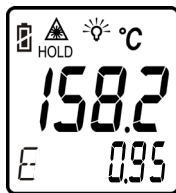


# IR-GUN-S

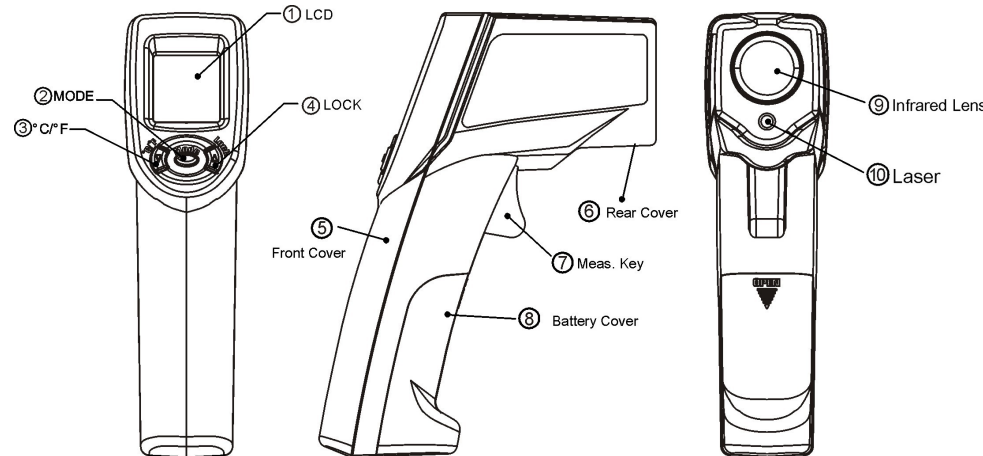
## High Accuracy Infrared Thermometer – Operating Instructions

The IR-GUN-S is a non-contact infrared thermometer for measuring surface temperatures. Please remember to keep away from children and don't use it for safety related applications.



### (Default Screen)

Simply aim the thermometer at the desired target and press the trigger (Meas. Key ⑦) to display the surface temperature. The Distance:Spot ratio is 12:1. Please make sure the target area is within the field of view.



### MAIN FUNCTION



Indicates emissivity. (The default emissivity is 0.95.) For more information on emissivity values of various surfaces, visit [www.thermoworks.com](http://www.thermoworks.com).

Press Mode (②) key to scroll between the following functions:



Press Mode (②) key, then press Lock (④) key or °C/°F (③) key to **set the emissivity**, then press Mode (②) key to confirm. The emissivity can be changed from 0.10 (10E) to 1 (100E) depending on the surface being measured.

Press Mode (②) key for the **Maximum (MAX), Minimum (MIN), Different between MAX and MIN (DIF) and Average (AVG) modes**. During the measurement, the special modes reading will be displayed beside the mode icon.

Press Lock (④) key or °C/°F (③) key to change the **High Alarm (HAL) or Lo Alarm (LAL)**, then press Meas. Key (⑦) to confirm it. For example: When the reading 26.9°C < LAL 27°C, you will hear a beeping sound.

### ADDITIONAL FUNCTIONS

#### Changing from °F to °C

Press the °C/°F-Down (③) button

#### Display Lock

Sets unit to continuous measure mode without having to press the trigger. Press Lock/Up (④) button to enable. Press again to disable.

#### Backlight

While holding down the trigger (Meas. Key ⑦), Press the Lock/Up (④) button to turn backlight on. Press again to disable.

#### Laser

The laser pointer is set to on as the default. While holding down the trigger Meas. Key (⑦), press the °C/°F-Down (③) button to enable or disable the laser.

#### Memory

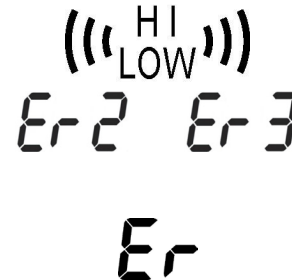
To recall the last temperature recorded, press the Mode (②) key while unit is off.

### STORAGE & CLEANING

The thermometer should be stored at room temperature. The sensor lens is the most delicate part of the thermometer. The lens should be kept clean at all times. Care should be taken when cleaning the lens using only a soft cloth or cotton swab with water or rubbing alcohol, allowing the lens to fully dry before using the thermometer. Do not submerge any part of the thermometer.

### LCD ERROR MESSAGES

The thermometer incorporates visual diagnostic messages as follows:



You will hear a beeping sounds when the temperature being measured is outside of the settings of HAL and LAL.

'Er2' is displayed when the thermometer is exposed to rapid changes in the ambient temperature. 'Er3' is displayed when the ambient temperature exceeds 0°C (32°F) or +50°C (122°F). The thermometer should be allowed plenty of time (minimum 30 minutes) to stabilize to the working/room temperature.

**Error 5~9**, for all other error messages it is necessary to reset the thermometer. To reset, turn the instrument off, remove the batteries and wait for a minimum of one minute, reinsert the batteries and turn on. If the error message remains please contact ThermoWorks' Technical Support for further assistance at [techsupport@thermoworks.com](mailto:techsupport@thermoworks.com).

### BATTERIES

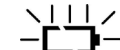
The thermometer incorporates visual low battery indication as follows:



'Battery OK': measurements are possible



'Battery Low': battery needs to be replaced, measurements are still possible



'Battery Exhausted': measurements are not possible

⚠ When the 'Low Battery' icon indicates the battery is low, the battery should be replaced immediately with 2 AAA, 1.5V batteries.

Please note: It is important to turn the instrument off before replacing the battery otherwise the thermometer may malfunction.

⚠ Dispose of used battery promptly and keep away from children.

### SPECIFICATION

Measurement Range	-76 to 1022°F (-60 to 550°C)
Operating Range	32 to 122°F (0 to 50°C)
Accuracy*	55 to 95°F (15 to 35°C): ±2.7°F (±1.5°C); 32 to 1022°F (0 to 550°C): 4°F (2°C) or ±2% of reading, whichever is greater; -76 to 32°F (-60 to 0°C): ±4°F + 0.9°F below 32°F (±2°C + 0.5°C below 0°C)
Emissivity	0.95 default – adjustable 0.1 to 1 step .01
Resolution	0.1° (-76 to 999.9°), otherwise 1°
Response Time	1 sec.
Distance/Target	12:1 (1" target diameter at 12" distance)
Battery	2x AAA, 180 hours typical, 140 hours continuous use (without laser and backlight)
Dimensions	5.82 H x 3.74 W x 1.63 D inches (147.93 H x 112.58 W x 36 D mm)
Weight	5.1 oz (145 g) including batteries
Note: Under the electromagnetic field of 3V/m from 200 to 600 MHz, the maximum error is 18°F (10°C). The thermometer will automatically shut off if left idle for more than 60 sec.	

⚠ **EMC/RFI:** Readings may be affected if the unit is operated within radio frequency electromagnetic field strength of approximately 3 volts per meter, but the performance of the instrument will not be permanently affected.

*\*IR accuracy can be affected by the emissivity setting, target spot size, and rapid changes in ambient temperature.*

### ⚠ CAUTION

1. WHEN DEVICE IS IN USE, DO NOT LOOK DIRECTLY INTO THE LASER BEAM—PERMANENT EYE DAMAGE MAY RESULT.
2. USE EXTREME CAUTION WHEN OPERATING THE LASER.
3. NEVER POINT THE DEVICE TOWARDS ANYONE'S EYES.
4. KEEP OUT OF REACH OF ALL CHILDREN.



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P-10-003-02-f





**ThermoWorks**

## **CERTIFICATE OF CONFORMANCE**

The manufacturer of this instrument has implemented a quality assurance system under ISO 9001 certified quality system and fully follow ISO GUM (Guide to the Expression of Uncertainty in Measurement) to evaluate the uncertainty of temperature and resistance standards, guarantee performance as below;

Calibration Temperature	Max Error	Target Accuracy	Target Stability
-30°C	±3.5°C	±0.3°C	0.3°C
0°C	±2.0°C	±0.4°C	0.1°C
100°C	±2.0°C	±0.4°C	0.1°C
200°C	±4.0°C	±0.5°C	0.1°C

Note: Assume the operation ambient temperature under  $23 \pm 3^{\circ}\text{C}$

Furthermore, we certify that this infrared thermometer has been inspected and found to comply with published specifications. This device has been calibrated by temperature and/or resistance standards that are traceable to NML (National Measurement Laboratory) of Taiwan, and the calibration procedure corresponds with generally accepted regulations and standards.

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