

# Infrared Thermometer Selection Guide

FLUKE®



Infrared Thermometer Selection Guide	Fluke 60 Series			Fluke 560 Series			Fluke 570 Series	
	Fluke 61	Fluke 62 MAX	Fluke 62 MAX+	Fluke 63	Fluke 561	Fluke 566	Fluke 568/568Ex	Fluke 572-2
Temperature range	-18 to 275 °C	-30 to 500 °C	-30 to 650 °C	-32 to 535 °C	-40 to 550 °C	-40 to 650 °C	-40 to 800 °C	-30 to 900 °C
Distance to spot	8:1	10:1	12:1	12:1	12:1	30:1	50:1	60:1
Laser sighting	single-point laser	Single laser	Dual laser	single-point laser	single-point laser	single-point laser	single-point laser	offset dual laser, output <1 mW
Accuracy	2%	1.50%	1.00%	1%	1%	1%	1%	1%
Response time	< 500 mSec	< 500 mSec	< 300 mSec	< 500 mSec	< 500 mSec	< 500 mSec	< 500 mSec	< 500 mSec
Recommended distance to spot	Up to 2 m	Up to 2 m	Up to 2 m	Up to 2.5 m	Up to 2.5 m	Up to 4.5 m	Up to 7.5 m	Up to 9 m
Adjustable emissivity		•	•		•	•	•	•
MIN/MAX readings		•	•	-/•	•	•	•	•
AVG readings		•	•		•	•	•	•
DIF readings		•	•	•	•	•	•	•
Backlit LCD	•	•	•	•	•	•	•	•
Audible Hi/Lo alarm								
Visible Hi/Lo alarm								
Includes contact probe					•	•	•	•
Probe input (types)					Type K Thermocouple	Type K Thermocouple	Type K Thermocouple	Type K Thermocouple
Data logging (number of measurements)						20 points	99 points	99 points
PC interface							USB	USB 2.0
Compatible with FlukeView Forms software							•	•

## Recommended Applications



**Contact thermometers**  
For our complete range of contact thermometers, see page 69.



**Plant/facilities maintenance**  
Preventive and predictive maintenance  
Energy audits  
Vehicle and fleet maintenance programs  
Faulty electrical/circuit connections  
Petrochemical/hazardous locations  
Motors, pumps and bearings



**Heating/ventilation/air conditioning/refrigeration**  
Leaky ductwork  
Thermostats  
Temperature balancing  
Steam distribution systems  
Compressor lines



**Manufacturing processes**  
Molding temperature measurement  
Printing, paper and converting  
Thermofforming plastics  
Electronics  
Paint curing/drying  
Food  
Chemical and pharmaceutical



**Safety and protection**  
Fire localization  
Hazardous materials  
Faulty ballasts  
Search and rescue  
Smoldering embers  
Equipment maintenance

# 572-2 High Temperature Infrared Thermometer

FLUKE®



Fluke 572-2

## The best choice when things are really hot

The Fluke 572-2 Infrared Thermometer is the one product you can use in high-temperature industrial environments all around the world. Whether you work in power utility, metal refining and smelting, glass, cement or petrochemical environments, the new 572-2 allows you to carry the most trusted name in test

tools anywhere you need accurate, high temperature and high distance-to-spot measurements.

With a rugged, easy-to-use, ergonomic design, the Fluke 572-2 can stand up to tough industrial, electrical, and mechanical environments.

## Features

- Measure -30 °C to 900 °C
- 60:1 distance to spot ratio with dual laser sighting for fast, accurate targeting
- Multi-language interface (user select)
- Current Temperature plus MAX, MIN, DIF, AVG temperature displays
- Compatible with standard mini-connector K-type thermocouples, including ones you already own and have installed
- Adjustable emissivity and predefined emissivity table
- Infrared and thermocouple temperature on backlit display
- Last reading Hold (20 seconds)
- High and low temperature alarm
- Data storage and review (99 data sets)
- Tripod mount
- 12 or 24 hour clock
- USB 2.0 computer interface cable
- FlukeView® Forms Documenting Software

## Specifications

Infrared temperature range	-30 °C to 900 °C
IR accuracy (Calibration geometry with ambient temperature 23 °C ± 2 °C)	≥ 0 °C: ± 1 °C or ± 1 % of the reading, whichever is greater ≥ -10 °C to < 0 °C: ± 2 °C < -10 °C: ± 3 °C
IR Repeatability	± 0.5 % of reading or ± 0.5 °C, whichever is greater
Display Resolution	0.1 °C
Distance:Spot	60:1 (calculated at 90 % energy)
Minimum spot size	19 mm
Laser sighting	Offset dual laser, output < 1 mW
Spectral Response	8 μm to 14 μm
Response Time (95 %)	< 500 ms
Emissivity	Digitally adjustable from 0.10 to 1.00 by 0.01 or via built-in table of common materials
Hi/Low alarms	Audible and two-color visual
Min/Max/Avg/Dif	Yes
Switchable celsius and fahrenheit	Yes
Backlight	Two levels, normal and extra bright for darker environments
Trigger lock	Yes
Data storage	99 points
Display	Dot matrix 98 x 96 pixels with function menus
Communication	USB 2.0
K-type thermocouple input temperature range	-270 °C to 1372 °C
K-type thermocouple input accuracy (with ambient temperature 23 °C ± 2 °C)	< -40 °C: ± (1 °C + 0.2 %/1 °C) ≥ -40 °C: ± 1 % or 1 °C, whichever is greater

**Operating temperature:** 0 °C to 50 °C  
**Storage temperature:** -20 °C to 60 °C  
**Size (HxWxD):** 177 x 164 x 52 mm  
**Weight:** 0.322 kg  
**Power:** 2 AA Batteries

**Battery life:** 8 hours with laser and backlight on; 100 hours with laser and backlight off, at 100 % duty cycle (thermometer continuously on)  
**Two years warranty**

### Included Accessories

K-type thermocouple bead probe, USB 2.0 computer interface cable, FlukeView® Forms Documenting Software, hard carrying case, getting started guide (print) and user's manual (CD).

### Ordering Information

Fluke 572-2 Infrared Thermometer

## Recommended Accessories



80-PK-1  
See page 150

80PK-8  
See page 150

80PK-9  
See page 150

80PK-11  
See page 150

80PK-25  
See page 150

80PK-26  
See page 150

# 62 MAX / 62 MAX+ Infrared Thermometers

FLUKE®



Fluke 62 MAX



Fluke 62 MAX+

The Fluke 61 and Fluke 63 handheld infrared thermometers enable professionals to monitor the status of electrical motors and electrical panels, research heating and ventilation problems and diagnose car malfunctions with ease. Check the Fluke web for more information.

The Fluke FoodPro™ thermometer series provide advanced temperature measurement solutions for the foodservice industry. Check the Fluke web for more information.



## Small in size. Big on toughness.

Designed with your on-the-job needs in mind, the new Fluke 62 MAX and 62 MAX+ infrared thermometers are everything you'd expect from the experts in measurement tools. Small in size, extremely accurate and very easy to use. IP54 rated for dust and water resistance. Precise yet rugged enough to take a 3-meter drop. In fact, the 62 MAX and 62 MAX+ are so tough, they're the only IR thermometers around you can handle without care.

### Key Benefits

- Dust and water-resistant: IP54 rated for dust and water resistance.
- Rugged: 3-meter drop tested.
- Ergonomically designed: Completely redesigned for a more natural hand fit.
- Small and lightweight; clips to your tool belt or belt loop or easily fits into your tool box.

## Specifications

	Fluke 62 Max	Fluke 62 Max+
Temperature Range	-30 °C to 500 °C	-30 °C to 650 °C
Distance to spot	10:1 (calculated at 90% energy)	12:1 (calculated at 90% energy)
Laser sighting	Single laser	Dual laser
Accuracy	±1.5 °C or ±1.5% of reading, whichever is greater -10 °C to 0 °C: ±2.0 -30 °C to -10 °C: ±3.0	±1.0 °C or ±1.0% of reading, whichever is greater -10 °C to 0 °C: ±2.0 -30 °C to -10 °C: ±3.0
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	
Display Resolution	0.1 °C	
Repeatability of readings	±0.8% of reading or <±1.0 °C, whichever is greater	±0.5% of reading or <±0.5 °C, whichever is greater
Operating Humidity	10 % to 90 % RH non-condensing at 30 °C	
Operating Altitude	2000 meters above mean sea level	
Storage Altitude	12,000 meters above mean sea level	
IP Rating	IP 54 per IEC 60529	
Drop Test	3 meters	
Vibration and Shock	IEC 68-2-6 2.5 g, 10 to 200 Hz, IEC 68-2-27, 50 g, 11 ms	
EMC	EN 61326-1:2006 EN 61326-2:2006	

## Ordering Information

Fluke 62 MAX Single laser infrared thermometer  
 Fluke 62 MAX+ Dual laser infrared thermometer  
 Fluke 62 MAX+/323 Kit  
 Fluke T5-600/62 MAX+/1AC2 Kit  
 Fluke 116/62MAX+ Kit  
 Fluke 414D/62MAX+ Kit

Fluke 61 Infrared Thermometer  
 Fluke 63 Infrared Thermometer  
 Fluke FP FoodPro™ Food Safety Thermometer  
 Fluke FP Plus FoodPro™ Plus Food Safety Thermometer

**Power:** AA battery  
**Size (HxWxD):** 175 x 85 x 75 mm  
**Battery life:** 10 hrs 62 Max+, 8 hrs 62 Max, with laser and backlight on  
**Weight:** 0,255 kg

**Operating Temperature:** 0 °C to 50 °C  
**Storage Temperature:** -20 °C to 60 °C, (without battery)  
**3 years warranty**

## Kits



Fluke 116/62MAX+



Fluke 414D/62MAX+



Fluke 62MAX+/323/1AC-II



Fluke T5-600/62MAX+/1AC-II

# 566, 568 and 568Ex Multipurpose Thermometers

FLUKE®



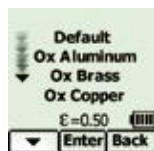
Fluke 566

Fluke 568

Fluke 568 Ex



Choose your language



Select the measurement surface



See complete measurement details in seconds

## The two-in-one infrared and contact thermometer with an innovative graphical display

With a straight-forward, menu-driven user interface and graphical display, the Fluke 566 and 568 multipurpose thermometers make even complex temperature measurements easy. Quickly navigate and adjust emissivity, start data logging, or turn on and off alarms, with just a few pushes of a button. For added convenience, both rugged handheld thermometers combine contact and non-contact temperature measurement capability, providing a total temperature measurement solution for any service and maintenance program.

- Easily access advanced features with the soft-key buttons and graphical display
- Measure smaller targets from farther away using the IR thermometer
- Adjustable emissivity and built-in table of common materials for higher IR accuracy

- Quickly identify problems with the MIN, MAX, AVG, and DIF functions
- 2-color flashing alarm alerts you visually when measurements exceed limits
- Includes Type K thermocouple bead probe
- Compatible with all standard mini-connector K-type thermocouples
- Data logging with a date/time stamp
- Soft rubber boot for increased ruggedness
- User interface available in 6 languages

**The Fluke 568 Ex Intrinsically Safe Infrared Thermometer** is the one product you can use in Class I Div 1 and Div 2 or Zone 1 and 2 hazardous environments anywhere in the world.

## Specifications

(Check the Fluke web for detailed specifications)

	566	568/568 Ex
Infrared temperature range	-40 °C to 650 °C	-40 °C to 800 °C
Infrared accuracy	$< 0\text{ °C} : \pm (1.0\text{ °C} + 0.1\%/1\text{ °C})$ $> 0\text{ °C} : \pm 1\% \text{ or } \pm 1.0\text{ °C, whichever is greater}$	
Display resolution	0.1 °C	
Infrared spectral response	8 μm to 14 μm	
Infrared response time	< 500 msec	
Input temperature range	-270 °C to 1372 °C	
Input accuracy	$-270\text{ °C to } -40\text{ °C} : \pm (1\text{ °C} + 0.2\%/1\text{ °C})$ $-40\text{ °C to } 1372\text{ °C} : \pm 1\% \text{ or } 1\text{ °C, whichever is greater}$	
D:S (Distance to measurement spot size)	30:1	50:1
Laser sighting	Single-point laser < 1 mw output Class 2 (II) operation, 630 nm to 670 nm	
Minimum spot size	19 mm	
Emissivity adjustment	By built-in table of common materials or digitally adjustable from 0.10 to 1.00 by 0.01	
Data logging with Date/Time stamp	20 points	99 points
PC interface and cable	None	USB 2.0 with FlukeView® Forms software
Hi/Low alarms	Audible and two-color visual	
Min/Max/Avg/Dif	Yes	
Display	Dot matrix 98 x 96 pixels with function menus	
Backlight	Two levels, normal and extra bright for darker environments	
Trigger Lock	Yes	
Switchable between Celsius and Fahrenheit	Yes	

**Power:** 2 AA/LR6 Batteries (566); 2 AA/LR6 Batteries and USB for use with a PC (568)

**Battery life:** Used continuously; laser and backlight on: 12 hours (568 Ex 4 hours); laser and backlight off: 100 hours  
**Weight:** 0.965 kg (566); 1.026 kg (568)

**Size (HxLxW):** 254 x 191 x 69 mm

**Operating temperature:** 0 °C to 50 °C

**Storage temperature:** -20 °C to 60 °C

Safety rating Zone 1 and 2 IECEx EPS 13.0006X Ex ia IIC T4 Gb 568 Ex

**Two years warranty**

### Included accessories

FlukeView® Forms software (568 only), USB cable (568 only), K-type thermocouple bead probe, 2 AA batteries, hard carrying case, quick start guide, and users manual.

### Ordering information

Fluke 566 Infrared thermometer  
 Fluke 568 Infrared thermometer  
 Fluke 568 Ex Intrinsically safe infrared thermometer

### Recommended Accessories



H6 See page 153

80PK-8 See page 150

80PK-9 See page 150

80PK-11 See page 150

80PK-25 See page 150

80PK-26 See page 150

# 561 Multipurpose Thermometer

FLUKE®



Fluke 561

## Combined Infrared and Contact Thermometer

The Fluke 561 combines the temperature measurement functions that industrial, electrical, and HVAC/R professionals need, all in one tool. It measures both IR and contact temperature, replacing several other test tools. It's fast, efficient, and easy to use, saving you valuable time and effort. With the Fluke 561, you can take contact and ambient temperatures in the way that's best for you. Use the IR thermometer to measure hot, moving, electrically energized, and hard-to-reach objects instantly. Check motors, insulation, breakers, radiant heating, pipes, corroded connections, and wires. Plus, scan ducts, and other hard-to-reach objects from the floor—leave your ladder in the truck. You can use the Fluke 561's handy Velcro® pipe probe or, plug in any industry standard, K-type mini-connector thermocouple probe you already own.

- IR thermometer for quick measurements up close or at a distance
- Single-point laser sighting
- Easy emissivity adjustment for measuring pipes and ducts more accurately
- Includes a Velcro pipe probe for super-heat and sub-cooling as well as other surface contact measurements
- Also compatible with all standard mini-connector K-type thermocouples
- MIN, MAX and DIF temperature readings
- Lightweight (only 340 grams) and portable
- Includes measurement guide



The Fluke 561 includes everything you need for immediate inspections.

## Specifications

Temperature range	-40° to 550°C
Display resolution	0.1° of reading
D:S (Distance to spot size)	12:1
Easy emissivity selector	Adjustable with three settings: low (0.3), medium (0.7), high (0.95)
Display accuracy (Assumes ambient operating temperature of 23° to 25°C)	± 1.0% of reading or ± 1°C, whichever is greater; below 0°C, ± 1°C, ± 1°/1°
Response time	500 mSec (95% of reading)
Repeatability	± 0.5% of reading or ± 1°C, whichever is greater
Spectral focus	8 µm to 14 µm
Laser sighting	Single-point laser
Laser shutoff	Laser turns off above ambient temperature of 40°C
Laser power	Class 2 (II) operation; output < 1 mW, wavelength 630 nm to 670 nm
Relative humidity	10% to 90% RH non-condensing, at < 30°C
Power	2 AA batteries (alkaline or NiCD)
Display hold	7 seconds
Backlit display	Yes, LCD with dual temperatures (current and MAX/MIN/DIF/KTC), low battery, F/C indicator, and Scan/Hold options
Operating temperature	0° to 50°C
Storage temperature	-20 to 65°C
MAX, MIN, DIF temperatures	Yes
Thermocouple type K mini-adapter input	Yes, compatible with industry standard type K probes with mini-connector
Thermocouple type K Velcro pipe probe	Yes, with a temperature range of 0° to 100°C and accuracy of ± 2.2°C
Measurement guide	Yes

**Battery Life (alkaline):** 12 hours  
**Size (HxLxW):** 176,9 x 163,6 x 51,8 mm

**Weight:** 0.34 kg  
**Two years warranty**

### Included accessories

Thermocouple K-type Velcro pipe probe, hand carrying case, 2 AA batteries and user manual with measurement guide.

### Ordering information

Fluke 561 HVACPro Thermometer

### Recommended Accessories



**H6**  
See page 153



**80-PK-1**  
See page 150



**80PK-8**  
See page 150



**80PK-25**  
See page 150