



Infrared Thermal Camera

Instruction Manual: IR0175

www.perfectprime.com for product register and warranty

Customer Service: cs@perfectprime.com



Contents

1. Overview	3
2. Considerations and Safety Maintenance	4
3. Performance index	5
4. Product description	6
5. Measurement principle.....	8
6. Color palette.....	8
7. Basic operation.....	9

1. Overview

Thank you for purchasing the infrared thermal camera IR0175 that integrates surface temperature measurement and real-time thermal image. With this product, the potential problems can be displayed on color display screen clearly which is helpful for users to locate and measure the temperature.

The following are the major features of IR0175:

- Easy to use : Test can be conducted in several seconds after powering on, and there only a few simple buttons.
- User-friendly : Highest or lowest temperature of thermal image are displayed.
- Highly selectable: Two types of color palettes are provided.

The product can be utilized in many fields, for instance:

1. Detect spills and leaks of chemicals which have different thermal signatures with the surroundings,
2. Fire fighting: search where the fire burns and locate people trapped by fire,
3. Locate the source of abnormal leaking of heat of a house or a machine, find out the problem area more quickly,
4. Allow drug-enforcement units to find where Marijuana is planted,
5. Moisture detection in walls and roofs,
6. Measure body temperatures,
7. Night vision,
8. Building inspection and etc.

IR0175 is the ideal selection for electrician, maintenance personnel, technicians and even the emergency.

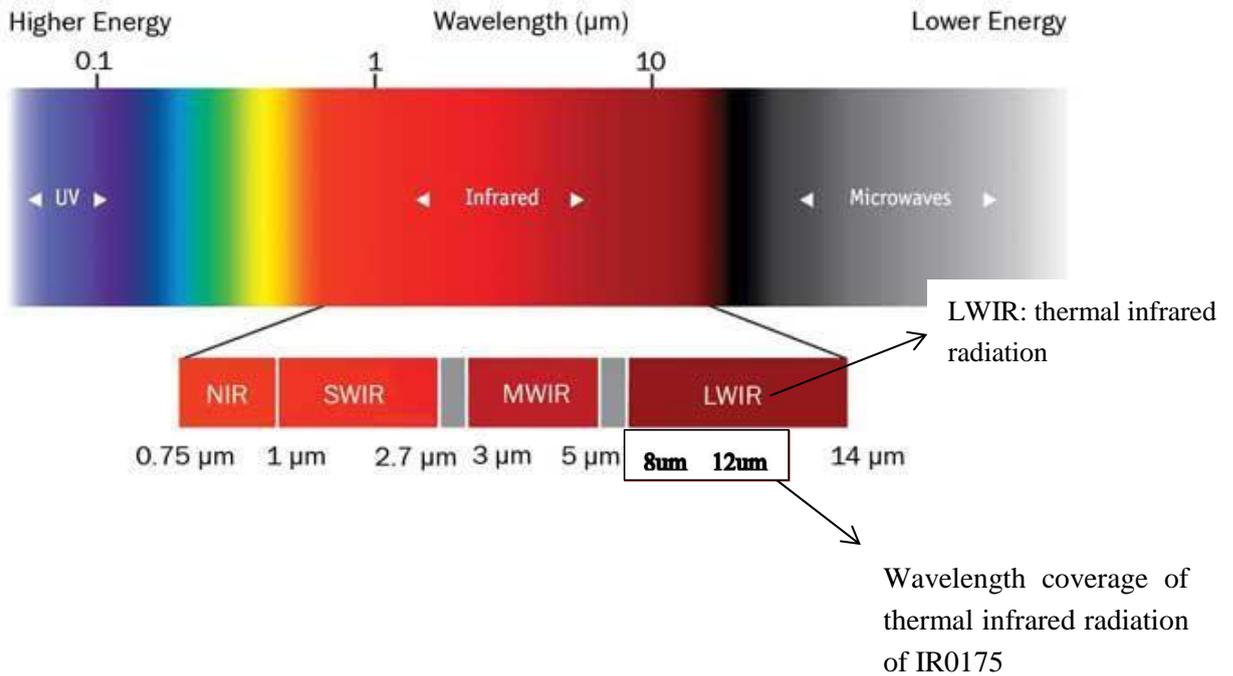
2. Considerations and Safety Maintenance

Please read the instructions carefully so as to ensure accurate measurement results and safety:

- ✧ Please take out the battery if the instrument is not used for a long time.
- ✧ Do not use the device under explosive, flammable or corrosive environment.
- ✧ Since the product is a precision electronic and sensitive optical device. Do not impact and drop it to avoid damage.
- ✧ Do not dismantle and remodel the products.
- ✧ Please use damp cloth, alcohol or weak soap to clean the enclosure of the device. Do not use abrasant, isopropanol or solvent to clean. Special optical lens cleaner should be used to clean the screen.

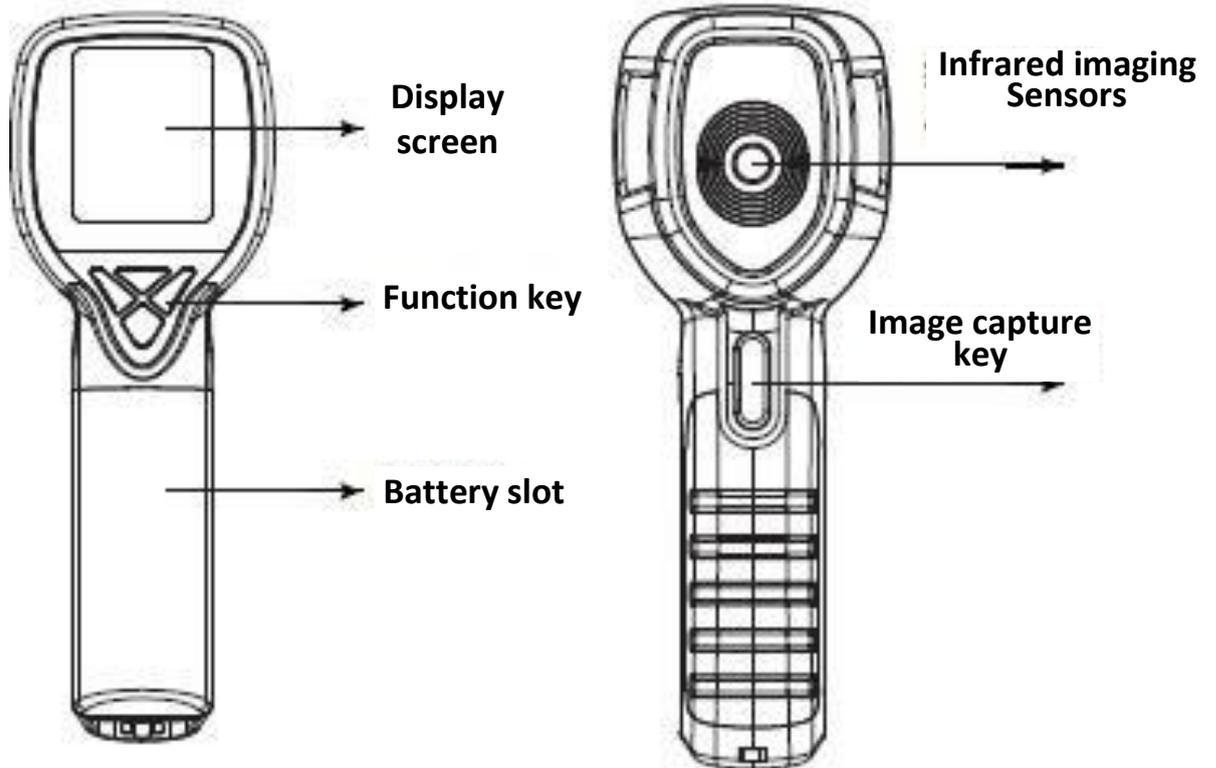
3. Performance Index

Display screen	2.0 color screen
Infrared image resolution	32*32 (1024 pixels)
Measurement mode	Infrared focal plane temperature measurement
Temperature measurement range	-20~300°C (-4°F ~572°F)
Measurement precision	±2% or ±2°C
Wavelength coverage	8-11.5um
Focus mode	Fixed
Color palette	Iron oxide red and white glow
Power supply	3×AAA alkaline battery
Size	165mm×69mm×60mm
Weight	135g (battery not included)
Work temperature	0°C to 50°C
Storage temperature	-20°C to 50°C
Humidity	10% RH to 80% RH

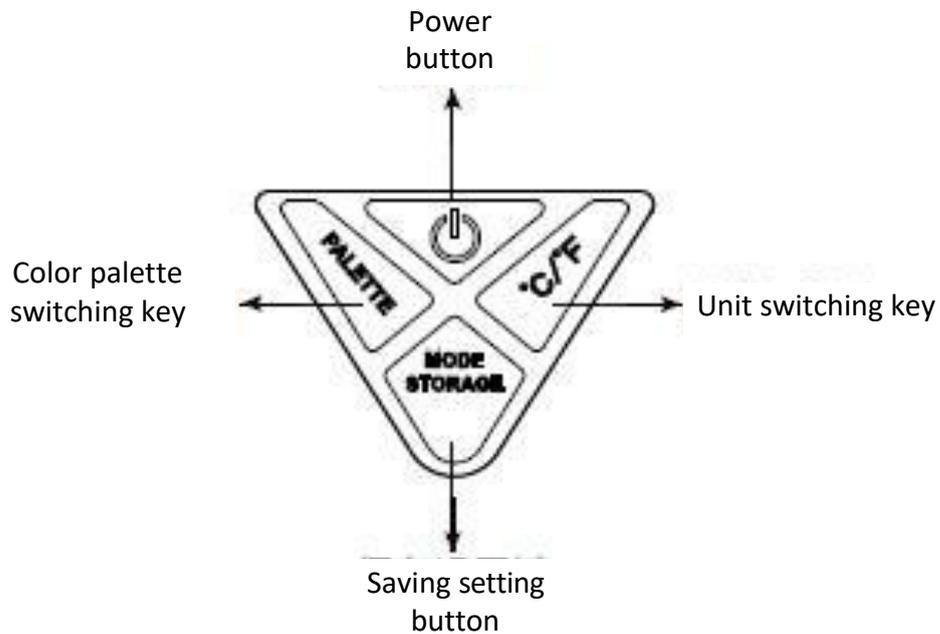


4. Product Description

4.1. Instruction to structure



4.2. Key description



1. Power button: hold down to power on/off.
2. Unit switching key: change the temperature unit °C/°F.
3. Color palette switching key: change the color palette (iron oxide red/white glow).
4. Image capture key: press to lock the image; press again to cancel.
5. Saving setting button: After completing the setting of color palettes or temperature units, press the key to remember the setting by the instrument.
---->It will not lose after powering off and on again.

5. Measurement principle

In the nature, when the temperature of an object is higher than absolute zero (-273°C), it will radiate electromagnetic wave to the surroundings constantly as a form of energy, in which infrared ray is included.

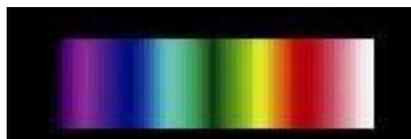
The optical elements of this infrared thermal camera can convert the infrared energy emitted, reflected or transmitted by the object into its specific temperature reading which will be displayed on screen.

The instrument first measures the infrared ray difference between the object itself and the background so as to obtain different images, then converts them into standard video format and finally display them.

6. Color palette

Suitable selection of color palette displays better the details of the target object. Two color palettes are available as below:

1. White glow color: provides balanced linear color, help to reveal full details.
2. High-contrast color: emphasize the displayed color, and the color contrast of high-temperature and low-temperature can therefore be improved.



High contrast

7. Basic Operations

7.1. Measurement

1. Aim the infrared sensor at the tested objects.
2. Adjust the angle so that the tested objects is at “+” position of the screen center.
3. Temperature display
 - The temperature of “+” position is displayed on the top right corner of the screen.
 - The lowest temperature is displayed at the bottom left corner.
 - The highest temperature is displayed at the bottom right corner.

7.2. Battery replacement/installation

1. Pull downwards and then pick up to open the battery cover.



2. Take out the battery holder to replace with new batteries (Pay attention to the anode and cathode during installing).



3. Place the battery holder back into the battery box and close the battery cover.