Multifunctional
Thermal Imaging Camera

Manuals



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Pn:5018083601
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Safety Precautions

This product complies with IEC 1010 safety standards. Read all safety precautions before use;

1.Voltages below 36V are considered safe. When measuring above 36V DC or 25V AC, ensure test leads are securely connected, properly insulated, and correctly placed to avoid electric shock;

2.Do not exceed 1000V DC or 750V AC RMS when measuring voltage, or 10A when measuring current. Incorrectly connecting voltage to the current input may blow the fuse—replace it with a qualified fuse (10A/300V);

3.When changing functions or ranges, remove test leads from the measurement point;

4.Select the correct function and range to prevent misuse. Although this meter has full-range protection, exercise caution for safety.

⚠ Warning ⚠

1.Do not disassemble the casing; seek professional repair for faults;

2.Before each use, ensure the product and test leads are undamaged;

3.When using the upgraded red laser to detect fiber, avoid direct eye exposure;

4.Follow multimeter instructions strictly. Only use test leads for high-voltage connections to prevent injury or damage;

5.Connect inputs correctly during multimeter use—wrong current port connections may cause fuse burnout or electric shock;

6.Recharge when the low-battery icon appears;

7.Store fully charged if unused for extended periods.

Product Features

1.Multi-function thermal imaging multimeter with TPR drop-resistant design

2.Stores up to 20 thermal images (with temperature data)

3.3.2" LCD (240×320 resolution)

4.7 color palettes: Iron/ Lava/ Rainbow/ Green Heat/ Red Heat/ White Heat/ Black Heat

5.60,000-count digital multimeter

6.Macro lens (optional accessory) for PCB inspection

7.5 language options

8.1500mAh rechargeable battery

9.Auto-off, brightness & sound settings

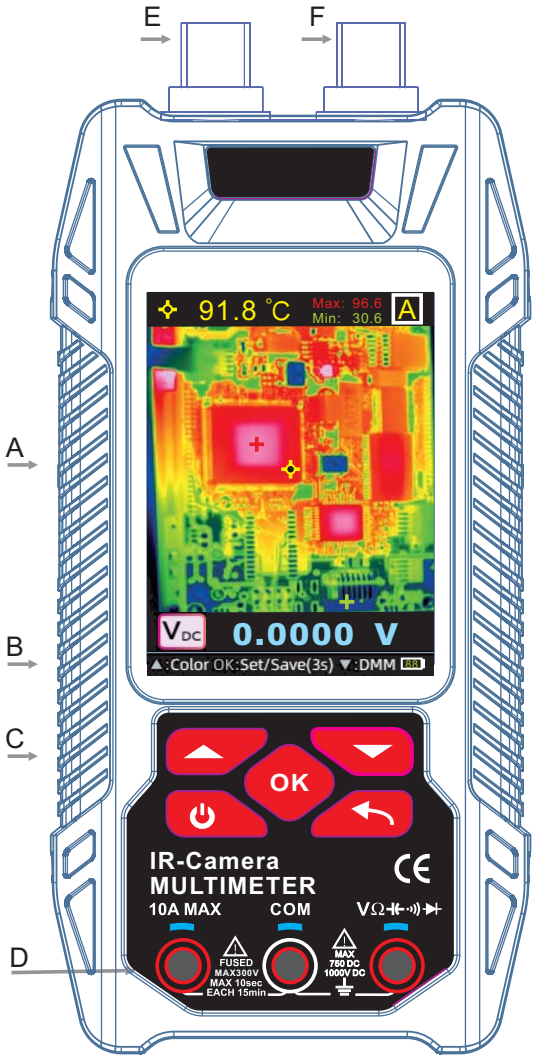
10.Optical power & red laser for fiber maintenance (upgraded model only)

Product Overview

This innovative all-in-one testing tool combines a full-function digital multimeter with a thermal imager, significantly improving electrical fault diagnosis efficiency. It integrates multiple functions including 10+ electrical measurements (AC/DC voltage, resistance, capacitance, current, etc.) and a 240×240 IR thermal imager for rapid hotspot detection (fuses, wires, connectors), enabling real-time fault verification without switching devices.

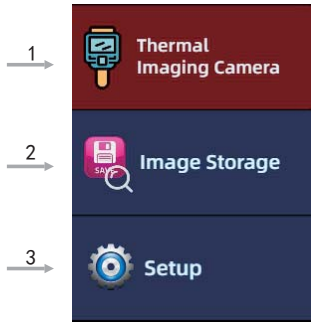
Featuring a 60,000-count precision multimeter, 3.2-inch color display and 1500mAh rechargeable battery, it delivers high-accuracy measurements for extended industrial use. Ideal for electrical troubleshooting, electrothermal circuits and PCB design applications.

A.Display Screen
B.Type-C USB Charging Port
C.Operation Buttons
D.Multimeter Input Jacks(Standard/Upgraded Model Only)
E.Optical Power Measurement Port (Upgraded Model Only)
F.Red Laser Output Port (Upgraded Model Only)



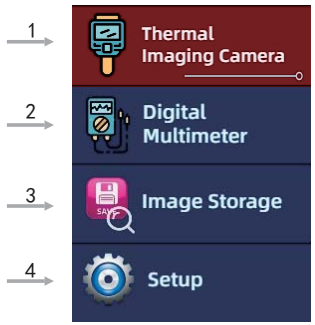
the multifunctional product enters the main menu at startup, listing all functions. Use ▲/▼ to select, then OK to confirm. Press ↖ to return to the main menu

Menu Display(Basic Model)



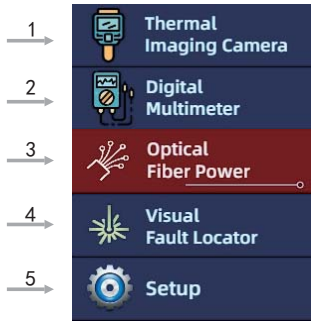
1.Thermal Imaging
2.View Stored Thermal Images
3.User Settings

Menu Display(Standard Model)



1.Thermal Imaging
2.Digital Multimeter Function
3.View Stored Thermal Images
4.User Settings

Menu Display(Upgraded Model)

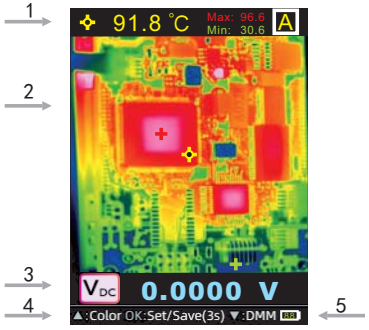


1.Thermal Imaging
2.Digital Multimeter Function
3.Optical Power Measurement
4.Red Light Pen Function
5.User Settings

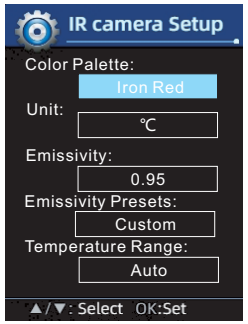
Operation Guide

Thermal Imaging Camera

On entering thermal imaging mode:Press ↖ to return to main menu; The macro lens enables close-range thermal imaging (approx. 20mm). Adjust the distance for optimal results. Features magnetic mounting—store properly to prevent magnetic interference or damage to other devices;



1. Center/Max/Min temperatures & range
   A :Auto-20~550℃ / L :Low-20~150℃
   H : High100~550℃
2. Thermal Image
   Red+: Max temp / Blue+: Min temp /
   Yellow+: Center point
3. Multimeter: Real-time readings
4. Controls:
   ▲： Toggle color palette
   OK： Enter settings (hold 3s to save image)
   ▼： Toggle multimeter functions
   Upgraded model: Press ⏻ to review saved data
5. Battery: Blinks below 10%—charge immediately.



Settings Note

Adjust color palette /units /emissivity /temperature range in settings.

Temperature range changes take ~7s to apply.

Cautions

The greater the temperature difference, the clearer the display effect.

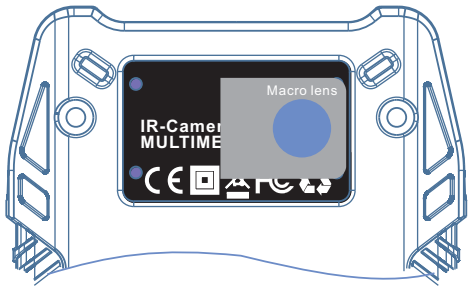
The thermal imager may experience a brief 1-2 second delay and produce a "click" sound during measurement, wh ich is normal as the system performs automatic calibration to compensate for environmental temperature sensitivity.

Product Functions

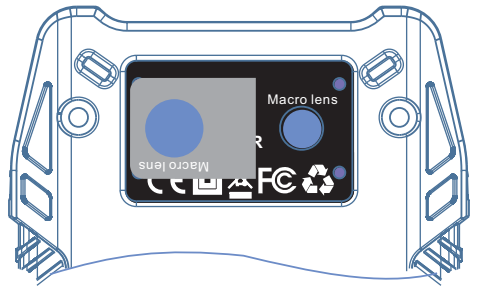
Inaccurate range selection may cause blurry images. Estimate the target's approximate temperature to set the proper range.

If readings are inaccurate, verify emissivity settings. Note: Polished and oxidized metal surfaces have significantly different emissivity.

Macro Lens Usage



Usage status



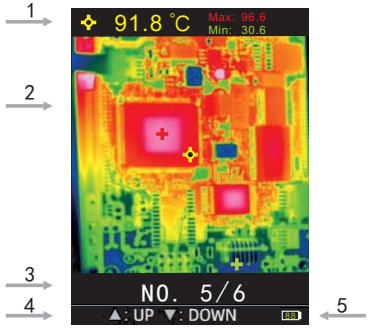
Storage when not in use

*The macro lens is an optional accessory

Image Storage

(Basic/Standard model) After powering on, select"Image Storage" from the main menu to enter this function. (Upgraded model)In thermal imaging mode, tap ⏻ to access the "Image Storage" recall feature.

The device can store up to 20 thermal images. When no data is stored, "NO Data" will be displayed. Images are automatically saved in sequential order (1-20) with cyclic overwriting. Press □ to exit this function.



1.Center/Max/Min temperatures□
2.Thermal image□
Red+: Max temp;
Blue+: Min temp;
Yellow+: Center point;
3. Image index/total count;
Factory reset will erase all stored images;
4.Operation prompts;
5. Battery level.

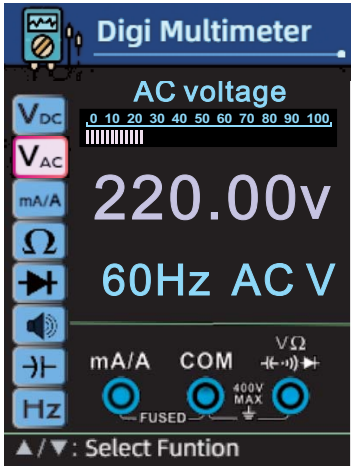
Special Functions(for Standard/Upgraded)

Digital Multimeter（DMM）

The digital multimeter features professional-grade 60,000-count resolution and measures AC/DC voltage, AC/DC current, resistance, capacitance, continuity, diodes, and frequency.

It automatically detects current types without manual selection, and uses ▲/▼ keys for function switching；

Always connect test leads as instructed to prevent fuse damage or device failure；



⚠Warning

Incorrect probe connection may damage fuses or the device.

Special Functions(for Upgraded Model)

Optical Power Measurement（OPM）

The optical power meter measures optical signal power and attenuation values.

Press ▼ to select wavelength.

Click ▲ to enable/disable the REF function for attenuation testing. When REF mode is activated, the device automatically saves the current optical power value and initiates reference measurement, comparing the current result with the previously stored value to determine the attenuation level of the tested component.

Press OK to hold the measurement results.



Optical Power Calibration（CAL）

When measurements deviate, calibrate as follows:

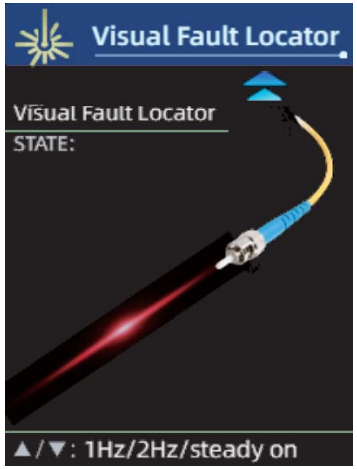
Input a standard signal (known power value)；Hold OK for 2s until "CAL" appears;Adjust with ▲/▼, then hold OK for 2s to save

For factory reset:

Select OPM mode;Hold OK for 2s (no adjustment),Hold OK for 2s again

Special Functions(for Upgraded Model)

Red Light Pen (VFL)



This visual fault locator generates a 650nm red laser that couples into fiber optic cables, allowing technicians to visually identify specific fibers by observing the light emission at the remote end

Press ▲/▼ to switch between 1Hz pulse, 2Hz pulse, or continuous light modes.

Troubleshooting

1. No power:
   Charge fully before use;
2. Blurry macro imaging:
   Select correct/Auto temperature range;
   Align lens' left tabs with housing slots
3. No current reading:
   Check/Replace fuse (10A/300V rated);
4. Muted keys/dim screen:
   Enable sounds/Brightness in settings Or reset to factory defaults.

Technical Specifications

Functions	Basic	Standard	Upgraded
Detector Resolution	Thermal imaging pixels: ISR 240x240		
Testing Distance	0.2~3m（0.1m*0.1m）		
Measurement Principle	3-point temperature measurement (Center/Max/Min)		
Measurement Range	−20~550℃(L:Low H:High A: Auto)		
Spatial Resolution	8.8mrad		
Display Screen	3.2-inch Dot Matrix Color Screen（240*320）		
Photography Function	Storage: 60 data sets		
Frame Rate	25Hz		
Macro Lens (Optional)	With macro lens: Resolves 1mm components		
Measurement Accuracy	2℃ or 2%（whichever is greater）		
Special Function	no	DMM	DMM
	no	no	VFL
	no	no	OPM
Special Function			
Optical Power/OPM	mW/uW/nW/-70.00~6.00 dBm		
Visual Fault Locator	10mW(about 10kM) ON/1Hz/2Hz/OFF		
DMM Function	(60000COUNT)		
DC Voltage/DCV	600.00mV~1000V(±0.5%+0.3)		
AC Voltage/ACV	600.00mV~750V(±0.8%+0.5)		
DC Current/DCA	600.00mA~10A(±1%+0.4)		
AC Current/ACA	600.00mA~10A(±1%+0.5)		
Resistance/R	600.00Ω~60 MΩ(±1%+0.6)		
Capacitance/CAP	6.0000nF~60 MF(±2%+0.6)		
Frequency/Hz	6.0000Hz~6 MHZ(±1%+0.1)		
Continuity Test	< 10Ωbuzzer		
Diode Test/Diode	√		
Fuse Specification	10A/300V		
OTHER	Multi-language Selection (English, Chinese, German, French, Spanish) 3.2-inch 240*320 dot matrix color screen power supply		
Package	Color box/manual/tool kit/USB cable/test lead Macro Lens		
Power Specifications	1500mA.H lithium battery(with protection circuit) Charging requires a 5V/2A/10W charger or above (not included)		

*Indicators are the best indicators of function