

# FLUKE®

## The Fluke 66 and 68 Infrared Thermometers

Non-contact temperature measurement

### Technical Data

#### The professional's diagnostic tool

The Fluke 66 and Fluke 68 non-contact thermometers are the ideal professional diagnostic tools for HVAC technicians performing room balance checks, electricians evaluating electrical connections and auto mechanics diagnosing catalytic converters. This handheld portable tool enables professionals to research heating and ventilation problems, monitor the status of electrical motors and electrical panels and diagnose car malfunctions with ease. They measure surface temperatures, helping to quickly locate potential blockages or malfunctioning systems reducing work time and improving performance.

#### The 60 series thermometers feature:

- Laser guided sighting system for easy targeting with 1 % accuracy.
- 12-point data logging.
- Advanced optics to measure smaller targets at greater distances.
- Adjustable emissivity for more accurate temperature measurements.
- Selectable MAX, MIN, DIF and AVG functions that display values instantly with Hi/Lo Alarm.
- Temperatures up to 760 °C (1400 °F) (68, 68IS).
- Intrinsically Safe model available (68IS).\*

#### Optical resolution

The laser sighting system guides measurements to the right target and indicates the approximate center of the measurement area.

(D:S = distance to spot using 90 % encircled energy at focal point).

The 68IS\* model is available for the noncontact temperature monitoring needs of potentially explosive or flammable environments.

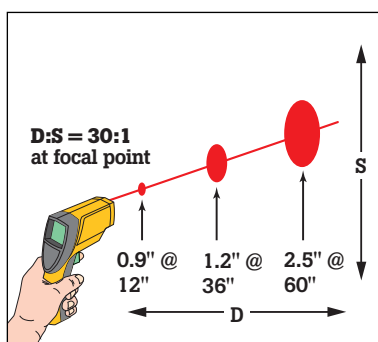
\*Approved by Factory Mutual Research, a USA organization, for use in hazardous locations. The 68IS approval does not apply to atmosphere containing coal dust, grain dust, metal dust or fibers. Check your national and company regulations to determine if this approval is appropriate for your situation.



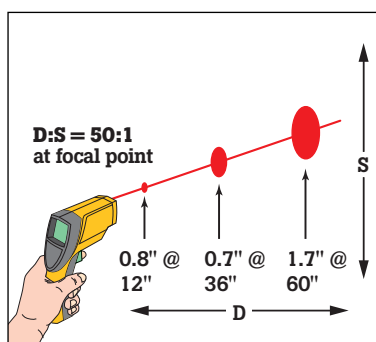
## Specifications

|                                                                            | Fluke 66                                                                                                                                                                                                                                                                                | Fluke 68/68IS*                    |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Temperature range                                                          | -32 to 600 °C<br>(-25 to 1100 °F)                                                                                                                                                                                                                                                       | -32 to 760 °C<br>(-25 to 1400 °F) |
| Accuracy<br>(assumes ambient<br>operating temperature<br>of 23 °C [73 °F]) | -32 to -26 °C (-25 to -15 °F): $\pm 3$ °C ( $\pm 5$ °F)<br>-26 to -18 °C (-15 to 0 °F): $\pm 2.5$ °C ( $\pm 4$ °F)<br>-18 to 23 °C (0 to 73 °F): $\pm 2$ °C ( $\pm 3$ °F)<br>For targets above 23 °C (73 °F): $\pm 1$ % or reading<br>or $\pm 1$ °C ( $\pm 2$ °F), whichever is greater |                                   |
| Repeatability                                                              | $\pm 0.5$ % or $\leq \pm 1$ °C ( $\pm 2$ °F), whichever is greater                                                                                                                                                                                                                      |                                   |
| Response time                                                              | $\leq 0.5$ second (95 % of reading)                                                                                                                                                                                                                                                     |                                   |
| Spectral response                                                          | 8 to 14 $\mu$ m                                                                                                                                                                                                                                                                         |                                   |
| Emissivity                                                                 | Digitally adjustable emissivity<br>(from 0.1 to 1.0 by 0.01)                                                                                                                                                                                                                            |                                   |
| Ambient operating temp.                                                    | 0 to 50 °C (32 to 120 °F)                                                                                                                                                                                                                                                               |                                   |
| Relative humidity                                                          | 10 to 90 % RH non-condensing,<br>at $< 30$ °C (86 °F) ambient                                                                                                                                                                                                                           |                                   |
| Storage temperature                                                        | -20 to 60 °C (-13 to 158 °F) without battery                                                                                                                                                                                                                                            |                                   |
| Dimensions                                                                 | 200 x 160 x 55 mm (8 x 6 x 2 in.)                                                                                                                                                                                                                                                       |                                   |
| Weight                                                                     | 320 g (11 oz.)                                                                                                                                                                                                                                                                          |                                   |
| Power                                                                      | 9 V alkaline or NiCd battery                                                                                                                                                                                                                                                            |                                   |
| Batter life (alkaline)                                                     | 20 hours with laser and backlight on 50 %<br>40 hours with laser and backlight off                                                                                                                                                                                                      |                                   |
| Laser sighting (Class II)                                                  | Offset single point laser point                                                                                                                                                                                                                                                         |                                   |
| Typical distance to target                                                 | 5 m (15 ft.)                                                                                                                                                                                                                                                                            | 8 m (25 ft.)                      |
| Distance to Spot (D:S)                                                     | 30:1 at focus point                                                                                                                                                                                                                                                                     | 50:1 at focus point               |
| MIN, MAX, AVG, DIF<br>Temperature display                                  | •                                                                                                                                                                                                                                                                                       |                                   |
| Data logging                                                               | 12 points                                                                                                                                                                                                                                                                               |                                   |
| Probe jack                                                                 | •                                                                                                                                                                                                                                                                                       |                                   |
| Display hold (7 seconds)                                                   | •                                                                                                                                                                                                                                                                                       |                                   |
| Hi/Low alarm                                                               | •                                                                                                                                                                                                                                                                                       |                                   |
| LCD backlight                                                              | •                                                                                                                                                                                                                                                                                       |                                   |
| Temperature display                                                        | °C or °F selectable                                                                                                                                                                                                                                                                     |                                   |
| Display resolution                                                         | 0.1 °C (0.1 °F)                                                                                                                                                                                                                                                                         |                                   |
| Hard carrying case                                                         | •                                                                                                                                                                                                                                                                                       |                                   |
| Locking trigger                                                            | •                                                                                                                                                                                                                                                                                       |                                   |
| Tripod mounting                                                            | 6.35 mm (.25 in.) 20 UNC threading                                                                                                                                                                                                                                                      |                                   |
| Warranty                                                                   | 2 years, conditional                                                                                                                                                                                                                                                                    |                                   |

\* Approved by Factory Mutual Research for use in hazardous locations.



Use the Fluke 66 within 5 m (15 ft.) of the intended target. At greater distances, the measured area will be larger (approximately the distance divided by 30).



Use the Fluke 68 and 68IS within 8 m (25 ft.) of the intended target. At greater distances, the measured area will be larger (approximately the distance divided by 50).

## Ordering information

|                   |                      |
|-------------------|----------------------|
| <b>Fluke 66</b>   | Infrared Thermometer |
| <b>Fluke 68</b>   | Infrared Thermometer |
| <b>Fluke 68IS</b> | Infrared Thermometer |

## Included



## Optional accessories:

- RTD temperature probe (standard w/68IS)  
32 °C to 260 °C (-25 °F to 500 °F)
- Non-contact thermometer holster



\*Included w/68IS

## Standard Feature (68IS only)

- Factory Mutual Research Intrinsically Safe approval, including probe (Intrinsically safe, Class I Division 1 Groups A, B, C, D Class I, Zone 0, AEx ia IIC, T4 at 50 °C when used with 9V alkaline battery.) Groups A, B, C, D refers to: Acetylene, Hydrogen, Ethylene and Propane.

**Fluke.** Keeping your world up and running.

## Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.

PO Box 1186, 5602 BD

Eindhoven, The Netherlands

For more information call:

In the U.S.A. (800) 443-5853 or Fax (425) 446-5116

In Europe/M-East/Africa +31 (40) 2 675 200 or Fax +31 (40) 2 675 222

In Canada (800) 36-FLUKE or Fax (905) 890-6866

From other countries +1 (425) 446-5500 or Fax +1 (425) 446-5116

Web access: <http://www.fluke.com>

©2005 Fluke Corporation. All rights reserved.

Printed in U.S.A. 6/2005 2153543 D-US-N Rev C

Shop for Fluke products online at: **www.MyFlukeStore.com** 1.888.610.7664