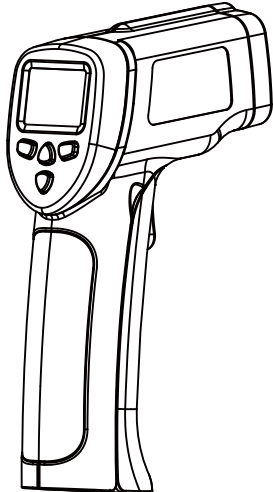




Dual Laser Infrared Thermometer

IR-40

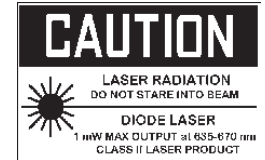


Product Instruction

Many thanks for choosing our product. This is non-contact Infrared Thermometer and the max temperature can be measured is 1202°F/ 650 °C). It can measure almost all things' surface temperature and their emissivity characteristic is adjustable. Under the proper operation and protection it can be used for years.

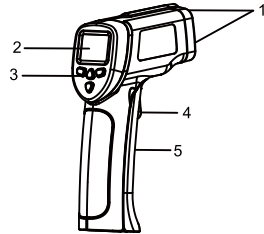
Safety

- * Be cautious when laser is working
- * Do not point directly into eyes or anything that can be reflect into eyes.
- * Do not point the laser directly at the explosive gas or area.



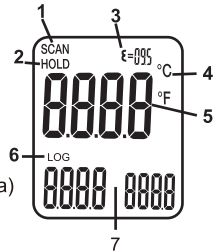
Product Description

1. Dual Laser Targeting
2. LCD display
3. Function Menu
4. Measuring trigger
5. Battery cover



Show

1. Scanning and measuring procedure
2. Hold and keep the last measuring data
3. Emissivity setting
4. °F and °C swift
5. Main temperature display
6. Temperature storage (can store up to 20 data)
7. Mode display



Operation Instruction

Temperature Measuring

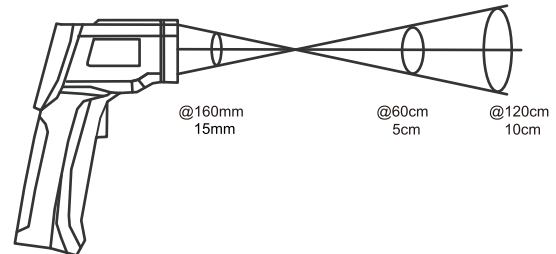
1. Point the instrument to the surface of the object you want to measure and press the trigger.
2. It can display temperature, max temperature, min temperature, difference value, average value, max temperature setting value, min temperature setting value.
3. The measuring result will stay on the screen for 7 sec after the trigger is loosen and it will be powered off if no operation is done.
Notice: Press the "MODE" button for 2 sec when the instrument is on to swift between °F and °C .

Dual laser spot

Dual laser distance is within 120cm. And the temperature be measured is 10cm in diameter range in this distance.

Dual laser's on and off

1. Press and loose the trigger
2. When "hold" is displayed, press the laser backlit button to power on and off the laser and to switch the backlit.
3. Laser will be remained stored stage until it change to another mode.



Max Temperature Display

The max temperature is displayed in "MAX" after the temperature measurement is finished.

Backlight

1. Press and loose trigger.
2. Press the backlit button when the screen shows "HOLD" to switch backlit.
3. When the backlit is on, it will light up the screen.
4. Backlit will be remained stored stage until it change to another model.

Press up and down button to adjust emissivity when it shows "EMS". The emissivity of this instrument is between 0.10-1.00.

Remark: backlit will consume the power of battery. Turn it off when you need not.

MODE menu operation

1. It can enter max value, min value, average value, max temperature setting value, min temperature setting value
2. Press and loose the trigger when it shows "HOLD". Press the "MODE" to enter the next program.

Max data

Only shows the max data when measuring

Min data

Only shows the min data when measuring

Difference data

Shows the difference between the max and min data.

Average data

Shows the average among all the measuring temperature data.

HAL

To set the max alarm temperature, press the up and down menu.

LAL

To set the min alarm temperature, press the up and down menu.

LOG

Stores temperature data. Press the Measuring Trigger button to display temperature, then press the yellow button on the Function Menu to store temperature data. If you want to store the next one, press the Up button. Store the next few temperatures as the same way.

Alarm when temperature is too high or too low

This product can alarm when the temperature is too high or too low.

You can set the alarm temperature through the "MODE" menu. It can be remain the setting when it is power on unless the setting is cancelled.


Temperature Unit

°F or °C can be switched by pressing the MODE menu for 2 sec.

Over Range Alarm Function

If the temperature is beyond the instrument can measured, it will shows "----" on the screen.

Battery Replacement

When it shows low power signals "  ", please replace battery (9V). The battery is under the trigger.

Do not discard the used battery into the dustbin.

Attention

The object to be measured must be larger than the vision field of the instrument.

Keep the object surface clean and free from frost, oil and dirt etc when measuring.

If the object to be measured is easy to reflect, covered by adhesive tape or black paint before measuring. The object to be measured is transparent such as glass may not have an accurate result.

Steam, dust, smog etc will influence the measuring result.

This instrument can adjust the environment temperature deviation.

But if the deviation is huge it may cost about 30 minutes to adjust.

To find a hot spot please point the object from top to bottom and/or from left to right until you find it.

Distance Coefficient Ratio

The distance coefficient ratio of this product is 12:1. For example, if the object to be measured is 72cm far from the instrument, then the diameter of the object must be bigger than 6cm. It can measure proper distance but can be influenced by other light sources.

Emissivity and Infrared Temperature Measurement Principle

Infrared thermometer is an instrument that measures the surface temperature. It is through infrared emission, reflection and then converted into energy. The thermometer converts the electrical signals into temperature readings displayed on the LCD.

The infrared energy object can release in direct proportion with its temperature and emissive power. This is called emissivity, it is related to the material and gloss of the object. The emissivity value ranges from 0.10 to 1.00. As the same with our product. The emissivity of most organic material, paint and the surface be oxidized is 0.95. Once there is a problem please set the emissivity to be 0.95.

Emissivity values of common materials

Material under test	Emissivity	Material under test	Emissivity
Asphalt	0.90 to 0.98	Cloth (black)	0.98
Concrete	0.94	Skin (human)	0.98
Cement	0.96	Leather	0.75 to 0.80
Sand	0.90	Charcoal (powder)	0.96
Soil	0.92 to 0.96	Lacquer	0.80 to 0.95
Water	0.92 to 0.96	Lacquer (matt)	0.97
Ice	0.96 to 0.98	Rubber (black)	0.94
Snow	0.83	Plastic	0.85 to 0.95
Glass	0.90 to 0.95	Timber	0.90
Ceramic	0.90 to 0.94	Paper	0.70 to 0.94
Marble	0.94	Chromium Oxides	0.81
Plaster	0.80 to 0.90	Copper Oxides	0.78
Mortar	0.89 to 0.91	Iron Oxides	0.78 to 0.82
Brick	0.93 to 0.96	Textiles	0.90

Specifications

Model	IR-40
Temperature	-50°C~650°C
Rang	-58°F~1202°F
Temperature Resolution	0.1°C/0.1°F
Emmissivity	Adjustable 0.10~1.0
Optical Resolution	12:1 Distance to spot size ratio
Basic Accuracy	+2% of reading or +2°C/°F
Response time	0.15 second
Diode Laser	Output<1mW at 630~670nm class II laser produce
Spectral Response	6~14um
Power Supply	9V battery, NEDA 1604A or IEC 6LR61, or equivalent
Weight	150g
Size	180 x 107 x 40 mm

General Specifications

Display	Backlit LCD display with function indicators
Response time	150ms
Over range indication	"_——"
Operating Temperature	0°C to 50°C (32°F to 122°F)
Operating Humidity	10% to 90%RH operating, <80%RH storage.
Storage Temperature	-10 to 60°C (14 to 140°F)
Power Supply	9V battery
Automatic Power Off	7 seconds, with LOCK to disable