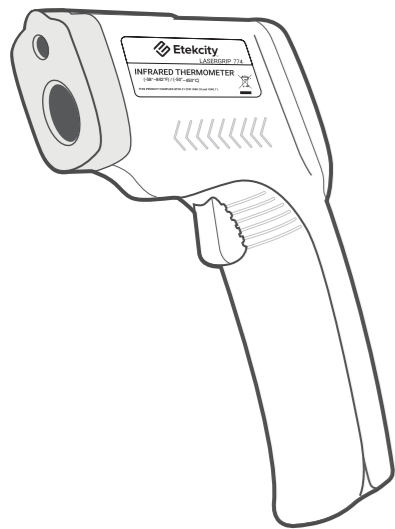




# Infrared Thermometer

## User Manual



### Questions or Concerns?

support@etekcity.com • (855)-686-3835

## READ AND SAVE THESE INSTRUCTIONS

### Important Safety Information

Please read and follow all instructions and safety guidelines in this manual.

- Do not point the Lasergrasp at another person or animal.
- Do not point the Lasergrasp at an aircraft.
- Avoid any eye contact with the laser. Laser radiation may cause eye damage.
- Do not allow children to operate the Lasergrasp.
- Remove batteries for storage if the device is not being used for a prolonged period of time.
- Do not use the Lasergrasp to determine whether a highly reflective surface is safe to touch. Temperature measurement may be inaccurate, which may cause burns.
- Keep the Lasergrasp away from objects that produce strong electromagnetic fields, such as arc welders and induction heaters.
- The Lasergrasp measures surface temperature, not internal temperature. Do not use the Lasergrasp to measure body temperature.
- Do not expose the Lasergrasp to direct sources of heat for extended periods of time.
- Do not use the Lasergrasp near explosive gases or other potentially explosive areas.
- Household use only.

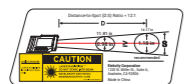
**WARNING:** THIS DEVICE PRODUCES CLASS 2 LASER RADIATION. USE EXTREME CAUTION WHEN IN USE. DO NOT LOOK INTO DIRECT OR REFLECTED LASER LIGHT BEAM OR VIEW BEAM WITH OPTICAL INSTRUMENTS. DO NOT AIM LASER AT ANOTHER PERSON OR ANIMAL. LASER RADIATION MAY DAMAGE YOUR EYE. DO NOT DISASSEMBLE.



**IMPORTANT:** READ ALL OF THE INSTRUCTIONS IN THIS MANUAL. FAILURE TO COMPLY WITH THE INSTRUCTIONS IN THIS MANUAL, OR USE OF THE DEVICE IN WAYS OTHER THAN THE ONES MENTIONED IN THIS MANUAL, MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.



The device certification information is labeled directly on the device. The sticker is located on the left side of the Lasergrasp.



The device warning and aperture safety information are also labeled directly on the device; the sticker is located on the right side of the Lasergrasp.

Any updates to the product information (date of manufacturing and manufacturer address) will be added as adhesive overlays.

## SAVE THESE INSTRUCTIONS

### Package Contents

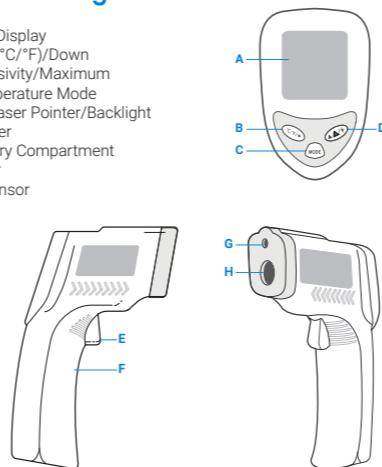
- 1 x Infrared Thermometer
- 2 x 1.5V AAA Batteries (Pre-Installed)
- 1 x User Manual

### Specifications

<b>Model</b>	Lasergrasp 774
<b>Measurement Range</b>	-58°-842°F / -50°-450°C
<b>Accuracy</b>	± 2% / ± 3.6°F ± 2% / ± 2°C
<b>Resolution</b>	0.1°F/°C
<b>Maximum Output</b>	< 1MW
<b>Wavelength</b>	630-670 nm
<b>Distance-to-Spot Ratio</b>	12:1
<b>Response Time</b>	< 500 ms
<b>Emissivity (Adjustable)</b>	0.1-1.0
<b>Battery</b>	2 x 1.5V AAA Batteries (Pre-Installed)
<b>Auto Shutoff</b>	15 seconds

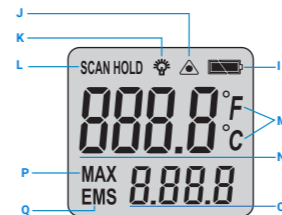
### Function Diagram

- A. LCD Display
- B. Unit (°C/°F)/Down Temperature Mode
- C. Emissivity/Maximum Temperature Mode
- D. Up/Laser Pointer/Backlight
- E. Trigger
- F. Battery Compartment
- G. Laser
- H. IR Sensor



### LCD Display Diagram

- I. Battery Level
- J. Laser On
- K. Backlight On
- L. Continue Scanning
- M. Temperature Unit
- N. Temperature Reading
- O. Emissivity/Maximum Temperature Reading
- P. Max Temperature Mode
- Q. Emissivity Mode



### Battery Installation & Replacement

Two new pre-installed 1.5V AAA batteries come inside your Lasergrasp. Follow the steps below to properly set up your Lasergrasp.

1. For first-time use, pull the insulation strip out of the battery compartment and discard. [Figure 1.1]

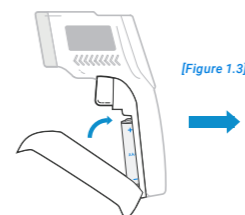
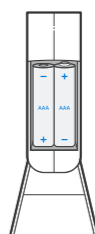
**NOTE:** You do not need to remove the batteries to pull out the insulation strip.

2. Open the battery compartment, and make sure the batteries are correctly placed inside the battery terminals. [Figure 1.2]
3. Close the battery compartment. [Figure 1.3]

[Figure 1.1]



[Figure 1.2]



[Figure 1.3]

**NOTE:**

- The low battery indicator will appear on the display when the power is running low. Immediately replace the battery when the icon appears.
- Remove the batteries before storing if the Lasergrasp is not being used for a long period of time.

### Operation

#### Surface Temperature Measurement

**NOTE:**

- The Lasergrasp only measures surface temperature, and cannot accurately measure internal temperature.
- The Lasergrasp cannot measure the temperature of objects behind glass or other transparent materials, and may be inaccurate in areas with steam, dust, or any other particles in the air.

1. Press the trigger to turn on the Lasergrasp.

**NOTE:** Make sure the insulation strip is removed from the battery compartment.

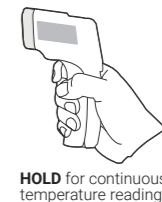
2. Point the Lasergrasp towards a surface.
3. Press and hold the trigger and the laser will activate for aiming guidance.

**NOTE:**

- Optionally, press to turn on the laser.
- To scan live temperature readings on a surface, keep holding the trigger as you move the Lasergrasp.

4. Release the trigger and the LCD display will show the calculated temperature.
5. Press the trigger again to take another measurement.

**NOTE:** The Lasergrasp LCD will display "HI" when the measured temperature is higher than the measurable range, and will display "LO" when the measured temperature is lower than the measurable range.



HOLD for continuous temperature reading



RELEASE to lock the temperature result

#### Sensor Care

- Avoid touching the sensor. This will interfere with measurements.
- To clean the sensor, wipe with a soft cloth or cotton swab. Do not wipe or clean with other materials.

## Unit Conversion

To change the temperature unit, press **UNIT** while the Lasergrip is on.



## Laser Activation

To turn the laser on/off, press **LAZ** while the Lasergrip is on.



## Backlight Display

To turn the backlight display on/off, press **BL** while the Lasergrip is on.



## Emissivity/Maximum Temperature Mode

To adjust the emissivity value before measurement, press **MODE**, then press **▲** and **▼** to change to the desired value.

### NOTE:

- Press **▲** and **▼** for more than 1 second to quickly adjust the emissivity value.
- You can refer to the emissivity reference chart for standard surface emissivity values.

To change to Max Temperature Mode, press **MODE** once more.

## Distance-to-Spot Ratio

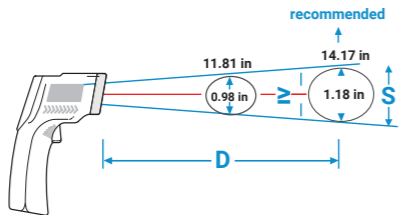
The distance-to-spot ratio (D:S) determines the accuracy of the reading taken by the Lasergrip. The smaller the surface you want to measure, the closer you should hold the Lasergrip to the surface.

The Lasergrip's 12:1 D:S ratio means that when held 12 inches from a surface, the Lasergrip measures a "spot" that is 1 inch in diameter. When the Lasergrip is held 24 inches away, the "spot" will be 2 inches, and so on. The greater the distance, the larger the measured surface area.

For best results, make sure the surface that you want to measure is at least twice the size of the spot the Lasergrip is measuring. If the measured spot is too small, the Lasergrip's reading will be less accurate. The Lasergrip's reading may also be less accurate when measuring a larger surface because the temperature will vary more over a larger surface.

The recommended distance to hold the Lasergrip from the measured surface is 14.17 in / 36 cm. This will measure a "spot" of 1.18 in / 3 cm in diameter.

## Distance-to-Spot (D:S) Ratio = 12:1



## Emissivity

Emissivity measures how well a surface emits thermal or infrared energy, ranging from 0.00–1.00. Non-reflective surfaces have a higher emissivity (closer to 1) and reflective surfaces have a lower emissivity (closer to 0). The Lasergrip is meant for high-emissivity surfaces, and may not accurately measure polished, shiny, or reflective surfaces.

To take accurate temperature measurements of reflective surfaces with low emissivity, adjust the emissivity value before measurement using the Emissivity Reference Chart. Optionally, place a strip of masking tape over the surface and allow it to adjust to the surface temperature for 30 minutes. Then, measure the taped section to increase temperature reading accuracy.

## Emissivity Reference Chart

Material	Feature	Emissivity	Material	Feature	Emissivity
Aluminum	Oxidized	0.3	Paint		0.93
	Polished	0.02-0.04		Graphite	Oxidized
Brass	Oxidized	0.5	Plastic	Non-transparent	0.95
	Polished	0.02-0.05		Rubber	
Gold		0.01-0.10	Plastic	Cement	0.85-0.95
Iron	Oxidized	0.7	Concrete		0.95
Steel	Oxidized	0.70-0.90	Cement		0.96
Asbestos		0.95	Soil		0.90-0.98
Plaster		0.80-0.90	Mortar		0.89-0.91
Asphalt		0.95	Brick		0.90-0.96
Rock		0.7	Marble		0.94
Wood		0.90-0.95	Textile		0.90
Charcoal	Powered	0.96	Paper		0.95
Carbon		0.85	Sand		0.90
Lacquerwork	Lackluster	0.97	Clay		0.92-0.96
Carbon Cement		0.90	Glass		0.85-0.92
Soap Bubble		0.75-0.80	Textile		0.95
Water		0.93	Heated Food		0.95
Snow		0.83-0.90	Plastic		0.95
Ice		0.96-0.98	Oil		0.94
Frozen Foods		0.95	Steel and Iron		0.80
Ceramics		0.95	Wool	Natural	0.94
Limestone		0.98	Lead	Oxidized	0.5

## Federal Communication Commission Interference Statement – Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## FCC SDOC SUPPLIER'S DECLARATION OF CONFORMITY

Etekcity Corporation hereby declares that this equipment is in compliance with FCC requirements. The declaration of conformity may be consulted in the support section of our website, accessible from [www.etekcity.com](http://www.etekcity.com)

## Warranty Information

<b>Product</b>	Infrared Thermometer
<b>Model</b>	Lasergrip 774
<i>For your own reference, we strongly recommend that you record your order ID and date of purchase.</i>	
<b>Order ID</b>	
<b>Date of Purchase</b>	

### Scan Here to Receive Exclusive News



Your product comes with a 2-year warranty starting from the date of purchase.

1. Scan the QR code or visit [etekcity.com/warranty](http://etekcity.com/warranty)
2. Enter your purchase info to receive exclusive news
3. Learn about our quality customer support and gain easy access to warranty information



Connect with us @Etekcity



## Customer Support

If you have any questions or concerns about your new product, please contact our helpful Customer Support Team.

**Etekcity Corporation**  
1202 N. Miller St., Suite A  
Anaheim, CA 92806

**Support Hours**  
Mon–Fri, 9:00 am–5:00 pm PST/  
PDT

**Email:** [support@etekcity.com](mailto:support@etekcity.com)  
**Toll-Free:** (855) 686-3835

*\*Please have your invoice and order ID ready before contacting Customer Support.*