medical/safety equipment or other applications where the failure of the product could result in life-threatening or personal injury, and for purposes such as mass destruction fog, biochemical weapons, nuclear explosions or any unsafe use of nuclear energy or dangerous or inhumane uses. Any loss or liability arising from such use will be borne by you.

In the event of a conflict between the above and applicable law, the provisions of the law shall prevail.

Warranty card

Thank you for choosing FOTRIC thermal camera!

We are committed to providing you with products of excellent performance and reliable quality. According to our warranty policy, this product enjoys comprehensive warranty service from the date of purchase.

During normal use, if any defects caused by materials or craftsmanship are found in the device, we will provide you with repair or replacement services to ensure your workflow.

Customer Service

Global: service@fotric.com

United States: service-us@fotric.com

Certificate of Quality

Thank you for choosing FOTRIC thermal camera!

This product has passed strict quality inspection and complies with relevant technical standards and specifications to ensure reliable performance and excellent user experience.

We promise that the device you receive is a qualified product and can be used with confidence. If you need further support, please contact FOTRIC customer service team.