

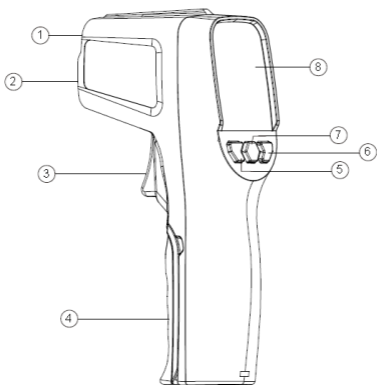
# BEETECH®

NON-CONTACT INFRARED  
THERMOMETER  
Model: **B-IR 3/ B-IR 6/ B-IR 9**



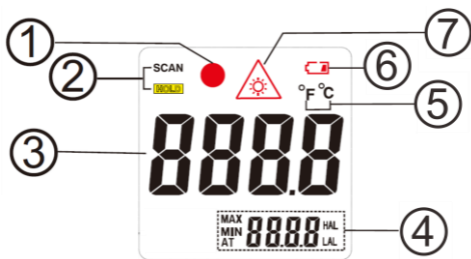
Instruction Manual

## FRONT PANEL DESCRIPTION



- 1) Laser Pointer
- 2) IR Sensor
- 3) Trigger Button
- 4) Battery Compartment
- 5) Menu Key
- 6) C / F Select Key
- 7) Set Key
- 8) LCD Display Screen

## LCD DISPLAY



- 1) Alarm Indicator
- 2) Measurement and Data hold
- 3) Temperature Reading
- 4) MAX-MIN-AT- HAL-LAL Display Area
- 5) Temperature Unit Symbol
- 6) Low Battery Indication Symbol
- 7) Laser Symbol

## INTRODUCTION

BEETECH B-IR3, B-IR6, B-IR9 is a Professional, hand-held Infra-Red Thermometer used for non-contact Infrared temperature measurement, that is simple to use, Highly Accurate, and has a Wide Temperature Range. It can be used to measure the surface Temperature of hard-to-reach or moving objects.

## FEATURES

- Accurate and fast non-contact measurements
- MAX-MIN-AT- HAL-LAL mode
- Temperature alarm
- Large color LCD display with backlight
- °C / °F selection
- Low power indication
- Data hold
- Auto power off.

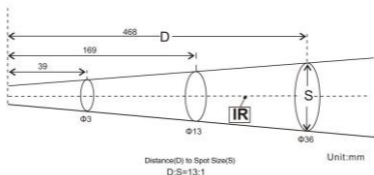


## SAFETY

- Use with extreme caution when the laser beam is turned on.
- Do not point the beam towards Human eye or animals.
- Do not allow the beam to strike the eye from a reflective surface.
- Do not use the laser near explosive gases

## DISTANCE AND SPOT SIZE

When the distance (D) between the thermometer and the object increases, the light spot (S) increases. The distance to the spot ratios is shown below in the field of view diagram.



### Note:

- Accuracy can be ensured while the temperature is at 18°C to 28°C (64°F~82°F) and humidity is less than 80 % RH.
- Make sure the target is larger than the unit's spot size. The smaller the target is, the closer you should be. When accuracy is critical, make sure the target is at least twice as large as the spot size.

# OPERATING INSTRUCTION








## OPERATING STEPS

1. Hold the meter with its handle grip and point it towards the surface to be measured.
2. Pull and hold the Trigger to turn on the meter, the "SCAN" icon will appear and begin testing.
3. Release the trigger, the "HOLD" icon will appear, the readings will be frozen .
4. The meter will automatically shut off after 25 seconds of inactivity.

## MEASUREMENT NOTE

1. If the meter is used in an ambient temperature with a large temperature change, wait at least 30 minutes to adjust it.

## BUTTON FUNCTION

1.  button, Power the meter on, press  button to change the mode of MAX-MIN-AT-HAL-LAL to check related value.
2.  button: power the meter on, press the  button to enter the setting mode, emissive adjustment mode, high alarm value setting mode, low alarm value setting mode can be changed in turn. Press the  button to increase the value and press the  key to decrease the value. Press the trigger button, meter will automatically save the value and return to the MAX mode.
3. Power the meter on, press  button to switch the temperature unit.

## TECHNICAL SPECIFICATION

Model	B-IR3	B-IR6	B-IR9
Temp. Range (IR)	-50°C~600°C -58°F~1112°F	-50°C~900°C -58°F~1652°F	-50°C~1150°C -58°F~2102°F
Distance to Spot Ratio (D:S)	13:1		20:1
IR Accuracy	±3°C/5.4°F (<0°C/32°F)		
	> 0°C: ±2.0% or ±2.0/3.6°F, whichever is greater		
Emissivity	Adjustable from 0.1~1.0		
Resolution	0.1		
Response Time	< 500ms		
Spectral Response	8~14um		
Diode Laser	Output<1mW,630~670nm, class 2( II ) laser		
MAX	The maximum value in this measurement		
MIN	The minimum value in this measurement		
Ambient Temp. (AT)	Ambient temperature measured		
High Alarm (HAL)	High Alarm, if the measured value exceeds the set high alarm value, the red alarm symbol will appear on the screen along with beeper sound to warn the user		
Low Alarm (LAL)	Low Alarm, if the measured value is lower than the set low alarm value, the red alarm symbol will be appeared on the screen along with beeper sound to warn the user		
Auto Power Off	Meter shuts off automatically approx. after 25 seconds of inactivity		
Operation Temp.	0°C~ 50°C / 32°F to 122°F		
Storage Temp.	-20°C~70°C / -4°F to 140°F		
Relative Humidity	Operating:10 to 95%RH; Storage:<80%RH		

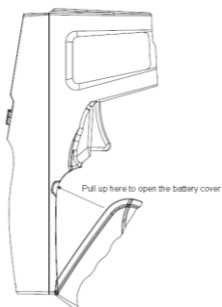
## EMISSIVITY


The emissivity of the surface of a material is its effectiveness in emitting energy as thermal radiation. It is the ratio of the thermal radiation from a surface to the radiation from an ideal black surface at the same temperature. The ratio varies from 0 to 1. The bigger the ratio, the stronger the thermal radiation is from the surface. The emissivity of surface of most materials is between 0.85~0.98. The default emissivity of this unit is set at 0.95; however, it can be adjustable. Before measuring, please adjust it to the suitable emissivity according to the table below.

## EMISSIVITY TABLE

Substance	Thermal Emissivity	Substance	Thermal Emissivity
Aluminum	0.30	Glass	0.90 to 0.95
Asphalt	0.95	Iron oxides	0.78 to 0.82
Concrete	0.95	Lacquer	0.80 to 0.95
Asbestos	0.95	Plastic	0.85 to 0.95
Ceramic	0.95	Paper	0.70 to 0.94
Copper	0.50	Sand	0.90
Brick	0.90	Rubber	0.95
Carbon	0.85	Timber	0.94
Fat-lute	0.94	Textiles	0.94
Frozen food	0.90	Lead	0.50
Hot food	0.93	Marble	0.94
Ice	0.98	Cloth black	0.98
Snow	0.90	Plaster	0.80 to 0.90
Human skin	0.98	Water	0.93

## BATTERY REPLACEMENT



- When the low battery icon  appears, replace the meter's battery.
- Open the battery compartment, replace a new 1.5V“AA” \*2 battery and then close the battery compartment cover.

## ACCESSORIES

- User Manual
- Battery.

# BEETECH WARRANTY POLICY

BEETECH Instruments are free from defects in workmanship and functioning, under normal and appropriate use and conditions, for a period of one 1 year from the original invoice date.

During the Warranty period of one year the original purchaser is warranted against the instruments purchased. During this period BEETECH will repair or replace (at its decision) the defective unit subject to verification of the defect or the malfunction (If a manufacturing defect) at Free of Cost (except shipping charges - to & from, handling charges, packing charges, insurance charges, etc., which must be incurred by the customer).

This warranty does not cover disposable batteries, or any damage caused due to abuse, neglect, accident, unauthorized opening or repair, alteration, contamination, or any other abnormal conditions of operation or handling.

Such repairs or replacements are primarily subject to verification of manufacturing defect or malfunctions and proof of purchase as confirmed by inspecting the product and the original, dated, purchase invoice. Buyers are to retain purchase invoices for a minimum of one year for warranty

## To summarize, warranty does not include:

- 1) Any condition resulting from other than ordinary and usual use for which the product was not intended.
- 2) Any condition resulting from incorrect or inadequate usage, application, maintenance, or care.
- 3) Damage resulting from misuse, incorrect application, abuse, negligence, accidents or shipping damage
- 4) Normal wear and tear or damage in transportation or in transit.
- 5) If the device has been opened, inspected, or modified by the user the warranty is void and cannot be claimed.
- 6) Batteries, Testing leads, and functional accessories are out of warranty policy.
- 7) Any defect which is not a manufacturing defect.



## **CALIBRATION CERTIFICATE**

**This Certificate guarantees that the product has been inspected and tested in accordance with the published specifications.**

**The instrument has been calibrated by using equipment which is calibrated to standards traceable to International and National standard.**

**(This instrument does not require further calibration until the period of one year from date of use)**