

**FLUKE®**

# **62 MAX/62 MAX +**

Infrared Thermometer

**Users Manual**

PN 4060712

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## ***Introduction***

The Fluke 62 MAX and 62 MAX + Infrared Thermometers (the Product) can determine the surface temperature by measuring the amount of infrared energy radiated by the target's surface. Note that the Japanese models indicate Celsius only.

### **Warning**

**Read all safety information before you use the Product.**

## ***How to Contact Fluke***

To contact Fluke, call one of the following telephone numbers:

- Technical Support USA: 1-800-44-FLUKE (1-800-443-5853)
- Calibration/Repair USA: 1-888-99-FLUKE (1-888-993-5853)
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-03-6714-3114
- Singapore: +65-6799-5655
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at [www.fluke.com](http://www.fluke.com).

To register your product, visit <http://register.fluke.com>.

To see, print, or download the latest manual supplement, visit  
<http://us.fluke.com/usen/support/manuals>.

## ***Safety Information***

A **Warning** identifies conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.

Table 1 tells you about symbols used on the Product and in this manual.

### **Warning**

**To prevent eye damage and personal injury:**

- **Read all safety Information before you use the Product.**
- **Do not use the Product if it operates incorrectly.**
- **Use the Product only as specified, or the protection supplied by the Product can be compromised.**
- **Before you use the Product, inspect the case. Do not use the Product if it appears damaged. Look for cracks or missing plastic.**

- See emissivity information for actual temperatures. Reflective objects result in lower than actual temperature measurements. These objects pose a burn hazard.
- Do not look directly into the laser with optical tools (for example, binoculars, telescopes, microscopes). Optical tools can focus the laser and be dangerous to the eye.
- Do not look into the laser. Do not point laser directly at persons or animals or indirectly off reflective surfaces.
- Replace the batteries when the low battery indicator shows to prevent incorrect measurements.
- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Use the Product only as specified or hazardous laser radiation exposure can occur.

**Table 1. Symbols**

| <b>Symbol</b>                                                                     | <b>Meaning</b>                                     | <b>Symbol</b>                                                                     | <b>Meaning</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Risk of danger. Important information. See Manual. |  | This product complies with the WEEE Directive (2002/96/EC) marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste.<br>Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information. |



**Table 1. Symbols (cont.)**

| <b>Symbol</b>                                                                                    | <b>Meaning</b>                            | <b>Symbol</b>                                                                     | <b>Meaning</b>                             |
|--------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------|
|                 | Warning. Laser.                           |  | Conforms to European Union directives.     |
|                 | Battery                                   |  | Conforms to relevant Australian standards. |
| <br>沪制01120009号 | Conforms to China Metrology Certification |                                                                                   |                                            |

## ***Maintenance***

### **Caution**

To avoid damage to the Product, do not leave the thermometer on or near objects of high temperature.

#### ***How to Change the Battery***

To install or change the AA IEC LR06 battery, open the battery compartment and replace the battery as shown in Figure 16.

#### ***How to Clean the Product***

Use soap and water on a damp sponge or soft cloth to clean the Product case. Carefully wipe the surface with a moist cotton swab. The swab may be moistened with water. See Figure 17.

## Specifications

|                                                                               | <b>62 MAX</b>                                                                                                                                                                                                                                                        | <b>62 MAX +</b>                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Range                                                             | -30 °C to 500 °C<br>(-22 °F to 932 °F)                                                                                                                                                                                                                               | -30 °C to 650 °C<br>(-22 °F to 1202 °F)                                                                                                                                                                                                                    |
| Accuracy<br>(Calibration geometry with<br>ambient temperature 23 °C<br>±2 °C) | <p>≥0 °C: ±1.5 °C or ±1.5 % of<br/>reading, whichever is<br/>greater<br/>(≥32 °F: ±3 °F or ±1.5 % of<br/>reading, whichever is<br/>greater)</p> <p>≥ -10 °C to &lt;0 °C: ±2 °C<br/>(≥14 °F to &lt;32 °F: ±4 °F)</p> <p>&lt; -10 °C: ±3 °C<br/>(&lt;14 °F: ±6 °F)</p> | <p>≥0 °C: ±1 °C or ±1 % of<br/>reading, whichever is<br/>greater (≥32 °F: ±2 °F or<br/>±1 % of reading, whichever<br/>is greater)</p> <p>≥ -10 °C to &lt;0 °C: ±2 °C<br/>(≥14 °F to &lt;32 °F: ±4 °F)</p> <p>&lt; -10 °C: ±3 °C<br/>(&lt;14 °F: ±6 °F)</p> |
| Response Time (95 %)                                                          | <500 ms (95 % of reading)                                                                                                                                                                                                                                            | <300 ms (95 % of reading)                                                                                                                                                                                                                                  |
| Spectral Response                                                             | 8 to 14 microns                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                            |
| Emissivity                                                                    | 0.10 to 1.00                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                            |
| Temperature Coefficient                                                       | ±0.1 °C/°C or ±0.1 %/°C of reading (whichever is greater)                                                                                                                                                                                                            |                                                                                                                                                                                                                                                            |

## 62 MAX/62 MAX +

### Users Manual

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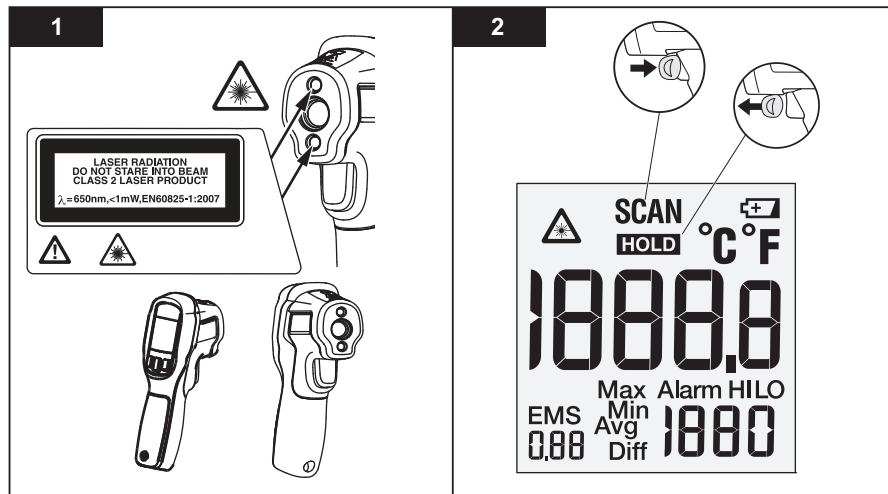
|                              |                                                           |                                                           |
|------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Optical Resolution           | 10:1<br>(calculated at 90 % energy)                       | 12:1<br>(calculated at 90 % energy)                       |
| Display Resolution           | 0.1 °C (0.2 °F)                                           |                                                           |
| Repeatability (% of reading) | ±0.8 % of reading or ±1.0 °C (2 °F), whichever is greater | ±0.5 % of reading or ±0.5 °C (1 °F), whichever is greater |
| Power                        | 1 AA IEC LR06 Battery                                     |                                                           |
| Battery Life                 | 10 hours with laser and backlight on                      | 8 hours with laser and backlight on                       |
| Weight                       | 255 g (8.99 oz)                                           |                                                           |
| Size                         | (175 x 85 x 75) mm (6.88 x 3.34 x 2.95) inches            |                                                           |
| Operating Temperature        | 0 °C to 50 °C (32 °F to 122 °F)                           |                                                           |
| Storage Temperature          | -20 °C to 60 °C (-4 °F to 140 °F), (without battery)      |                                                           |
| Operating Humidity           | 10 % to 90 % RH non-condensing @ 30 °C (86 °F)            |                                                           |
| Operating Altitude           | 2000 meters above mean sea level                          |                                                           |
| Storage Altitude             | 12,000 meters above mean sea level                        |                                                           |

|                           |                                                                |
|---------------------------|----------------------------------------------------------------|
| Ingress Protection Rating | IP 54 per IEC 60529                                            |
| Drop Test                 | 3 meters                                                       |
| Vibration and Shock       | IEC 60068-2-6 2.5 g, 10 to 200 Hz, IEC 60068-2-27, 50 g, 11 ms |
| EMC                       | EN 61326-1:2006 EN 61326-2:2006                                |

### ***Standards and Agency Approval***

Compliance ..... EN/IEC 61010-1  
Laser Safety ..... EN 60825-1 Class 2  
Implement Standard ..... Q/SXAV37

## **The Product**



gtt01.eps

**3**

**4**

°F/°C

**5**

EMS

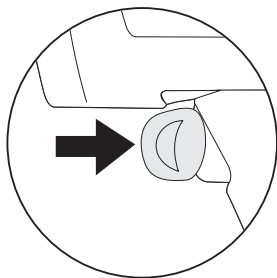
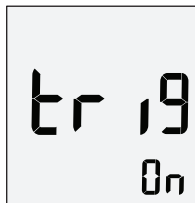
**5**

**6**

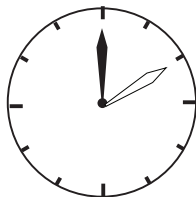
**Max/Min/Avg/Diff**

| SCAN °F         | SCAN °F         | SCAN °F         | SCAN °F          |
|-----------------|-----------------|-----------------|------------------|
| 68.0            | 68.0            | 68.0            | 68.0             |
| EMS 0.95 Max 90 | EMS 0.95 Min 68 | EMS 0.95 Avg 76 | EMS 0.95 Diff 22 |
| SEL             | SEL             | SEL             | SEL              |

7



+



10 min



=



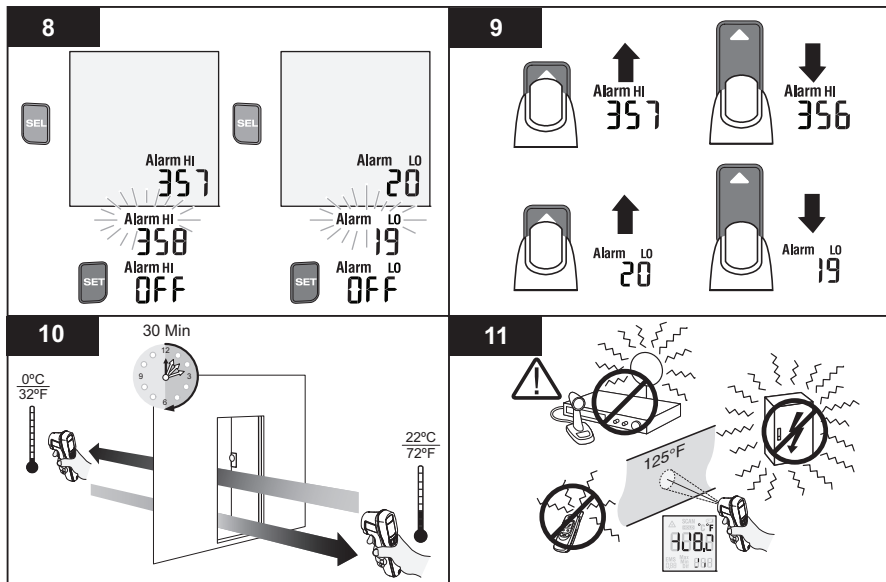
**OFF**

gtt16.eps



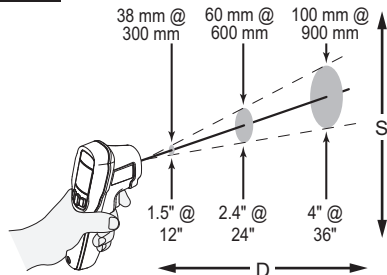
# Infrared Thermometer

## The Product



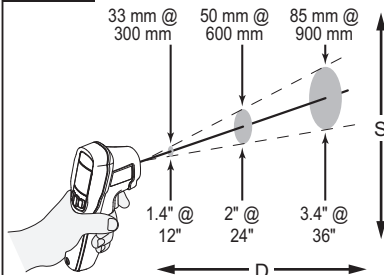
glt15.eps

**12**

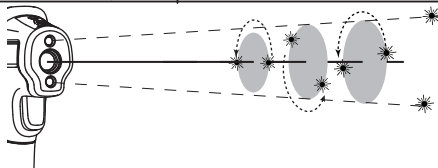


**62 MAX**  
**D:S = 10:1**

**13**

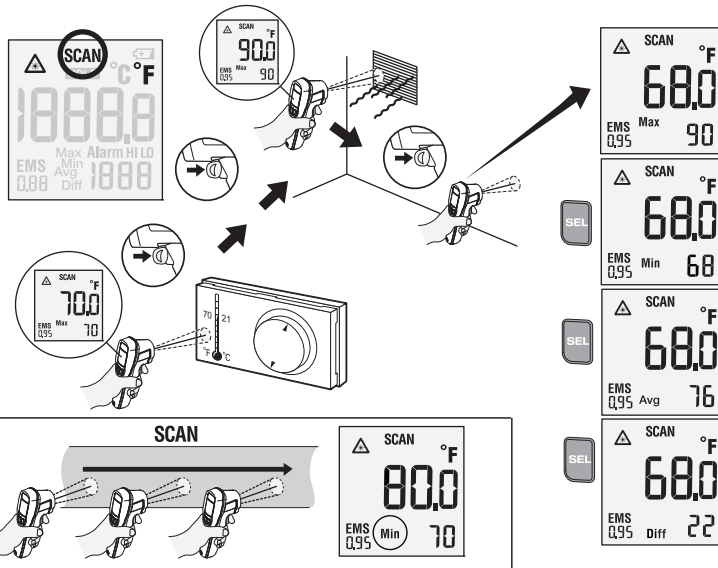


**62 MAX +**  
**D:S = 12:1**



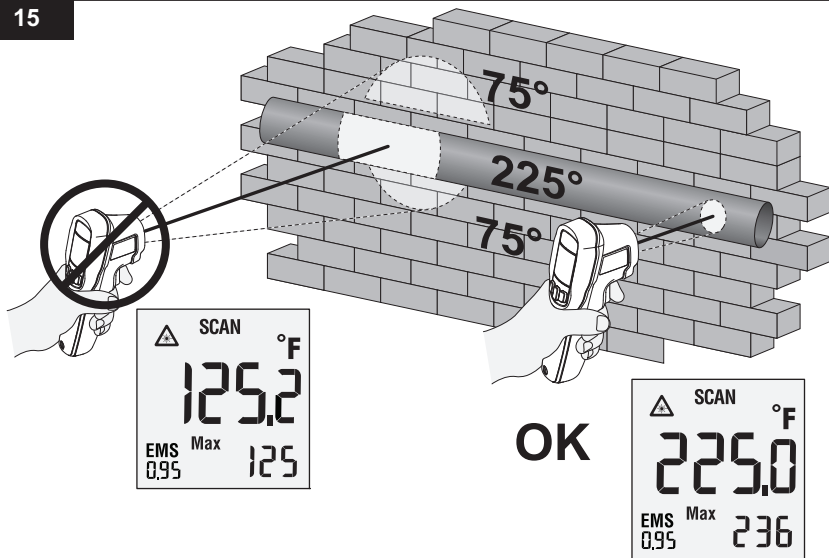
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14



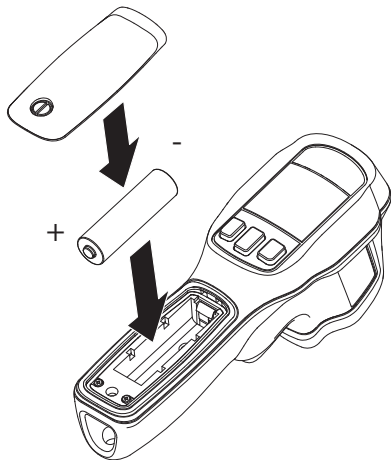
gtr03.eps

15



gtt04.eps

**16**



**17**

