HIKMICRO

HIKMICRO B SERIES PRODUCT INTRODUCTION

COMPACT AND EASY TO USE THERMAL CAMERA FOR DAILY OPERATION.

INDUSTRIAL PRODUCT | 2023.Q3

BATTERY 2 YEARS

FULL PRODUCT 3 YEARS

DETECTOR 10 YEARS

PRODUCT CATEGORY

HIKMICRO

Thermal

Handheld

Fixed

Firefighting

New

Explosion-proof

New

Acoustic

Acoustic

New

Software

PRODUCT MATRIX - HANDHELD

Entry & Middle level

- 256

Mini2Plus:
Manual Focus

Mini2:
Focus Free

Smartphone Attachment for Android

Mini Series

- 96 / 160
- Focus Free

Eco Series

E Series

- 192 / 256
- Wi-Fi
- Focus free

B Series

Pocket Series

Middle & High-end Level

- 160 / 192 / 256 / 384 / 640
- Wi-Fi
- Manual Focus
- Removable Batteries /Memory Card

M Series

- 384 / 480 / 640
- Wi-Fi
- Auto Focus
- Removable Batteries /Memory Card
- Optional Lenses

G Series

- 480 / 640
- Wi-Fi
- Auto Focus
- Removable Batteries /Memory Card
- Optional Lenses
- DV Form Factor

SP Series

PRODUCT POSITIONING

HIKMICRO

- The B series is our hot-selling handheld thermal camera for quick troubleshooting. B21L, B11, and B20 3 models are available in this series, which is a single IR camera and an IR, visible light dual-lens camera. Powered by SuperIR image enhancement technology, the B series can optimize the thermal image quality of products without increasing the budget. Supports full-screen temperature measurement, automatically tracks the highest, lowest, and center points, and quickly locates problems. Wireless connect with the HIKMICRO Viewer App to quickly transfer and share your on-device images.

Model	E1L	B11	B21L	B20	Pocket2
IR Resolution	160 x 120 (19,200 Pixels)	192 × 144 (27,648 Pixels)	256 x 192 (49,152 Pixels)	256 x 192 (49,152 Pixels)	256 x 192 (49,152 Pixels)
SuperIR	×	**Yes, on Captured Thermal Images**			TBD
FOV (H × V)	37.2° × 50°	27.8° × 37.2°	37.2° × 50.0°	37.2° × 50.0°	50° × 37.2°
Temperature Range	-20 °C to 550 °C (-4°F to 1022°F)	-20 °C to 550 °C (-4°F to 1022°F)			-20 °C to 400 °C (-4°F to 752°F)
Operation Time	8 Hours	6 Hours			4 Hours
Display	2.4" LCD Screen	240 × 320 Resolution, 3.2”LCD Screen			640 × 480 Resolution, 3.5" LCD Touch Screen with Auto-rotation
Visual Camera	×	1600 × 1200 (2 MP)	×	1600 × 1200 (2 MP)	3264 × 2448 (8 MP)
LED Flashlight	×	√	×	√	√
Wi-Fi	×		√		√

CONTENTS

B SERIES – FORM FACTOR

- **B11/B20**

- **B21L**

B SERIES – FORM FACTOR

- 3.2” LCD Screen with 240x320 Resolution
- Keypad Controls for use with Gloves or PPE
- Rugged Design with 2m Drop Test and IP54 Water & Dust Protection
- Built-in Rechargeable Li-ion Battery System for up to 6 hours of runtime
- Wrist Strap Hole, and UNC ¼”-20 Tripod Mounting Hole

B11/B20 – FORM FACTOR

- USB-C Connection for Transferring Images and Charging
- 1600 × 1200 (2 MP) Visual Camera
- B11: 192 × 144 (27,648 pixels) IR Resolution
  B20: 256 x 192 (49 125 pixels) IR Resolution
- LED Lamp for Lighting Dark Environments
- Trigger for Capture and Laser Pointer, and for 1 Click Thermal and Visual Image Storage

B21L – FORM FACTOR

- Removable Micro SD Card, and USB-C Connection
- B21L: 256 x 192 (49 125 pixels) IR Resolution
- Laser Pointer
- Trigger for Capture and Laser Pointer, and for 1 Click Thermal and Visual Image Storage

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B SERIES - OVERVIEW

Compact and easy to use camera for daily operation

Basic Parameters	B11	B21L	B20
IR Resolution	192 × 144 (27,648 Pixels)	256 x 192 (49 125 pixels)	
SuperIR	Yes, on Captured Thermal Images		
FOV (H × V)	27.8° × 37.2°	37.2° × 50.0°	
Visual Camera	2 MP	×	2 MP
Laser Pointer	×	√	×
Led Flashlight	√	×	√
Wi-Fi	√		
Display	240 × 320 Resolution, 3.2”LCD Screen		
Object Temperature Range	-20 °C to 550 °C (-4 °F to 1022 °F)		
Focus	Focus-free, 0.3 m (0.98 ft) Min. Focusing Distance		
Storage Media	Built-in EMMC (16 GB)		
Battery Operating Time	6 Hours		
Weight	380 g (0.84 lb)		

B SERIES - KEY FEATURES

Compact and easy to use camera for daily operation

256

High Image Quality

Features a highly sensitive (NETD < 40 mK) VOx detector, along with optimized image enhancement algorithms to provide clear thermal images.

3.2”

3.2” Color LCD

View the details of your images on the large, class-leading LCD screen

Wi-Fi

Wi-Fi Connectivity

Connect to mobile devices via built-in Wi-Fi and the HIKMICRO Viewer App to quickly share your images.

Temp

High Temperature Alarm

Built-in speaker and flash light give the operator audio and visual alerts to high temperatures

B SERIES - KEY FEATURES

Compact and easy to use camera for daily operation

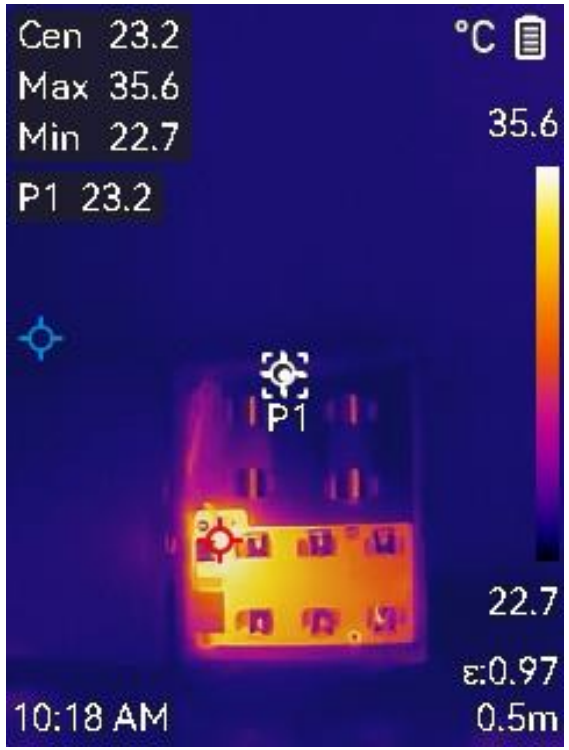
256

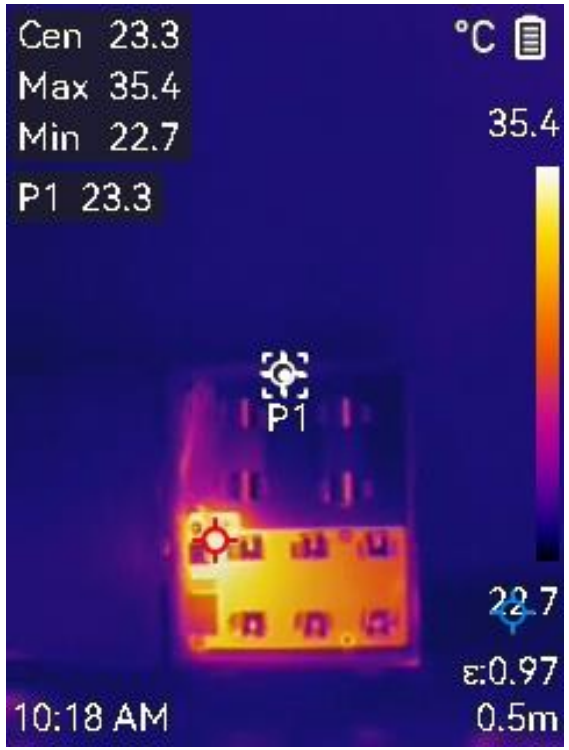
Enhanced Thermal Clarity with **SuperIR**

Powered by HIKMICRO SuperIR image enhancement technology, it upscales the resolution of captured thermal images to **320 x 240 (76,800 Pixels).**

- **Upscaled** IR Resolution
- **Reduced** Image Noise
- **Enhanced** Edge Details

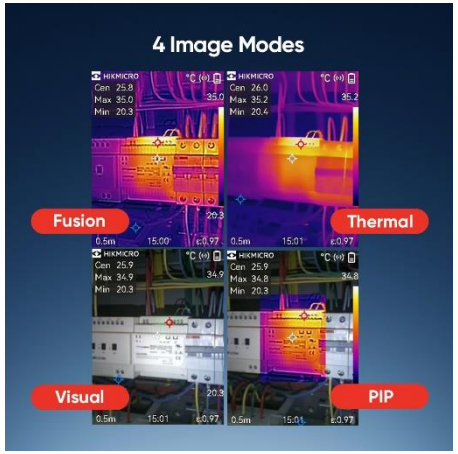
Note: Update the firmware of your B series cameras to V5.5.50 and above.





B SERIES - KEY FEATURES

Compact and easy to use camera for daily operation



Full-screen Precise and Wide Temperature Measurement

Supports capture of full-screen radiometric images and automatically tracks max/min/center spots to pinpoint temperature anomalies at a glance. Accurately measures temperatures from -20°C to 550°C (-4°F to 1022°F) with a temperature accuracy up to +/-2°C (+/-3.6°F) or +/-2% of reading.

25 Hz Fast Image Frequency

25 Hz fast image frequency delivers smooth video while panning across scenes or viewing moving targets.

4 Images Modes

Thermal, Fusion, PIP and Optical modes to suit your preferred view. (Except B2L/B21L)

Durable and Rechargeable Batteries

Built-in 3350mAh Li-Ion rechargeable battery and thoughtful auto power-off settings (10/20/30/40/50/60 minutes) allow the camera up to 6 hours of continuous operation.

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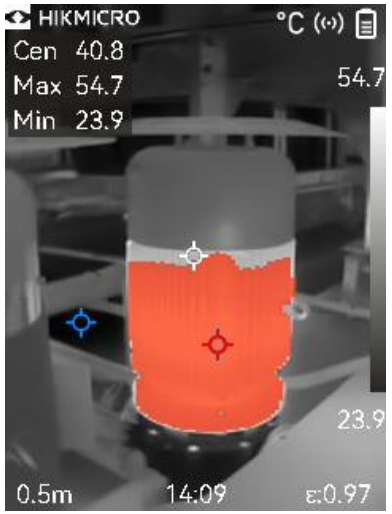
B SERIES – APPLICATIONS

Electrical Inspection

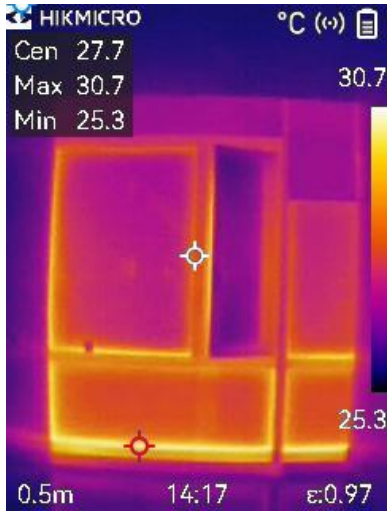
Electrical problems can relate to problems such as loose or over-tight connections, shorted or overloaded circuits, load imbalances, and components that have failed or are fatigued, such as fuses, circuit breakers, transformers, etc. Most electrical problems exhibit a gradual rise in temperature prior to their failure.

And thermal imaging can recognize this heat. By detecting these early, you can prevent the possibility of fire.



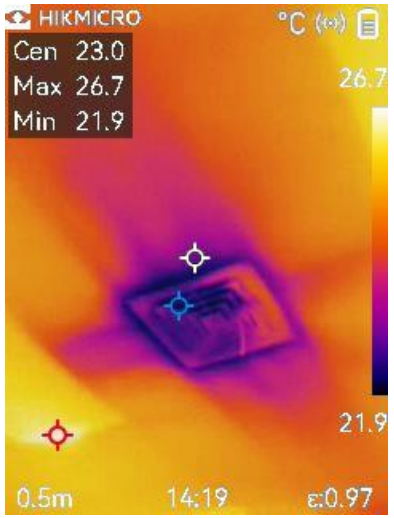
Mechanical Predictive Maintenance

Thermal imaging is great for spotting a lack of uniformity in equipment by indicating hot and cold spots in surface temperature, through infrared image capture. Heat is often an early symptom of equipment damage or malfunction, making it important to monitor preventive maintenance programs. Monitoring equipment performance with thermal imaging cameras can reduce the likelihood of unplanned downtime due to equipment failure, reduce reactive maintenance fees and equipment repair costs, and extend the lifespan of machine assets.



Building Inspection

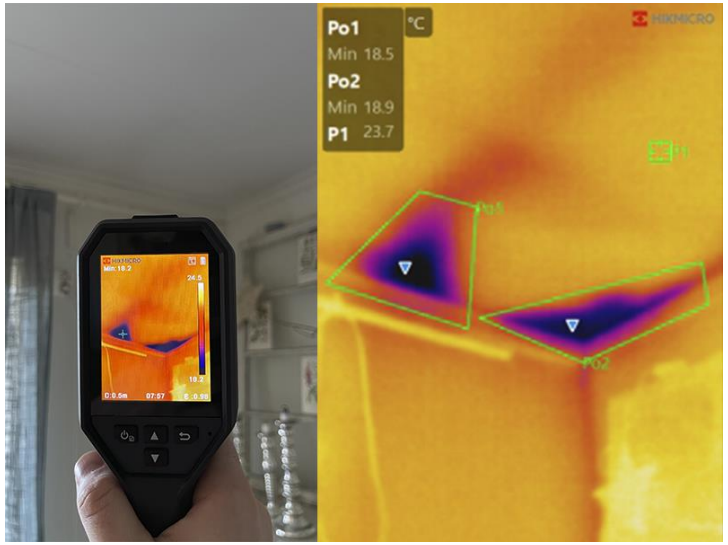
In building inspections, missing or damaged insulation, building envelope air leaks, and moisture intrusion can be very difficult to find before they become serious enough to damage or destroy building contents. Thermal cameras can and have been utilized in the discovery of otherwise undetectable heat, air, and moisture anomalies in all types of structures.



HVAC

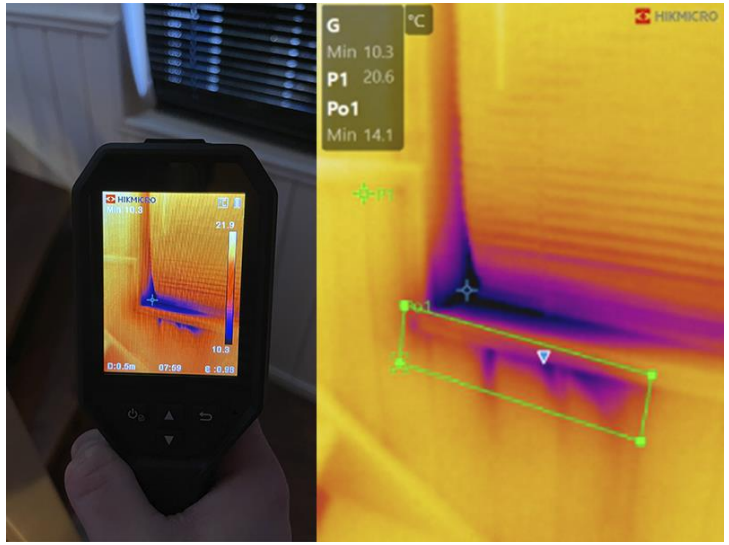
With thermal imaging technology, technicians and heating engineers can make doubly sure that a central heating system has been thoroughly maintained. Not only does this provide peace of mind for the operator themselves, and it also allows them to show clients the results of their work and even help convince them of the need for maintenance in the first place. Thermal technology stands out as the only way to provide a comprehensive, visual, and quantitative assessment of the efficacy of maintaining HVAC Radiators.

B SERIES – APPLICATIONS



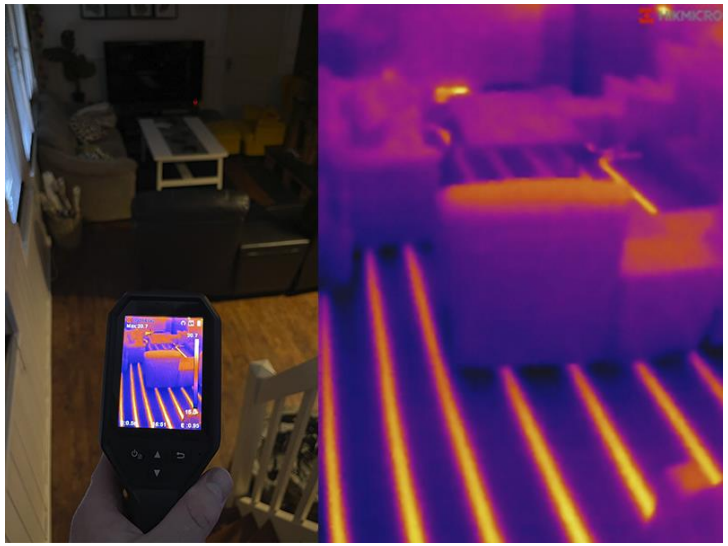
HVAC Inspection

A handheld thermal imager can be used to troubleshoot HVAC problems effectively and efficiently. It can find blocked registers, broken junctions, condenser units, electrical problems, radiant floor heating, and coil temps in a flash.



Water Leak Inspection

Hidden water can wreak havoc on insulation, wood, electrical components and, eventually, finishes when it does reveal itself. As long as the conditions are right, thermal imaging will find the leakage area though showing the temperature variances between water and surrounding materials.



Find Air Leakage

When insulation is missing in walls or rafters, it can cause energy loss and increase heating and cooling costs. As long as the conditions are right, a thermal imaging camera can help identify areas with energy loss, especially those in hard-to-reach locations or behind walls.

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B SERIES - SCOPE OF DELIVERY

Compact and easy to use camera for daily operation

- Thermal Camera with Wrist Strap
- Power Supply
- International Use Plugs

  (US/EU/UK/AU/CN) for Power Supply
- USB 2.0 A to USB Type-C Cable
- Calibration Certificate
- Quick Start Guide

Calibration Certificate

Quick Start Guide

Thermal Camera with Wrist Strap

USB Cable

Charger and International Adapters

B SERIES - OPTIONAL ACCESSORIES

POUCH

(HM-B01-POUCH)

- Soft carrying case

Bracket

(HM-2925ZJ-TM01-BRACKET)

- PCB Testing Bracket
- UNC ¼”-20 Tripod Mounting Bracket

Macro Lens for B Series

(HM-B201-MACRO)

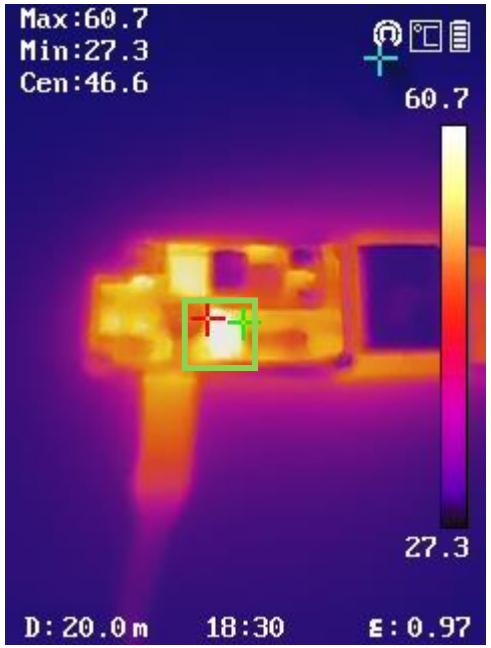
- Compatible with B Series camera
- Magnification: 0.12X
- Focus Distance: 30 mm
- Minimum Target Size for Accurate Temperature Measurement: 500 μm
- Accurate Temperature Range: -20~150 ℃(-4~302℉), Max(±3℃, ±3%)

B SERIES - MACRO LENS

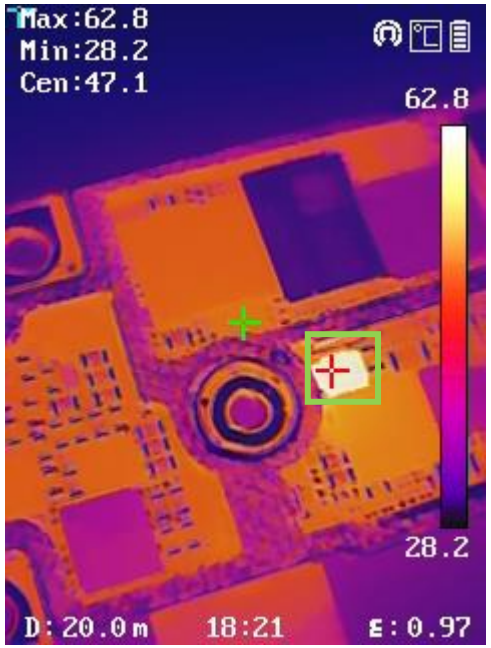
Macro Lenses Solution for Imaging Small Targets

Item	Model Name	Key Features	Picture
Macro Clip-on Lens	HM-B201-MACRO	• Compatible with B Series camera • Magnification: 0.12X • Focus Distance: 30 mm • Minimum Target Size: 100 μm • Accurate Temperature Range: -20~150 ℃(-4~302℉), Max(±3℃, ±3%)	

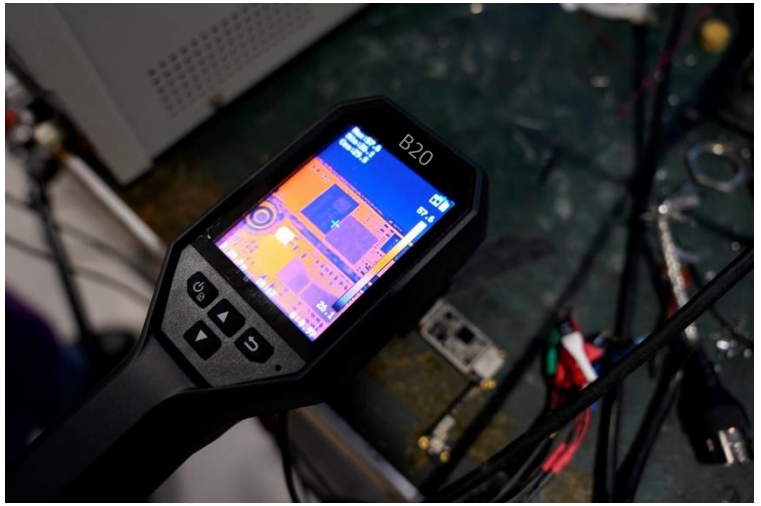
Without Macro Lens



With Macro Lens



Features above 2: Imaging the chip on the PCB with the HIKMICRO B Series camera with or without a macro lens.



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B SERIES - SPECIFICATIONS

Camera Highlights		B11	B21L	B20
Infrared Image	IR Resolution	192 × 144 (27,648 Pixels)	256 x 192 (49,152 Pixels)	
	SuperIR	**Yes, on Captured Thermal Images**		
	NETD	<0.04°C / NETD< 40mK		
	Image Frequency	25 Hz		
	Field of View (FOV)	27.8° × 37.2°	37.2° × 50.0°	37.2° × 50.0°
	Focus Mode	Focus Free		
Image Display	Visual Camera	1600 × 1200 (2 MP)	×	1600 × 1200 (2 MP)
	Image Modes	Thermal/Visual/PIP/Fusion	Thermal	Thermal/Visual/PIP/Fusion
	Display	240 × 320 Resolution, 3.2" LCD Screen		
Measurement and Analysis	Object Temperature Range	-20 °C to 550 °C (-4°F to 1022°F)		
	Accuracy	Max (± 2°C/3.6°F, ± 2%), for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)		
Data Storage and Communication	Storage Media	Built-in 16 GB flash memory		
	File Format	Radiometric JPEG		
	Storage Capacity	Approx. 90,000 Images		
General	Wi-Fi	802.11 b/g/n (2.4 GHz)		
	Battery Operating Time	Approx. 6 hours		
	Led Flashlight	√	×	√
	Laser Pointer	×	√	×
	Durability	IP54, 2 m (6.56 ft) drop protection		
	Weight	Approx. 380 g (0.84 lb)		

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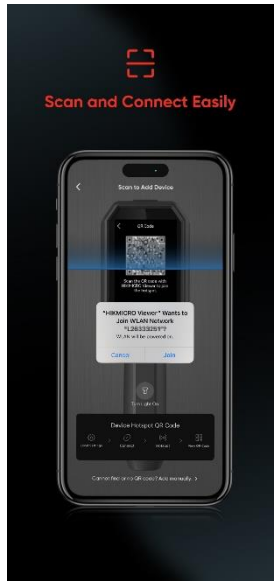
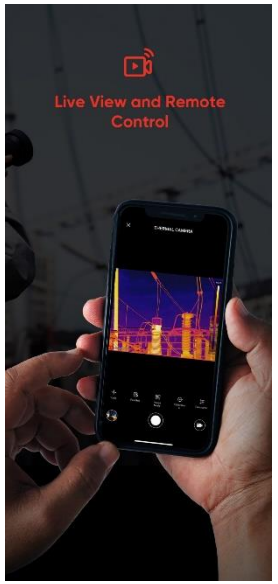
MOBILE APPLICATIONS - HIKMICRO VIEWER

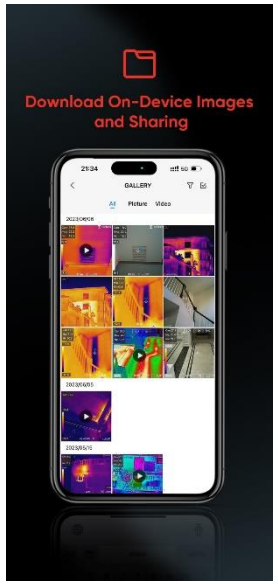
WIRELESS ANALYSIS, REPORTING AND SHARING

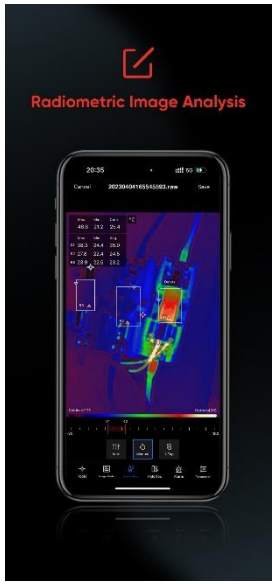
HIKMICRO Viewer App is A powerful and intuitive APP designed for industrial thermal cameras. It allows thermal inspector to view and capture live streaming infrared video and still images from select HIKMICRO thermal imaging cameras using a mobile device. With the HIKMICRO Viewer, the thermal camera can be placed in an area and operated wirelessly from a distance - helping infrared detection work safely in hard-to-reach locations and harsh work environments. Streaming video and remote access also provide opportunities for decision-makers and others on the team to observe and collaborate during IR surveys. With a powerful reports function, you can efficiently generate reports for your clients in the field.

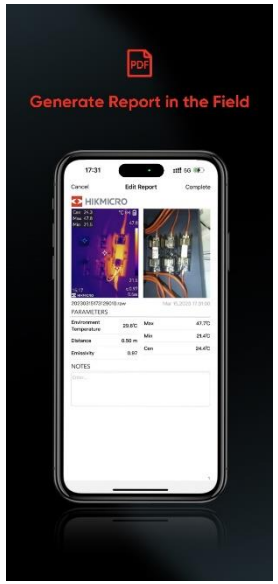
- **Free license**
- **Scan and Connect Easily**
- **Download On-Device Images and Video to share**
- **Live View and Remote Control**
- **Advanced measurement and image analysis**
- **Quick reporting and sharing**
- **Firmware Upgrade**
- **After-sales contacts and online support services**
- **Turn screen rotation on and off**











GET IT ON Google Play

Download on the App Store

Learn more:

https://www.hikmicrotech.com/en/industrial-products/hikmicro-viewer-software/

PC SOFTWARE - HIKMICRO ANALYZER

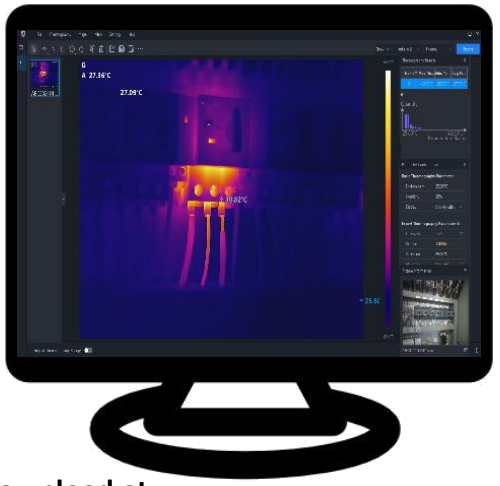
EFFICIENT, POWERFUL THERMAL ANALYSIS AND REPORTING

HIKMICRO Analyzer is a powerful and free licensed PC software designed to help users manage and analyze thousands of thermal images and videos and quickly create professional reports. Compatible with files from HIKMICRO handheld thermal cameras, providing the features you need to simplify your workflow and increase your productivity.

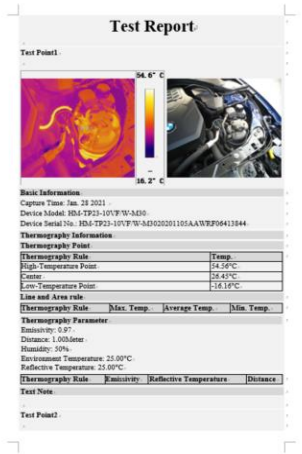
- **Free license**
- **Import, edit and manage files**
- **View, edit and analysis radiometric images and videos**
- **Advanced measurement and image analysis**
- **Batch processing with all image and measurement controls**
- **Quick reporting with pre-defined or customized templates**

THERMAL IMAGE ON SITE

ANALYSIS ON COMPUTER



EXPORT REPORT



Download at:

https://www.hikmicrotech.com/en/industrial-products/hikmicro-analyzer-software/

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B20 - COMPETITIVE ANALYSIS

HIKMICRO Advantages:

1. Fully Radiometric
2. SuperIR
3. 25 Hz Video
4. 40 mK NETD
5. Wi-Fi
6. Auto Hot/Auto Cold
7. Warranty

FEATURE/PRODUCT	HIKMICRO B20	FLIR TG267	Fluke TiS20+
			
Thermal Resolution	256 x 192	160 × 120	120 x 90
SuperIR	**Yes, on Captured Thermal Images**		
Temperature Range	-20 °C to 550 °C (-4 °F to 1022 °F)	-25°C to 380°C (-13°F to 716°F)	-20 °C to 150 °C (-4°F to 302°F)
Accuracy	Max (±2 °C, ±2%)	±1.5°C (2.7°F) for 50°C to 100°C (122°F to 212°F); up to ±3°C (±5.4°F) for -25°C to 50°C (-13°F to 122°F) and 100°C to 380°C (212°F to 716°F)	Accuracy: ± 2 °C or ± 2 % at 25 °C, whichever is the greater.
Field of View	37.2° × 50.0°	57 ° x 44°	50° H x 38° V
Focus	Fixed	Fixed	Fixed
Frame Rate	25Hz	8.7Hz	30 Hz or 9 Hz versions
NETD	< 40mK	<70 mK	60 mK
Display	3.2” LCD Screen	320 × 240 pixel, 2.4 in color LCD	320 x 240 3.5" LCD touchscreen (landscape)
Measurement Rules	Max/Min/Center/preset points	Center Point	Max/Min/Center
Optical Camera	1600 × 1200 (2 MP)	2 MP (1600 × 1200 pixels)	5MP resolution
Wifi	Yes	No	Yes
High Temperature Alarm	Yes	No	No
Battery Operating Time	6 hours operating time	5 hours operating time	≥ 5 hours continuous
Warranty	3 Years	2 Years	2 Years

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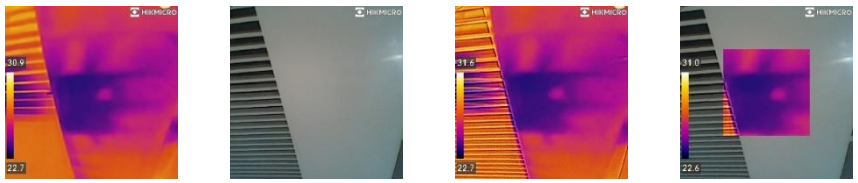
IMAGES QUALITY COMPARISON(Internal Use Only)

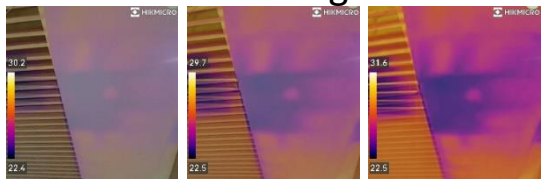
	Eco	Eco-V	PocketE	B11	B21L	B20
IR	96 x 96 (9,216 Pixels)			192 × 144 (27,648 Pixels)	256 x 192 (49,152 Pixels)	
SuperIR	240 x 240 (57,600 Pixels), on Live View and Captured Thermal Images			320 x 240 (76,800 Pixels), on Captured Thermal Images		
Image Mode	Thermal	3: Thermal/Visual/Fusion	5: Thermal/Visual/Fusion/ PIP/Blending	4: Thermal/Visual/Fusion/ PIP	Thermal	4: Thermal/Visual/Fusion/ PIP
Palettes	7			7		
Min. Focus Distance	0.1 m			0.3 m		

- Image Mode

Thermal Visual Fusion PIP

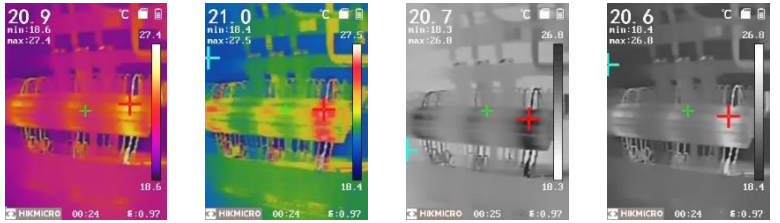


Blending

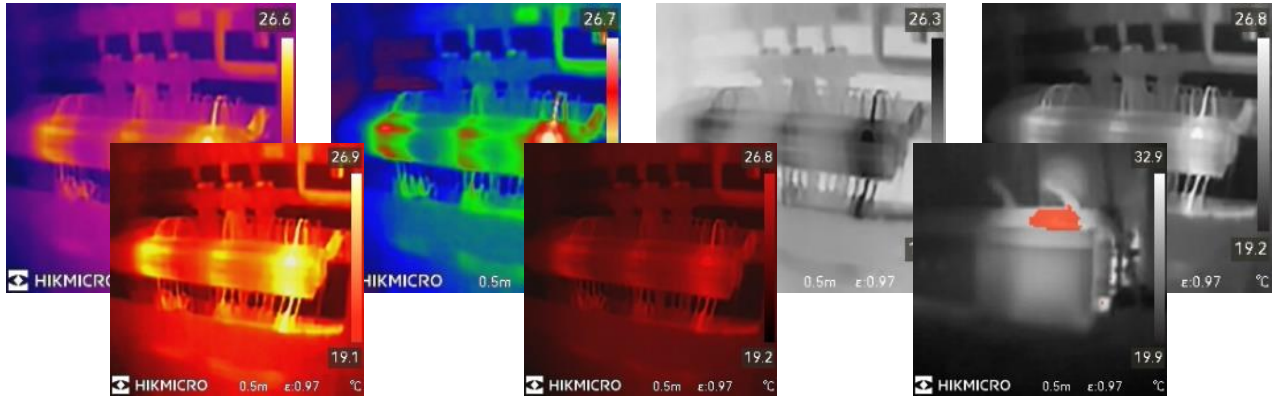


25% 50% 75%

- 4 color palettes

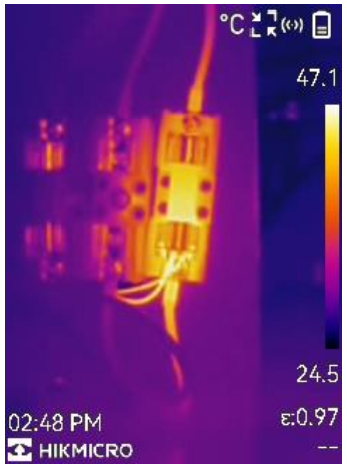
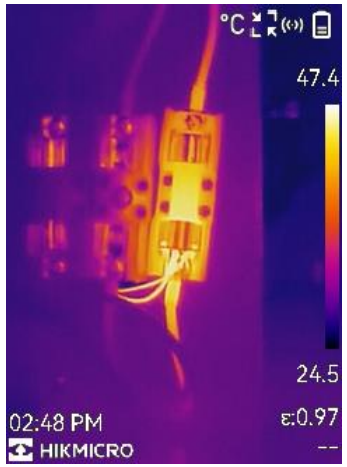
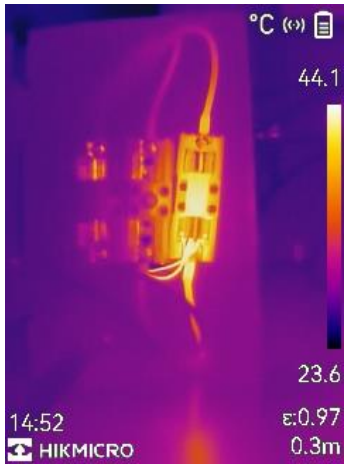
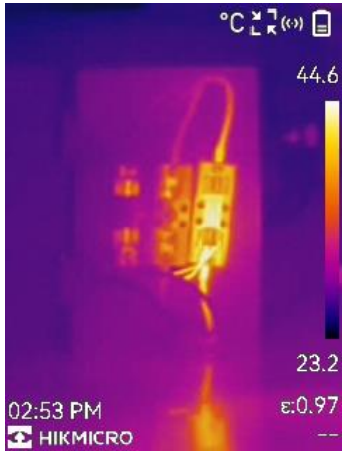
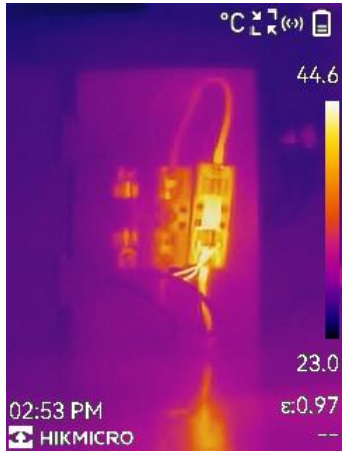
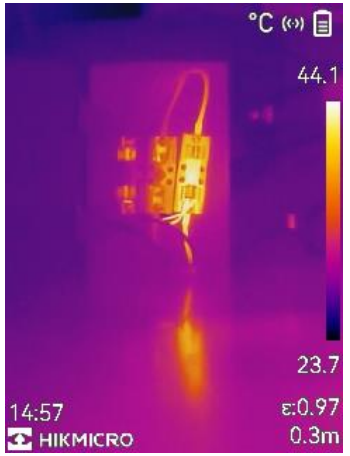


- 7 color palettes



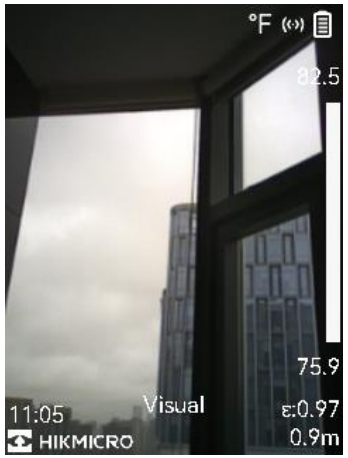
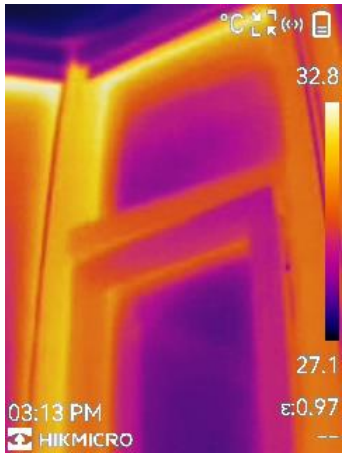
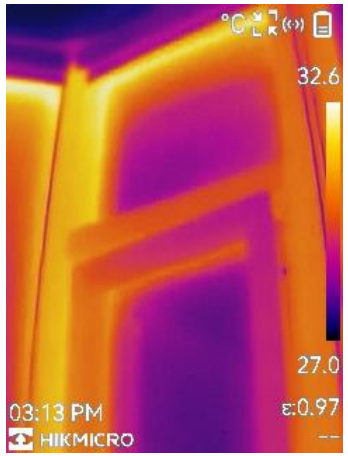
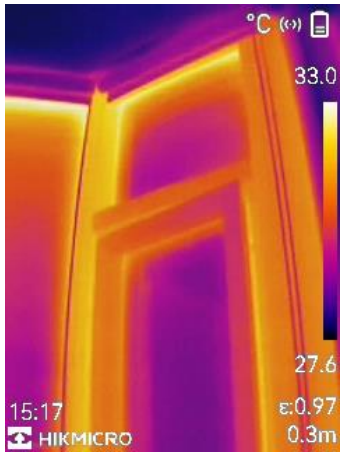
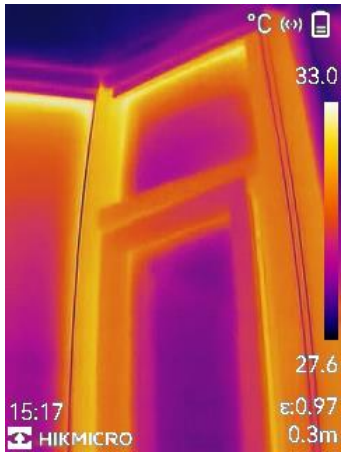
COMPARISON OF IMAGES - ELECTRICAL(Internal Use Only)

HIKMICRO

		B11		B21L/B20	
			SuperIR ON		SuperIR ON
30 cm					
50 cm					

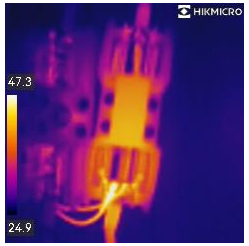
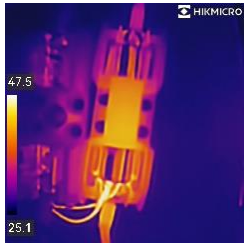
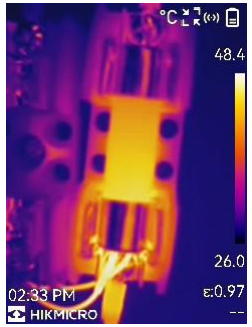
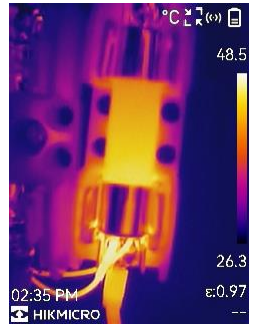
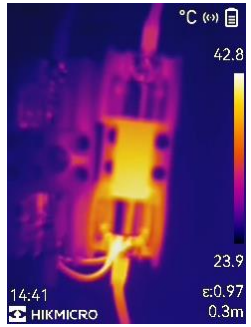
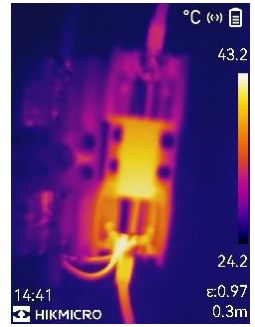
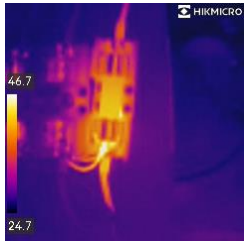
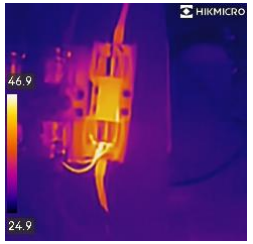
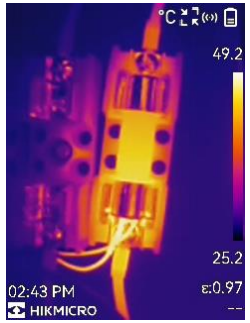
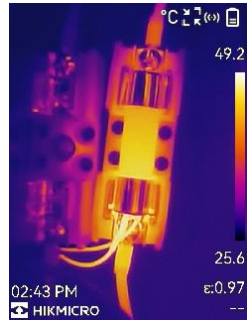
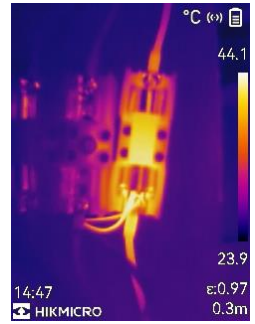
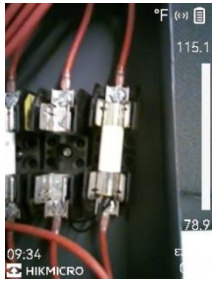
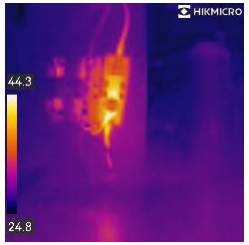
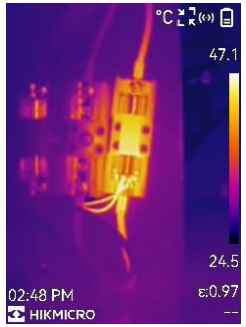
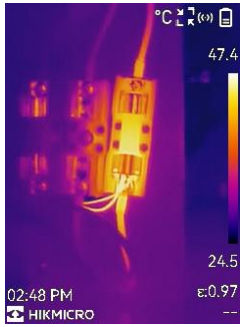
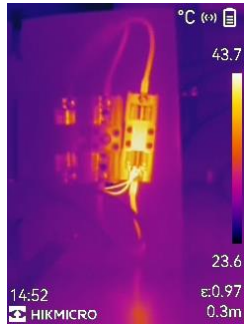
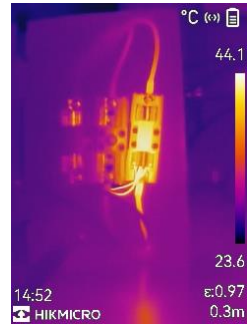
COMPARISON OF IMAGES - ELECTRICAL(Internal Use Only)

HIKMICRO

		B11		B21L/B20	
		SuperIR ON		SuperIR ON	
1.5 m					

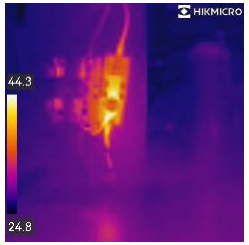
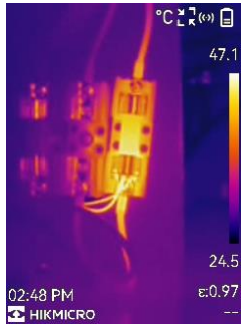
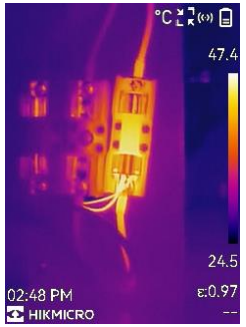
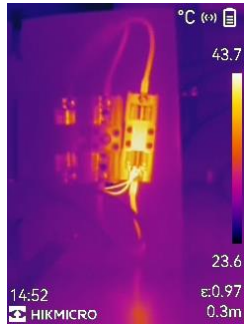
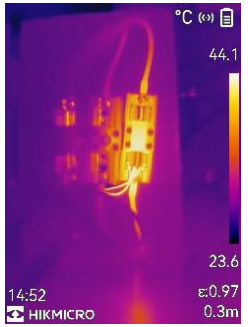
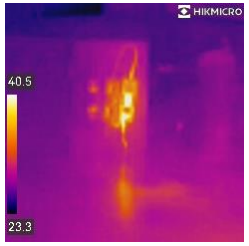
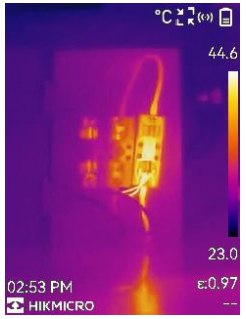
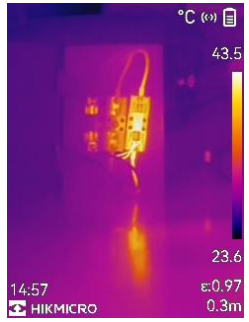
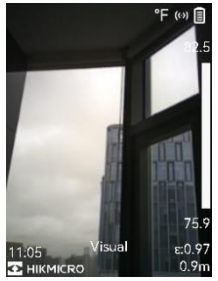
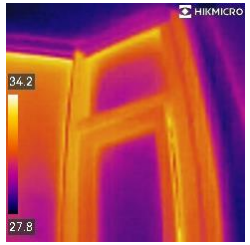
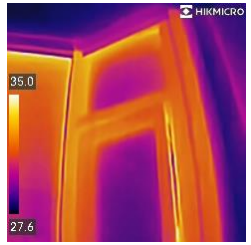
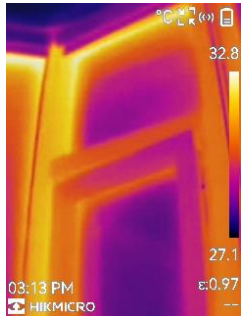
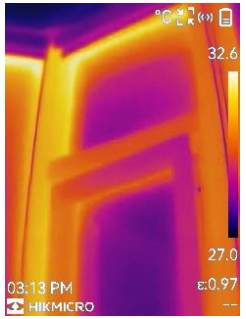
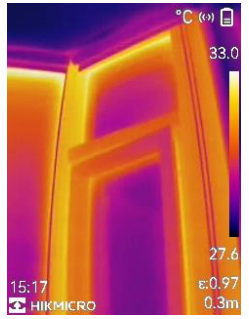
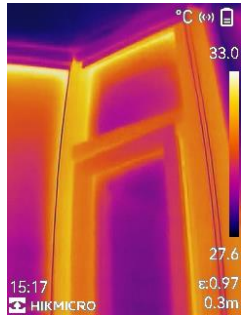
COMPARISON OF IMAGES – Short Distance(Internal Use Only)

HIKMICRO

	Eco/Eco-V/PocketE		B11		B21L/B20	
		SuperIR ON		SuperIR ON		SuperIR ON
10 cm							
15 cm							
30 cm							

COMPARISON OF IMAGES - Medium Distance(Internal Use Only)

HIKMICRO

		Eco/Eco-V/PocketE		B11		B21L/B20	
			SuperIR ON		SuperIR ON		SuperIR ON
30 cm							
50 cm							
1.5 m							

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