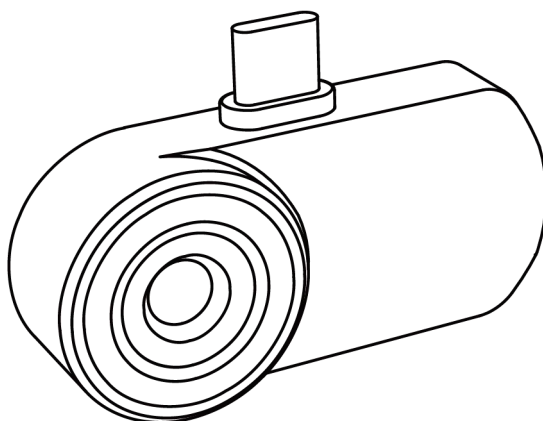


MobIR 3.0

USER GUIDE



THERMAL CAMERA

FOR SMARTPHONE

Thank you for choosing this product. Please read this Guide carefully before use and keep it properly for future reference. We hope you'll be satisfied with this product.

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1. Important

This manual is a general guide for this series of products, which means that the specific model you receive may differ from the images in the manual. Please refer to the actual product received.

This manual is compiled to facilitate the use and understanding of our company's products. While we make every effort to ensure the accuracy of the content in this manual, we cannot guarantee its completeness, as our products are subject to continuous updates and upgrades. Our company reserves the right to make modifications at any time without prior notice.

2. Storage and transportation

Storage: The packaged products should be stored in a clean, well-ventilated indoor environment with a temperature range of -40°C to 70°C, relative humidity not exceeding 95%, free from condensation and corrosive gases.

Transportation: During transportation, the product should be protected from rain and water immersion and must not be subjected to violent vibrations or impacts. Handle with care during transit; throwing or dropping is strictly prohibited

3. Precautions

3.1. warn

- 1) Please keep the device as stable as possible when using it, and avoid violent shaking;
- 2) Do not use or store the device in environments that exceed the permitted operating or storage temperatures;

- 3) Do not point the device directly at high-intensity heat radiation sources, such as the sun, lasers, or spot welders, to avoid damaging the device;
- 4) Do not knock, throw, or vibrate the device or its accessories to avoid damage;
- 5) Do not disassemble the device by yourself to avoid damage and voiding the warranty;
- 6) Do not wipe the device with solvents to avoid damaging the device;
- 7) Please follow these steps when wiping this equipment :
 - Non-optical surfaces: Wipe with a clean, soft cloth if necessary;
 - Optical surfaces: Do not get the lens dirty during use. If the optical lens surface is contaminated, wipe it carefully with professional lens tissue.

3.2. Notice

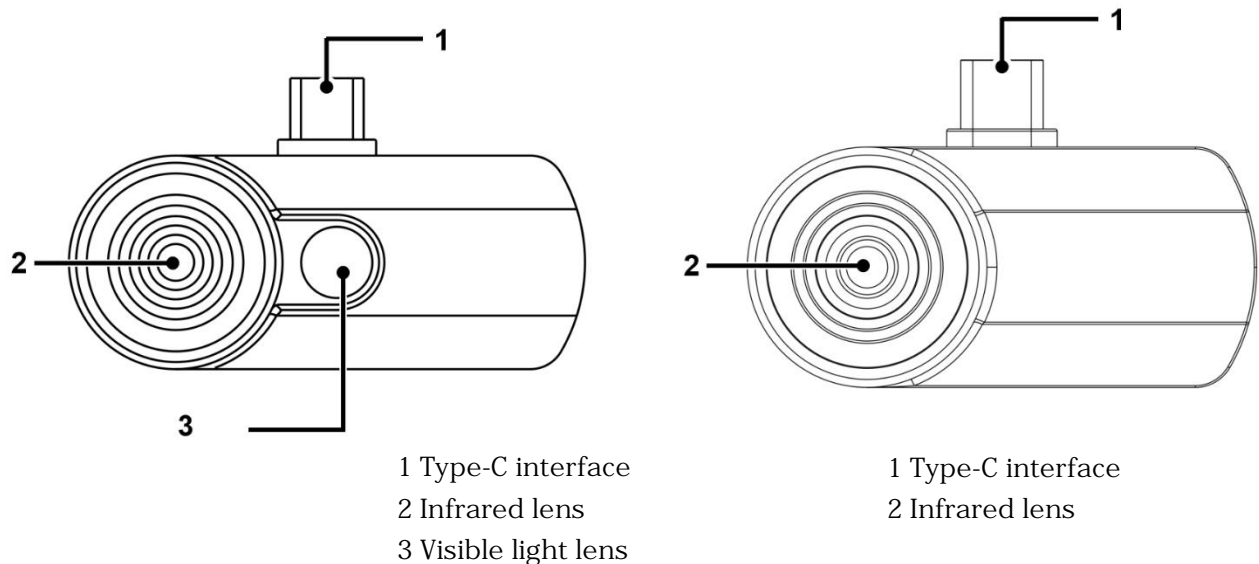
- 1) Do not expose the equipment to dusty, humid, or corrosive environments ;
- 2) When the device not in use, please place the device and all accessories in the dedicated packaging box ;

4. Product Introduction

This is a portable infrared thermal imaging mobile phone accessory that quickly transforms your phone into a thermal imager, giving you the ability to observe things without the naked eye and easily detect the surface radiation energy of objects . It is lightweight, consumes little power, boasts powerful performance , and is plug-and-play .

This is a portable infrared thermal imaging phone accessory that instantly transforms your smartphone into a thermal camera. It empowers you with

observational capabilities beyond the naked eye, allowing for easy detection of surface radiant energy from objects. It is compact, low-power, high-performance, and plug-and-play.



5. Operating Instructions

This accessory needs to be used with a mobile device. The connection method is as follows:

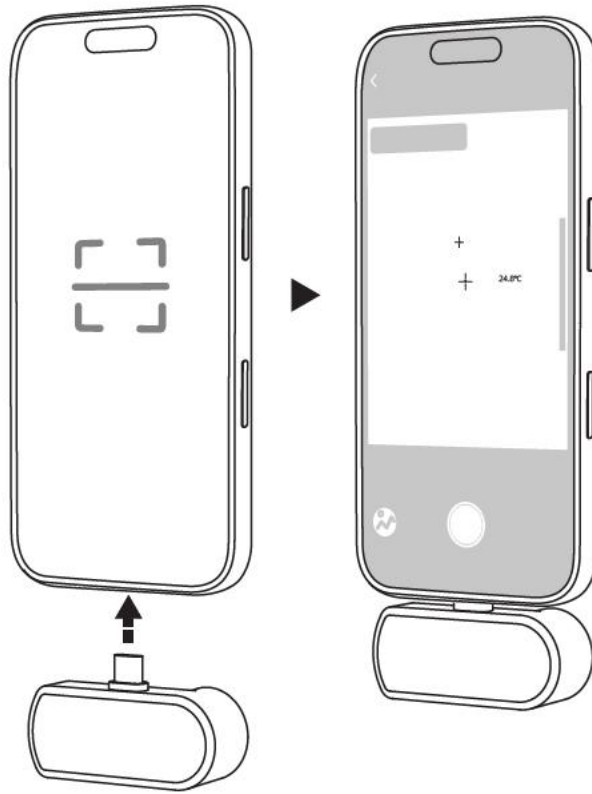
1. Download the APP

- For Android users : Open your phone's app store (uch as Huawei AppGallery, Xiaomi App Store, OPPO App Market, vivo App Store, Tencent Appstore, or Google Play Store), search for  "FocusIR", and click "Install" to download and install.

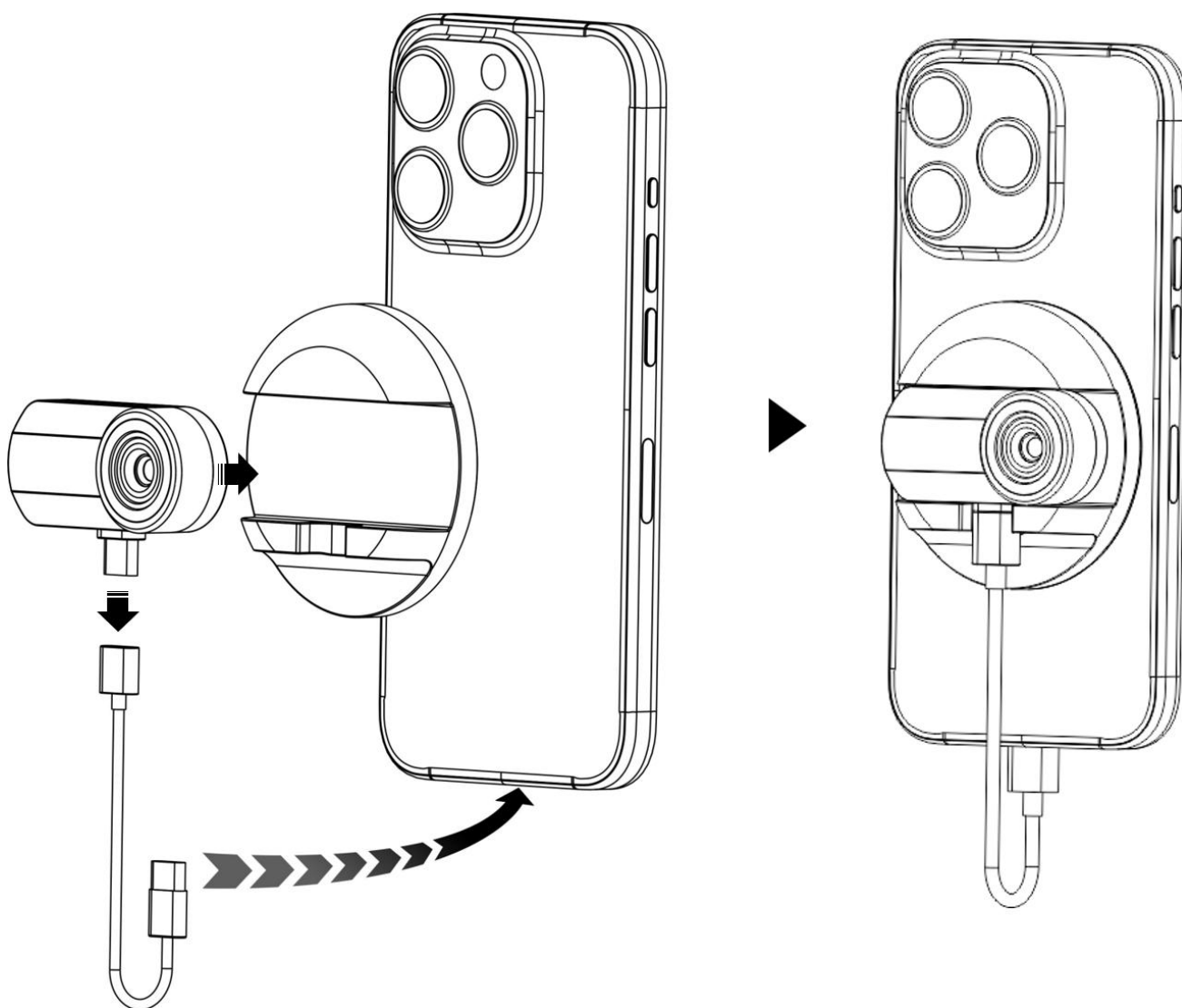
2. Insert the phone accessory and connect the device.

- ① Direct insertion into the phone's charging port: Hold the accessory body, align the bottom port with the phone's charging port, and gently push it vertically until fully inserted;

Note: Avoid tilting at an angle greater than 30° during insertion to prevent bending the connector pins. If the phone has a protective case, remove thick cases (cases $\leq 1.2\text{mm}$ may be retained).



② Connect via extension cable (extension cable is optional): First, insert the accessory into one end of the extension cable (accessory interface → extension cable female connector), and then insert the other end (male connector) of the extension cable into the phone interface.



3. Connection Status Confirmation

After inserting the accessory, your phone will display a prompt: " Allow 'FocusIR' to access XXX device?" The device will be successfully connected after clicking OK.

6. Product Specifications

Product Model	ES2	ES2+
Infrared detector		
Detector type	VOx	

Infrared resolution	256 x 192@12μm	
Spectral Range	7.5 to 14 μm	
Frame rate	30Hz/9Hz	
Lens		
Focal length	3.2mm	
Field of view	56° x 42°	
Focus	Focus free	
Temperature measurement		
Measurement range	-20°C to 150°C to 550°C, automatic temperature switching.	
Measurement accuracy	At ambient temperature (23°C±2°C), the accuracy is ±2°C or ±2% (whichever is greater).	
Measurement	Points, lines, and planes	
APP Functions		
Image mode	IR/PIP	IR/PIP/MIF/VL
Photo	support	
Video	support	
Color palettes	12 basic color strips + custom stripes	
Temperature alarm	Supports automatic image/video capture after an alarm is triggered.	
Report	support	
Instant sharing	Instant sharing of photos, videos , and reports	
OTA upgrade	support	

Environmental parameters		
Working temperature	-20°C to 50°C	
Storage temperature	-40°C to 70°C	
IP rating	IP54	
Drop	1m drop (without the interface)	
Certification	CE/FCC/ROHS/IP54/KC	
Physical parameters		
External interface	Type-C	
Weight	25.5g	32.5g
Size	51*24*13.8mm	58*24*17.3mm
Color	Silver / Gray / Blue	

7. FAQ

Issue	Possible Cause	Solution
No response after inserting the accessory	APP Not Installed	Download and install the FocusIR App via the app store or browser.
	Poor contact	Unplug the device and plug it back in, ensuring it is plugged in correctly.
	OTG not enabled	Check if your phone supports OTG functionality and if OTG is enabled. Most phones have OTG enabled by

		default and can be used directly. If it's not enabled, you'll need to search for "OTG" in your phone's settings and enable it. Note: If your phone does not support OTG functionality, you will not be able to use this device properly.
Infrared image is unclear.	Lens fogged up or contaminated	Clean the lens using professional equipment.
Visible light image is unclear	The environment is too dark	Take appropriate lighting measures.
	Visible light lenses may have water vapor or be contaminated.	Clean the visible light lens using professional equipment.
Inaccurate temperature measurement	Incorrect temperature measurement parameter settings	Change the parameter settings.
	Non-uniformity correction not performed for a long time	After connecting the device, enter the live preview page, double-click the image, and you will hear a shutter sound. This will initiate a non-uniformity correction.

	No calibration for a long time	To obtain accurate temperature measurement results, we recommend calibrating once a year.
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Emissivity table of common objects

Material	Emission rate
Wood	0.85
Water	0.96
Brick	0.75
Stainless Steel	0.14
Tape	0.96
Aluminum	0.09
Copper	0.06
Black Aluminum	0.95
Human Skin	0.98
Asphalt	0.96
PVC	0.93
Black Paper	0.86
Polycarbonate	0.8
Concrete	0.97
Copper Oxide	0.78
Cast Iron	0.81
Rust	0.8
Plaster	0.75
Paint	0.9
Rubber	0.95
Soil	0.93