

Infrared camera and visual IR thermometer selection guide

	Expert Series IR Cameras						Professional Series IR Cameras		
	TiX1000	TiX660	TiX640	TiX560	TiX520	TiX500	Ti450	Ti400	Ti300
Detector resolution	1024 x 768, 2048 x 1536 Super Res.	640 x 480, 1280 x 960 Super Res.	640 x 480	320 x 240 Super Resolution mode: 640 x 480			320 x 240	240 x 180	
Field of view	32.4° H x 24.7° V	30.9° H x 23.1° V		24° H x 17° V					
Optional lenses	Capture spectacular images close up or from a distance with: 2 wide angle, 2 telephoto, 3 macro and 1 standard			Capture spectacular images close up or from a distance with pre-calibrated smart lenses: wide angle, 2x and 4x telephoto, 25 micron macro			2x and 4x telephoto and wide angle pre-calibrated smart lenses		
Wireless connectivity¹	-			Fluke Connect® app compatible. Wireless connectivity to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN ¹					
Focus system	LaserSharp® Auto Focus, autofocus, manual focus, and EverSharp multifocal recording		Autofocus, manual focus, and EverSharp multifocal recording	MultiSharp™ Focus, LaserSharp® Auto Focus with built-in laser distance meter and advanced manual focus					
IR-Fusion® technology/visible context	IR-Fusion® AutoBlend™ mode and Picture-in-Picture, continuous blending			IR-Fusion® AutoBlend™ mode and Picture-in-Picture					
Display	5.6 inch color TFT display, 1280 x 800 pixel resolution, suitable for daylight operation			5.7 inch touchscreen LCD, 640 x 480 pixel resolution			3.5 inch touchscreen LCD, 640 x 480 pixel resolution		
Design	Camcorder with handle, tiltable LCoS color viewfinder display, 800 x 600 pixel resolution		Camcorder	Ergonomic FlexCam design with a 240 degree rotating lens			Rugged, ergonomic design for one-handed use		
Thermal sensitivity	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK)		≤ 0.045 °C at 30 °C target temp (45 mK); Filter mode ≤ 0.03 °C (30 mK)	≤ 0.05 °C at 30 °C target temp (50 mK); Filter mode ≤ 0.04 °C (40 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.05 °C at 30 °C target temp (50 mK); Filter mode ≤ 0.03 °C (30 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)	
Temperature measurement range	-40 °C to +1200 °C (-4 °F to 2192 °F) High temperature option—request at time of order: up to 2000 °C (3632 °F)		-40 °C to +1200 °C (-4 °F to 2192 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)	-20 °C to +850 °C (-4 °F to +1562 °F)	-20 °C to +650 °C (-4 °F to +1202 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)		-20 °C to +650 °C (-4 °F to +1202 °F)
Frame rate	30 Hz (Sub-windowing options available up to 240 fps)	60 Hz (Subwindowing options available up to 240 fps)		60 Hz or 9 Hz					
Software	SmartView® software and Fluke Connect® ¹								
Documentation features	Voice annotation and text annotation			IR-PhotoNotes™, voice annotation, and text annotation					
Video recording	Standard and radiometric								
Streaming video (remote display)	Via HDMI; GigE Ethernet available in SmartView® software			Via USB or WiFi hot spot to PC or via HDMI to HDMI compatible screen					
Remote control	•		Yes, through SmartView® software or Fluke Connect® mobile app	-			Yes, through SmartView® software or Fluke Connect® mobile app		-
Alarms	High temperature, low temperature, time lapse - auto image capture, and isotherms (within range)								

¹Within your provider's wireless service area; Fluke Connect is not available in all countries.

	Performance Series IR Cameras						Visual IR Thermometers
	TiS75	TiS65/TiS60	TiS55/TiS50	TiS45/TiS40	TiS20	TiS10	VT04/VT04A
Detector resolution	320 x 240	260 x 195	220 x 165	160 x 120	120 x 90	80 x 60	31 x 31
Field of view	35.7 °H x 26.8 °V						28 °H x 28 °V
Optional lenses	-						
Wireless connectivity ¹	Fluke Connect® app compatible. Wireless connectivity to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN						
Focus system	Manual focus	TiS65 (Manual focus) TiS60 (Fixed focus)	TiS55 (Manual focus) TiS50 (Fixed focus)	TiS45 (Manual focus) TiS40 (Fixed focus)	Fixed focus		
IR-Fusion® technology/ visible context	5 presets (0 %, 25 %, 50 %, 75 %, 100 %)			3 presets (0 %, 50 %, 100 %)		-	Infrared heat map and visual image blending in 25 % increments; center box to outline the temperature measurement area
Display	3.5 inch (landscape) 320 x 240 LCD						2.2 inch portrait standard TFT LCD
Design	Rugged, lightweight, ergonomic design for one-handed use						Slim, pocket-sized design
Thermal sensitivity	≤ 0.08 °C at 30 °C target temp (80 mK)			≤ 0.09 °C at 30 °C target temp (90 mK)	≤ 0.10 °C at 30 °C target temp (100 mK)	≤ 0.15 °C at 30 °C target temp (150 mK)	250 mK
Temperature measurement range	-20 °C to +550 °C (-4 °F to 1022 °F)		-20 °C to +450 °C (-4 °F to 842 °F)	-20 °C to +350 °C (-4 °F to 662 °F)		-20 °C to +250 °C (-4 °F to 482 °F)	-10 °C to +250 °C (+14 °F to +482 °F)
Frame rate	30 Hz or 9 Hz	TiS65 (30 Hz or 9 Hz) TiS60 (9 Hz)	TiS55 (30 Hz or 9 Hz) TiS50 (9 Hz)	TiS45 (30 Hz or 9 Hz) TiS40 (9 Hz)	9 Hz		8 Hz
Software	SmartView® software and Fluke Connect® ¹						SmartView® software
Documentation features	IR-PhotoNotes™ (3 images), voice annotation		IR-PhotoNotes™ (1 image), voice annotation	Voice annotation	-		
Video recording	Standard and radiometric		-				
Streaming video (remote display)	Yes, to SmartView® software on a PC or to the Fluke Connect® app on a smartphone		-				
Remote control	-						
Alarms	High temperature, low temperature, time lapse - auto image capture, and isotherms (within range)			High temperature, low temperature, time lapse - auto image capture	-		High/low temperature alarms, time-lapse image capture, auto-monitor alarm

¹ Within your provider's wireless service area; Fluke Connect is not available in all countries.

INFRARED TOOLS



Fluke Expert Series: TiX1000/660/640 and TiX560/520/500

Stunning HD and industry's largest screen

See incredible detail in your target with SuperResolution and up to 3.1 million pixels. Navigate over, under and around hard-to-reach objects with a full 240 degree rotating lens. Easily view, annotate, edit and analyze images on the large tablet-like screen. Get advanced analytics such as streaming IR data and trend analysis.



TiX1000/660/640



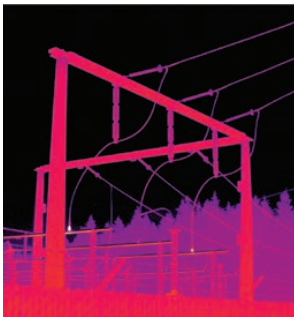
TiX560/520/500

- Easily navigate over, under and around objects with the 240° articulating lens (TiX560/520/500) or the articulating LCD display (TiX1000/660/640)
- MultiSharp™ Focus (TiX560/520/500) and EverSharp multifocal recording (TiX1000/660/640) give you clear, accurate focus throughout the field of view in one image, by capturing multiple images from varying focal distances
- LaserSharp® Auto Focus gives you the fastest way to precisely focused images by calculating the distance to your target with a laser distance meter¹
- Capture spectacular images close up or from a distance with seven optional lenses including telephoto, wide angle, and macro (TiX1000/660/640) or interchangeable smart lenses—2x and 4x telephoto, wide angle, and 25 micron macro (TiX560/520/500)
- Get premium in-field viewing with the 5.7 inch touchscreen LCD, the largest in its class (TiX560/520/500) or the 5.6 inch articulating display (TiX1000/660/640) along with a viewfinder that reduces outdoor glare (TiX1000/660)

¹Compared to industrial infrared cameras without a user-designated laser-focus feature.

Ordering information

Models	Included accessories
FLK-TiX1000 30Hz Infrared Camera; 1024 x 768	Rechargeable battery (2 for TiX1000 and TiX660; 1 for TiX640), battery charger and adapter, ac adapter, SD card reader, FC SD card for Fluke Connect, protective lens cap, hand strap, neck strap, carrying case, warranty card, safety instructions, calibration certificate, printed manual in English and Chinese, multi-lingual manual CD, SmartView® software
FLK-TiX660 60Hz Infrared Camera; 640 x 480	
FLK-TiX640 60Hz Infrared Camera; 640 x 480	
FLK-TiX560 9Hz or 60Hz Infrared Camera; 320 x 240	AC power supply; battery pack charger (including universal AC adapters); two rugged lithium ion smart battery pack; USB cable; HDMI video cable; micro SD card; rugged, hard carrying case; adjustable neck and hand straps and quick start guide; Bluetooth headset (where available)
FLK-TiX520 9Hz or 60Hz Infrared Camera; 320 x 240	
FLK-TiX500 9Hz or 60Hz Infrared Camera; 320 x 240	



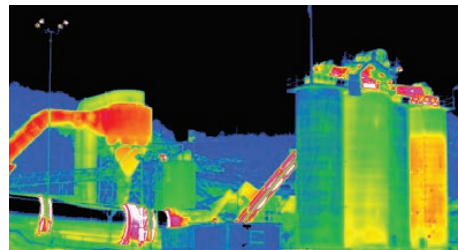
Apparent hot spots in electrical equipment.

Get tough shots from any angle with a 240° degree rotating lens and the only 5.7 inch LCD in its class (TiX560/520/500).



Lens compatibility

Models	Lenses
TiX1000/660/640	FLK-XLENS/TELE; FLK-XLENS/SUPTELE; FLK-XLENS/WIDE; FLK-XLENS/SUPWIDE; FLK-XLENS/MACRO1; FLK-XLENS/MACRO2; FLK-XLENS/MACRO3
TiX560/520/500	FLK-LENS/TELE2; FLK-LENS/4XTELE2; FLK-LENS/WIDE2; FLK-LENS/25MAC2



Fluke Professional Series: Ti450/400/300

100 % Focused. Every object.

Get clear, accurate focus on objects near and far with MultiSharp™ focus, or focus with laser speed and accuracy on your designated target with LaserSharp® Auto Focus. Easily navigate the menu and view images on a 3.5 inch, 640 x 480 touchscreen.

- Get 4x the pixel data with SuperResolution, which captures multiple images and combines them to create a 640 x 480 image (Ti450)
- Inspect high-temperature components, up to 1200 °C (2192 °F)¹
- Digitally document critical information with your infrared image using IR-PhotoNotes™, voice annotation, or text annotation
- Monitor processes with video recording, live video streaming, remote control¹, or auto capture

¹Features vary by model.

Ordering information

Models	Included accessories
FLK-Ti450 9Hz or 60Hz Infrared Camera	Infrared camera with standard infrared lens; ac power supply and battery pack charger (including universal ac adapters); two rugged lithium ion smart battery packs; USB cable; HDMI video cable; 4GB micro SD card; rugged, hard carrying case; soft transport bag and adjustable hand strap and quick start guide
FLK-Ti400 9Hz or 60Hz Infrared Camera	
FLK-Ti300 9Hz or 60Hz Infrared Camera	



Lens compatibility

Models	Lenses
Ti450/400/300	FLK-LENS/TELE2; FLK-LENS/4XTELE2; FLK-LENS/WIDE2

Expand the capabilities of your infrared camera

Software for Fluke Infrared Cameras

Analyze images, adjust blending and palette, export to multiple file formats, and create professional reports with Fluke SmartView® desktop software, downloadable for free from the Fluke website, or the Fluke Connect® mobile app for your smartphone. The Fluke Connect® app also enables you to wirelessly sync images directly from your camera to your smartphone, where you can email images to colleagues and attach them to an asset record or work order.

Lenses and other accessories

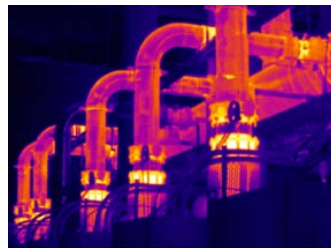
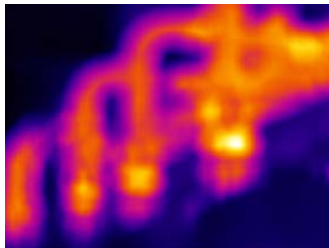
Capture images close up or from a distance with optional lenses, available for the Expert and Professional Series cameras.

All Fluke Professional and Performance Series cameras feature interchangeable batteries. Expand your powering capabilities with a car charger, extra battery, or charging base.

100% Focused—Every object. MultiSharp™

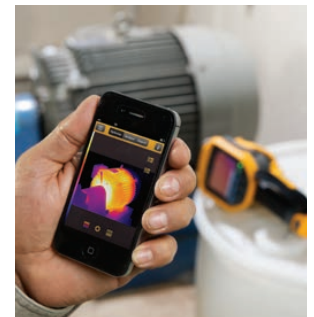
Go from being completely out of focus to:

100 % in focus with MultiSharp™ Focus, available on the Ti450.



Built-in laser distance meter instantly calculates and displays the distance to your target.

Save time and instantly email images from the field with the Fluke Connect® app.



INFRARED TOOLS



Fluke Performance Series: TiS75/65/60/55/50/45/40/20/10



Easy-to-use frontline troubleshooting

Easily see potential problems with precisely blended IR and visual images—with a 5MP visual camera, up to 320 x 240 resolution, and a large 3.5 inch LCD. Get precise focus as close as 15 cm (6 in) with manual focus.

- With up to 320 x 240 resolution, you can see more detail in every image, even from a distance—detail that could indicate a potential issue
- Get the context of the visual and infrared details all in one precisely blended or picture-in-picture image with IR-Fusion® technology¹
- Reduce the amount of time it takes to get an in focus image with manual or fixed focus options
- Make decisions in real time—wirelessly sync images from your camera, create and email reports all with your smart phone and the Fluke Connect® App.
- Wirelessly connect to other Fluke Connect tools and pull in other measurements types like electrical and vibration into your thermal image.
- Removable 4GB micro SD card
- Digitally document critical information with your infrared image using IR-PhotoNotes™ or voice annotation³
- Monitor battery charge and avoid unexpected loss of power with the smart battery with LED charge indicator

¹IR-Fusion® and picture-in-picture mode execution varies by model

²Within your provider's wireless service area; Fluke Connect® is not available in all countries. Subscription to Fluke Connect® Assets is required in order to use the asset management and work order function

³Varies by model; see page 73 for model specifications



Inspect industrial components.

Designed for your environment.



Ordering information

Models	Included accessories
FLK-TiS75 30HZ Industrial Commercial Infrared Camera	Universal AC power adapter, lithium ion smart battery (TiS75, TiS65/60 includes 2 each—other models 1 each), USB cable, Micro SD card (TiS75, TiS65/60, TiS55/TiS50, TiS45), hard carrying case (TiS75, TiS65/60, TiS55/50, TiS45/40), soft transport bag, adjustable hand strap (TiS75, TiS65/60, TiS55/50, TiS45/40) and quick start guide. TiS75, TiS65/60 models include a two-bay battery charger.
FLK-TiS75 9HZ Industrial Commercial Infrared Camera	
FLK-TiS65 30HZ Industrial Commercial Infrared Camera	
FLK-TiS65 9HZ Industrial Commercial Infrared Camera	
FLK-TiS60 9HZ Industrial Commercial Infrared Camera	
FLK-TiS55 30HZ Industrial Commercial Infrared Camera	
FLK-TiS55 9HZ Industrial Commercial Infrared Camera	
FLK-TiS50 9HZ Industrial Commercial Infrared Camera	
FLK-TiS45 30HZ Industrial Commercial Infrared Camera	
FLK-TiS45 9HZ Industrial Commercial Infrared Camera	
FLK-TiS40 9HZ Industrial Commercial Infrared Camera	
FLK-TiS20 9HZ Industrial Commercial Infrared Camera	
FLK-TiS10 9HZ Industrial Commercial Infrared Camera	

Full infrared.

50 % blending, picture-in-picture mode

Picture-in-Picture.



Fluke VT04/VT04A Visual IR Thermometer

Designed to see it all

See issues in context by blending the infrared heat map with a visual image, and get the detail you need by choosing one of five on-screen blending modes. See aligned images from as close as 15 cm (6 in) in near mode or from a distance in far mode. Plus, obtain accurate temperature readings without taking your eyes off the screen. The center measurement box shows the exact area of temperature measurement. Fill that center box with your target and rest assured you're not measuring the background.

- Identify intermittent problems by monitoring equipment over time or get alerts when a temperature is outside the expected range with temperature alarms and automated monitoring features
- Instantly identify the hottest and coldest spots within the field of view with hot and cold markers
- Handy when you need it; easily fits in your tool bag or pocket
- Intuitive enough to use right out of the box
- Easily access saved images with the removable SD card
- Save in .bmp format when you only want the image, or choose .is2 format so you can optimize images and create reports with Fluke SmartView® software, available by free download from Fluke.com



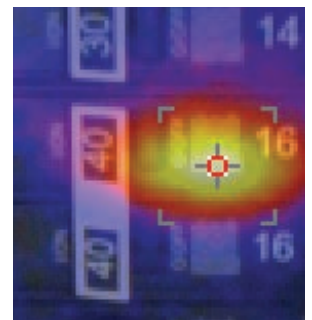
Fluke IR Windows CV400/401/300/301/200 CLKT100/75/50

Increase the safety and speed of your electrical infrared inspections

A company's greatest investment is not the equipment that's behind the panel door. It's the electricians, engineers and inspectors who risk their lives every day doing their jobs.

- Highest arc blast safety rating available—63 kA*
- Under 5 minute installation with 1 person; no need to remove panel door
- Clearly view equipment both visually and thermally with ClirVu® coating that protects the optic from the elements
- Corrosion and UV resistant for challenging outdoor environments—IP67 rugged*

* CV Series only



50% blended heat map.



Fluke IR Windows enable you to inspect electrical equipment without opening panel doors.

Ordering information

Models	Included accessories
FLK-VT04A Visual IR Thermometer	Soft case, micro-SD card, micro-SD conversion adapter to standard, AA batteries (4), quick reference guide
FLK-VT04 Visual IR Thermometer	Hard case, micro-SD card, micro-SD conversion adapter to standard, lithium-ion rechargeable battery, micro USB charger/power supply (including worldwide adapters), quick reference guide

Ordering information

Models	Included accessories
CV400 4 in (95 mm) IR Window, Hand Turn Door Latch	Fluke IR Windows are supplied complete, assembled and ready for installation. In addition to the IR Window, each carton contains warranty statement and security key if that option is ordered.
CV401 4 in (95 mm) IR Window, Security Key Door Latch	
CV300 3 in (75 mm) IR Window, Hand Turn Door Latch	
CV301 3 in (75 mm) IR Window, Security Key Door Latch	
CV200 2 in (50 mm) IR Window, Hand Turn Door Latch	
FLK-100-CLKT 4 in (100mm) C-Range IR Window, Kwik Twist	Fluke IR Windows are supplied complete, assembled and ready for installation. In addition to the IR Window, each carton contains warranty statement
FLK-075-CLKT 3 in (75mm) C-Range IR Window, Kwik Twist	
FLK-050-CLKT 2 in (50mm) C-Range IR Window, Kwik Twist	



VISUAL IR THERMOMETERS



Fluke infrared thermometers: 62 MAX+, 62 MAX, 59 MAX and 572-2

Take measurements from a safe distance

Fluke has built infrared thermometers with the durability and accuracy you need to do your job, and all within your budget. These IR Thermometers offer precise laser technology for accurate and repeatable measurements.

Fluke 62 MAX+ highlights:

- Three-meter drop tested
- 12:1 distance to spot ratio
- Min/Max/Avg/Dif, Hi and Lo alarms
- Dual lasers for superior targeting

Fluke 62 MAX highlights:

- Single laser targeting
- 10:1 distance to spot ratio

Fluke 59 MAX highlights:

- 8:1 distance to spot ratio
- Min/Max/Avg/Dif, Hi and Lo alarms

Fluke 59 Max+ highlights:

- 10:1 distance to spot ratio
- Min/Max/Avg/Dif, Hi/Lo alarms

Specifications

	62 MAX+	62 MAX	59 MAX+	59 MAX
Temperature range	-30 °C to 650 °C (-22 °F to 1202 °F)	-30 °C to 500 °C (-22 °F to 932 °F)	-30 °C to 500 °C (-22 °F to 932 °F)	-30 °C to 350 °C (-22 °F to 662 °F)
Accuracy	± 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	± 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	0 °C: ± 1.5 °C or ± 1.5% of reading, whichever is greater	≥ 0 °C: ± 2.0 °C or ± 2.0% of reading, whichever is greater
Emissivity			0.10 to 1.00	0.10 to 1.00
Power	AA battery			
Compliance	EN/IEC 61010-1: 2001			
Laser safety	FDA and EN 60825-1 Class II			



Fluke 572-2 Thermometer

- Extremely wide measurement range from -30 °C to 900 °C (-22 °F to 1652 °F)
- 60:1 distance to spot ratio with dual laser sighting

Fluke 50 Series II Thermometers

Lab accuracy in a field thermometer

- Laboratory accuracy: ± (0.05% + 0.3 °C)
- Large backlit dual display, in °C, °F, or Kelvin (K)
- Min/Max/Avg
- Supports a wide range of thermocouple types

Powerful data logging capabilities

The Fluke 53 II B and 54 II B can log up to 500 points of data to internal memory.

- User-adjustable recording intervals
- Real-time clock captures the exact event time
- Download data to optional FlukeView® PC software



Ordering information

Models	Included accessories
FLUKE-62 MAX+ Infrared Thermometer, Dual Lasers	
FLUKE-62 MAX Infrared Thermometer, Single Laser	Instruction sheet, battery
FLUKE-59 MAX Infrared Thermometer	
FLUKE 572-2 High Temperature Infrared Thermometer	K-type thermocouple bead probe, durable hard case, USB 2.0 computer interface cable
FLUKE-54-2-B Datalogging Thermometer, Dual Input	Bead thermocouple(s), batteries, overview manual, instructional guide on CD
FLUKE-53-2-B Datalogging Thermometer, Single Input	
FLUKE-52-2 Digital Thermometer, Dual Input	Bead thermocouple(s), batteries, overview manual, instructional guide on CD
FLUKE-51-2 Digital Thermometer, Single Input	



Fluke 560 Series Infrared Thermometers

Stand up to tough industrial, electrical, HVAC, and mechanical environments

With a straight-forward user interface and soft-key menus, the Fluke 560 Series IR Thermometers make even complex measurements easy. With just a few pushes of a button you can easily adjust emissivity, record data, or turn on and off alarms.

- Measure up to 800 °C (1470 °F)
- Easily access advanced features with the soft-key buttons and graphical display
- Scan large areas or small objects; measure smaller objects from further away
- Compatibility with most type K thermocouples
- Confidently measure more surfaces, with adjustable emissivity and built-in materials table
- Log and download measurements for reporting (568)
- Audible and visual alarms alert you to measurements outside of set limits
- Pipe probe for superheat and sub-cooling; other contact and ambient measurements (561)
- Min/Max/Avg/Dif functions
- Includes KTC bead probe
- 1 % measurement accuracy



CE



CE

Specifications

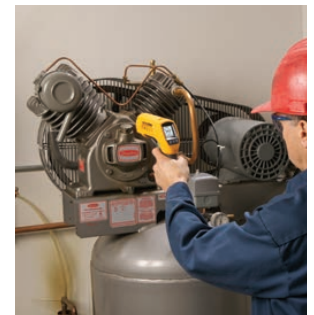
	Fluke 561	Fluke 566	Fluke 568
Infrared temperature range	-40 °C to 535 °C (-40 °F to 995 °F)	-40 °C to 650 °C (-40 °F to 1202 °F)	-40 °C to 800 °C (-40 °F to 1472 °F)
Accuracy	Greater of ± 1 % or ± 1 °C (2 °F)		
Distance to Spot (D:S)	12:1	30:1	50:1
Sighting	Laser point		
Typical distance to target	Up to 2.5 m (7 ft)	Up to 4.5 m (15 ft)	Up to 7.5 m (25 ft)
Probe type	Thermocouple K		
Contact temperature range	-40 °C to 550 °C (-40 °F to 1022 °F)		-270 °C to 1372 °C (-454 °F to 2501 °F)
Number of on-board memory locations		20	99
PC download and software			Yes, with FlukeView® Forms
Soft-key feature menu navigation			•
Min/Max/Avg/Dif	Min/Max/Dif		Min/Max/Avg/Dif
Material type adjustment (emissivity)	Hi/Med/Lo		Material table or 0.1 to 1.00 by 0.01
High and low alarms			High and low alarms
Hands-free logging			•
Battery		2 AA	
Warranty		Two-year	



Ordering information

Models	Included accessories
FLUKE-568 Infrared Thermometer	USB cable, FlukeView® Forms software, thermocouple type K bead probe, carrying case, two AA batteries, users manual, quickstart guide
FLUKE-566 Infrared Thermometer	Thermocouple type K bead probe, carrying case, two AA batteries, users manual and quickstart guide
FLUKE-561 Infrared Thermometer	Thermocouple type K pipe probe, carrying case, two AA batteries, users manual
FLUKE-61 Infrared Thermometer	9 V battery, instruction sheet
FLUKE-63 Infrared Thermometer	Wrist strap, carrying case, 9 V battery, users manual

The 568 allows for temperature measurement of small components.



www.fluke.com/thermometers