

**FLUKE®**



# Fluke infrared tools

Experience. Performance. Confidence.

**TEMPERATURE MEASUREMENT SOLUTIONS**

**FLUKE INFRARED TOOLS**  
Keeping your world up and running

**Fluke infrared  
tools are on  
the job because  
THEY DO  
THE JOB.**







**EXPERIENCE** is 65 years designing and building tools recognized as the industry standard in test and measurement. We understand that the demands on you and your tools are continuously evolving. This drives us to keep innovating, to learn from you what challenges you face and what you need from your tools.

**PERFORMANCE** is recognizing job sites can be complex, messy and sometimes dangerous. Your tools must excel while helping to keep you safe in changing environments. You want them designed for one-handed simplicity and to deliver superb image quality and deep analytics. We call it Fit for Purpose—tools developed for industrial use; for *your* use.

**CONFIDENCE** is knowing that the quality, accuracy and reliability we build into every Fluke tool is the DNA of our portfolio. We know the decisions you make from your measurements are your reputation. You need tools that are accurate and trustworthy so you can make the right decision.

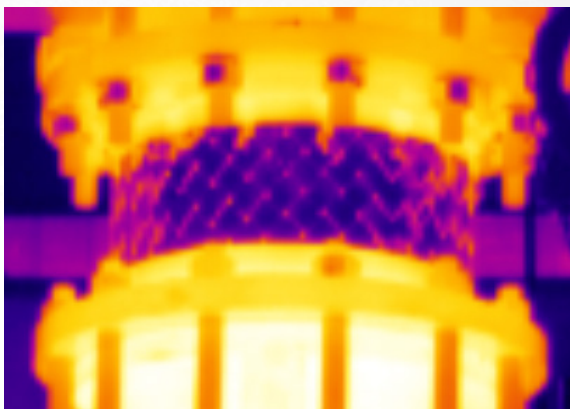
# Look beyond PIXELS. You'll see the DIFFERENCE.

Pixels are only part of the equation that determines infrared image quality.

**IMAGE QUALITY = focus + optics +  
spatial resolution (pixels + field of view)**







## Premier focus technologies

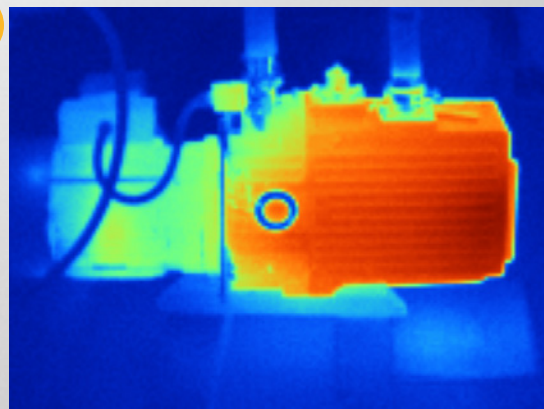
Getting in-focus images can be painstaking with manual focus systems, and some autofocus systems may not focus on your desired target. Fluke Professional and Expert Series cameras include some of the most innovative focus technologies available.

- LaserSharp® Auto Focus, only from Fluke, gives you the fastest way to precisely focused images
- Image Sharpening gives you premium image output in high temp applications by combining multiple sequential frames of data into one (TiX560 only)

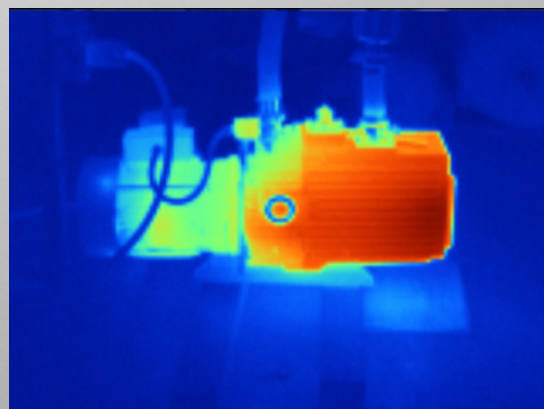


## Simply the best optics

Fluke uses only 100% diamond-turned germanium lenses covered with a specialty coating. This is the most efficient material to transmit energy to the detector to produce high quality infrared images.



2.25 mRad, D:S (detection) 400:1



3.39 mRad, D:S (detection) 295:1

## Spatial resolution: the best kept secret to image quality

Generally, a camera with a higher number of detector pixels or a narrower field of view will have better spatial resolution. Spatial resolution is measured in mRads, and the smaller the number, the more detailed the image. For Fluke thermal imagers with standard lenses, the range is from 1.31 mRad (best) to 7.8 mRad, while competitive models range up to 10.3 mRad.

The images above have the same number of detector pixels and were taken at the same distance from the motor<sup>1</sup>, but the top image has better spatial resolution, and you can see more details, due to the tighter field of view.

<sup>1</sup>Both images were taken with Fluke cameras.

# SEE IT. SAVE IT. SHARE IT.

All the facts, right in the field.



## ShareLive™ video call

Save and share measurements from the field with your team anytime, from anywhere.



## TrendIt™ graphs

Evaluate the trends. Eliminate the trouble.

“*Having your entire team able to share images across a network in real time—now, that’s valuable.*”

—John Bohling, UA HVAC Service Technician

## Introducing the largest system of wireless test tools.

The Fluke Connect® app and wireless tools are the most comprehensive way to stay in contact with your team without leaving the field. With over 30 wireless tools, confidently diagnosing and solving problems has never been easier.

Get started saving time and increasing productivity now.



Download the phone app at:



©2015 Fluke Corporation. All trademarks are the property of their respective owners. WiFi or cellular service required to share data. Smart phone, wireless service and data plan not included with purchase. First 5 GB of storage is free. Phone support details can be viewed at [fluke.com/phones](http://fluke.com/phones).





### **AutoRecord™ measurements**

Instantly save measurements  
to your phone.



### **Fluke Cloud™ storage**

Securely access equipment  
records anywhere, anytime.





# Your view of infrared technology is about to change 180°.

You need maximum flexibility with an ergonomic design that allows you to easily navigate over, under and around hard-to-reach objects. With an articulating lens that rotates a full 180 degrees and the largest 5.7 inch touchscreen LCD, you can aim and focus from a comfortable angle and easily capture the target that was once impossible to see.





## Premium viewing with the largest 5.7 inch touchscreen LCD.

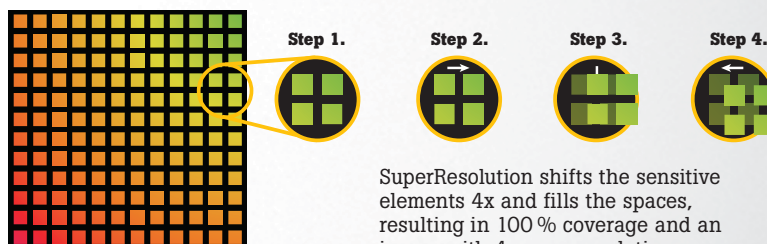
With 150 % more viewing area<sup>1</sup>, easily annotate, edit and analyze images with the largest touchscreen LCD in its class<sup>2</sup>.



## Get 4x the pixels with SuperResolution.

Instantly capture highly detailed images and start analyzing your images while still in the field with on camera analytics. See incredible detail from a distance or close up.

SuperResolution mode (available on camera in the TiX560) turns your 320x240 images into 640x480 images, 4x the resolution and pixels.



### TiX560/520/500

- Easily navigate over, under and around objects with the 180° articulating lens
- Quick and easy in-field analysis with post-capture image processing—edit emissivity, background temperature, transmissivity, palettes, color alarms, IR-Fusion and enable/disable markers—all on camera
- Get premium image output in high temp applications by combining multiple sequential frames of data into one with Image Sharpening (TiX560)
- Find subtle temperature differences easier—instantly improve thermal sensitivity from 45 mK to 30 mK with Filter mode (TiX560)
- Monitor processes with video recording, live video streaming, remote control (TiX560 only), or auto capture
- Optional lenses—inspect targets that would be challenging to see with a standard IR lens due to size and distance. 2x and 4x telephoto, 25 micron macro, and wide angle pre-calibrated smart lenses available
- Save and share images from the field with your team with the Fluke Connect® app

<sup>1</sup>Compared to a 3.5 inch screen.

<sup>2</sup>Compared to industrial handheld thermal imagers with 320x240 detector resolution as of September 1, 2015.

# Autofocus REDEFINED.

LaserSharp® Auto Focus.

On target and in focus. Every. Single. Time.

You're it when it comes to getting the right answers—there's no room for fuzzy, out-of-focus infrared images. Potential problems hide behind incorrect readings, which is why you need a camera with LaserSharp® Auto Focus for crisp, sharp images every, single time.



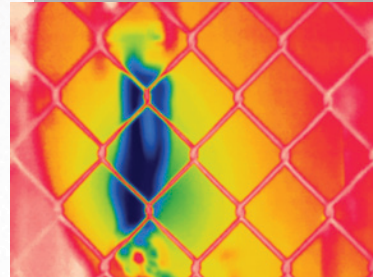


## Precisely focused images

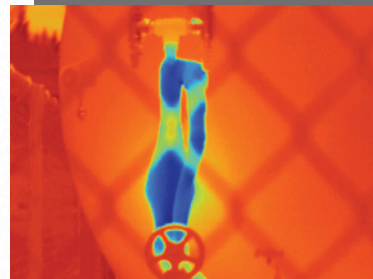
If your image is out of focus, temperature measurements could be off by up to 20 degrees or more. Getting crisp images in manual focus takes time and careful attention. With LaserSharp® Auto Focus, exclusive to Fluke, you get an in-focus image of your designated target with the push of a button. The built-in laser distance meter instantly calculates and displays the distance to your target, and the focus engine immediately adjusts the focus.



Many inspection sites are challenging for certain autofocus systems.



Passive autofocus systems may only capture the near-field subject (fence).



Red laser dot confirms LaserSharp Auto Focus captures your target.

LaserSharp® Auto Focus gives you in-focus images



## Navigate easier than ever

The Professional Series cameras have a stunningly clear 3.5-inch, 640 x 480 high resolution responsive touch screen to easily spot problems, with intuitive controls to quickly navigate to the next image or switch modes. Plus, all camera features can be accessed one-handed—even with gloves—because of the large buttons.

### Ti400/300/200

- Get the context of the visual and infrared details all in one precisely blended or picture-in-picture image with IR-Fusion® technology
- Inspect high-temperature components, up to 1200 °C (2192 °F)<sup>1</sup>
- Digitally document critical information with your infrared image using IR-PhotoNotes™, voice annotation, or text annotation<sup>1</sup>
- Monitor processes with video recording, live video streaming, remote control<sup>1</sup>, or auto capture
- 2 in 1 tool—see the distance to your target on the screen with the included laser distance meter
- Optional lenses—inspect targets that would be challenging to see with a standard IR lens due to size and distance. 2x and 4x telephoto and wide angle pre-calibrated smart lenses available
- Save and share images from the field with your team with the Fluke Connect® app

<sup>1</sup>Varies by model; see pages 20-21 for model specifications

## THE PERFORMANCE SERIES

TiS65/60/55/50/45/40/20/10

# Rugged, reliable PERFORMANCE from Fluke.

You need an easy to use high performance thermal imager that helps you quickly identify small details that could indicate a big problem.





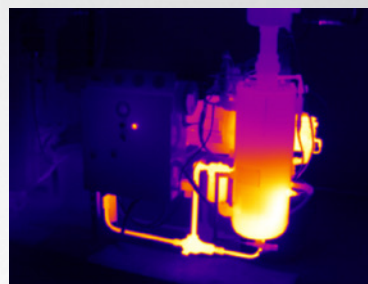
## Precisely blended images offer more detail

Image quality is everything when it comes to quickly analyzing infrared images. You need the right level of detail in your infrared image to pinpoint specific areas of concern. Fluke Performance Series thermal imagers blend visible light and infrared images using patented IR-Fusion® technology¹ to capture a clear 5MP real-world picture of your target. Blend at different preset levels and add picture-in-picture (PIP) to capture an incredibly revealing hybrid image.



## Designed for your environment

Easily see potential problems with the large 3.5 inch LCD, a full 32 % larger than many competitive models. And with a rugged one handed design (right or left handed) you can easily work up a ladder or in virtually any environment.



Full IR



75 % Blending



PIP mode

IR-Fusion® technology captures revealing blended images²

**TiS65/60/55/50/45/40/20/10**

- See more details with improved resolution that delivers the right image quality you need to make the proper diagnosis with up to 2.5² times more pixels and 70 %² better D:S
- Reduce the amount of time it takes to get an in focus image with manual or fixed focus options
- Securely store and manage your images from anywhere⁴
  - WiFi upload to Fluke Cloud™
  - Free storage³ with Fluke Cloud™
  - Share images in real-time with Fluke Connect®
  - Removable 4GB micro SD card
  - Voice annotation⁵
- Monitor your battery charge and avoid an unexpected loss of power with the smart battery with LED charge indicator
- Create and email reports from the jobsite with Fluke Connect®, eliminating the need to go back to the office to process reports⁴

¹IR-Fusion® and picture-in-picture mode execution varies by model; see pages 20-21 for model specifications

²Compared to the Fluke Tlxx thermal imagers

³5 GB of free storage

⁴Within your provider's wireless service area; Fluke Connect® is not available in all countries

⁵Varies by model; see pages 20-21 for model specifications

## VISUAL IR THERMOMETER

VT04/VT04A

# Designed to SEE IT ALL.

Say good-bye to spot-by-spot readings. An infrared heat map superimposed over a visual image provides the context you need to clearly see temperature-related issues—priced to outfit the whole team.





# Blended heat map for better analysis

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.



## Automate your inspections

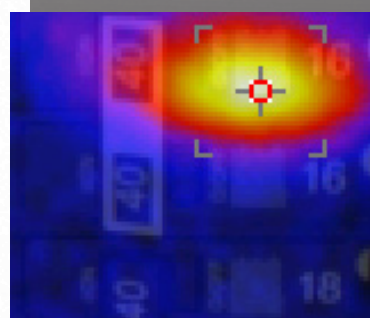
Monitor equipment over time by setting up your visual IR thermometer to take time-lapse images automatically. Easily configure high and low temperature alarms. Then blend images and select the best palette to pinpoint issues and create quick reports with the included Fluke SmartView® software.



25 % blended heat map



50 % blended heat map



75 % blended heat map

These blended VT04 images show the breaker number that is hot.

## VT04/VT04A

- 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 in SmartView® software
- Protect your visual IR thermometer with the included hard case (VT04) or soft case (VT04A)
- Choose your preferred way of powering your visual IR thermometer: a rechargeable Li-ion battery (VT04) or 4 AA batteries (VT04A)

# For FAST, EASY, DEPENDABLE readings, this is the go-to tool.

For a quick temperature reading, it doesn't get much easier than an IR Thermometer from Fluke. So rugged and fast you'll always want to keep it with you.





## Quick and simple measurements

With a start-up time of a mere second, you'll never have to wait on your tool. Simply pull the trigger and instantly get a spot measurement. Laser guides show where you're measuring, and dual lasers on some models indicate the area the measurement is based on.



## Rugged, ready and reliable

You have a tough job. Tough on you and your tools. That's why Fluke IR thermometers are ready for action even in harsh conditions—tested to withstand dust and water with an IP54 rating<sup>1</sup>. Some can even survive a 3 meter drop<sup>1</sup>. For rugged reliability, it's tough to beat Fluke.



### 572-2/568/62 MAX+

- Measure accurately from farther away with up to a 60:1 distance to spot ratio<sup>2</sup>
- Measure temperatures up to 900 °C (1652 °F)<sup>2</sup>
- Save time with available onboard, downloadable data storage of temperature readings (572-2 and 568 models)
- Get contact measurement with 2-in-1 IR thermometers (572-2 and 568 models)
- Intrinsically safe model available for use in hazardous environments including oil and gas (568 Ex). See 568 Ex product page on Fluke website for details
- Additional models available to meet your specific needs; see Fluke website for details

<sup>1</sup>Testing was done on the 62 Max and 62 Max+.

<sup>2</sup>Varies by model; see pages 20-21 for model specifications.



# 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.



## CV400/401/300/301/200/201

- Highest arc blast safety rating available—63 kA when properly installed
- Under 5 minute installation with 1 person; no need to remove panel door
- Available in 2 inch (50 mm), 3 inch (75 mm), and 4 inch (95 mm) sizes with convenient ¼ turn access or security key access options
- 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



# See the impossible.

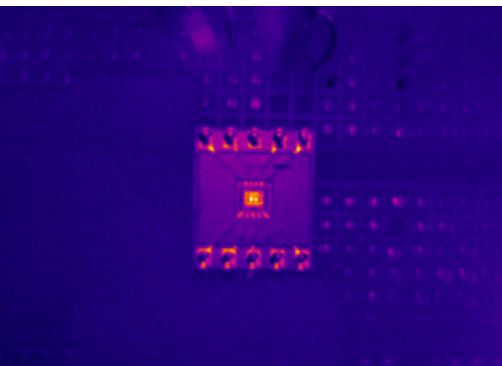
Infrared lenses can make it possible to inspect targets that would be challenging to see with a standard IR lens due to their size and distance.



TiX560—standard lens



TiX560—4x telephoto lens



TiX560—standard lens



TiX560—25 micron macro lens

## Expand the capabilities of your thermal imager

- **Lenses**—Capture images close up or from a distance with optional lenses, available with Expert and Professional series cameras.
- **Batteries and chargers**—All Fluke Professional and Performance Series cameras feature interchangeable batteries. Expand your powering capabilities with a car charger, extra battery, or charging base.
- **Tripod mounts**—Capture images from a tripod using your Professional or Performance Series camera with a tripod mount. Expert Series models have built-in tripod mounts.
- **Sun visors**—Reduce LCD screen glare. Available for Professional and Performance Series models.
- **CarePlans**—Gold and Silver CarePlans available for all Professional and Performance models as well as the Expert Series TiX500, TiX520 and TiX560.
- **SmartView® software**—Analyze images, adjust blending and palette, export to multiple file formats, and create professional reports with Fluke SmartView® software. Download your copy for free from the Fluke website.

Not all accessories are interchangeable. Visit the Fluke website to see which accessories are recommended for your specific product.

# SPECIFICATIONS

Expert Series Thermal Imagers				Professional Series Thermal Imagers			
	TiX560	TiX520	TiX500	Ti400	Ti300	Ti200	TiS65/TiS60
IFOV (spatial resolution)/	1.31 mRad				1.75 mRad	2.09 mRad	2.4 mRad
Detector resolution	320 x 240 (76,800 pixels) Super Resolution mode: 640 x 480 (307,200 pixels)			320 x 240 (76,800 pixels)	240 x 180 (43,200 pixels)	200 x 150 (30,000 pixels)	260 x 180 (50,700 pixels)
Field of view	24 °H x 17 °V						24 °H x 17 °V
Distance to spot – D:S	764:1				573:1	477:1	417:1
Optional lenses	Optional 2x and 4x telephoto, 25 micron macro, and wide angle pre-calibrated smart lenses available			Optional 2x and 4x telephoto and wide angle pre-calibrated smart lenses available			
Wireless connectivity <sup>1</sup>	Fluke Connect® app compatible. Wireless connectivity to PC, iPhone® and iPad® (iOS 10.0 and up), Android™ 4.3 and up, and WiFi to LAN <sup>1</sup>						
Focus system	LaserSharp® Auto Focus with built-in laser distance meter and advanced manual focus						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					IR-Fusion® AutoBlend™ mode and Picture-in-Picture
Display	5.7 inch touchscreen LCD, 640 x 480 pixel resolution			3.5 inch touchscreen LCD, 640 x 480 pixel resolution			
Design	Ergonomic FlexCam design with a 180 degree articulating lens			Rugged, ergonomic design for one-handed use			
Thermal sensitivity	≤ 0.045 °C at 30 °C target temp (45 mK); Filter mode (NETD improvement) ≤ 0.03 °C at 30 °C target temp (30 mK)	≤ 0.05 °C at 30 °C target temp (50 mK); Filter mode (NETD improvement) ≤ 0.04 °C at 30 °C target temp (40 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)			≤ 0.075 °C at 30 °C target temp (75 mK)	≤ 0.08 °C at 30 °C target temp (80 mK)
Temperature measurement range	-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)		-20 °C to +1200 °C (-4 °F to +2192 °F)
Frame rate	60 Hz or 9 Hz versions						9 Hz or 30 Hz
Software	SmartView® software and Fluke Connect® <sup>1</sup>						
Documentation features	IR-PhotoNotes™, voice annotation, and text annotation				IR-PhotoNotes™ and voice annotation		IR-PhotoNotes™ (3 images), voice annotation, and text annotation. Bluetooth LE (sold separately)
Video recording (remote display)	Standard and radiometric						
Streaming video (remote display)	Via USB or WiFi						
Remote control	Yes	—		Yes			
Alarms	High temperature, low temperature, and isotherms						
Warranty	Two-years (standard), extended warranties are available						

<sup>1</sup>Within your provider's wireless service area; Fluke Connect® is not available in all countries.



Performance Series Thermal Imagers					Visual IR Thermometers		IR Thermometers					
TiS60	TiS55/TiS50		TiS45/TiS40		TiS20	TiS10	VT04/VT04A		572-2	568	62 Max+	
Rad	2.8 mRad		3.8 mRad		5.2 mRad	7.8 mRad	—					
195 pixels	220 x 165 (36,300 pixels)		160 x 120 (19,200 pixels)		120 x 90 (10,800 pixels)	80 x 60 (4,800 pixels)	31 x 31 (961 pixels)		—			
35.7 °H x 26.8 °V							28 °H x 28 °V		—			
1	353:1		257:1		193:1	128:1	Detection 128:1; measurement 9:1		60:1	50:1	12:1	
—												
iOS 4s and later),							—					
Fixed focus	Manual focus	Fixed focus	Manual focus	Fixed focus					—			
Vision® AutoBlend mode and Picture-in-Picture—5 presets (0 %, 25 %, 50 %, 75 %, 100 %)					IR-Fusion® AutoBlend mode—3 presets (0 %, 50 %, 100 %)	—	Infrared heat map and visual image blending in 25 % increments; center box to outline the temperature measurement area		Dual-laser sighting	Single-laser sighting	Dual-laser sighting	
3.5 inch (landscape) 320 x 240 LCD							2.2 inch portrait standard TFT LCD		Dot Matrix LCD		Segment LCD	
Rugged, lightweight, ergonomic design for one-handed use							Slim, pocket-sized design				Pocket-sized, 3-meter drop tested, IP54 rating	
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		—		
-550 °C (-822 °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)		-30 °C to +900 °C (-22 °F to +1652 °F)	-30 °C to +800 °C (-22 °F to +1472 °F)	-30 °C to +650 °C (-22 °F to +1202 °F)
9 Hz	9 Hz or 30 Hz	9 Hz	9 Hz or 30 Hz	9 Hz			8 Hz		—			
							SmartView® software		FlukeView® Forms		—	
Notes™, voice annotation—Bluetooth Headset (sold separately)	IR-PhotoNotes™ (1 image), voice annotation—Bluetooth Headset (sold separately)		Voice annotation—Bluetooth Headset (sold separately)		—							
	—											
	—											
—												
			High temperature, low temperature				High/low temperature alarms, time-lapse image capture, auto-monitor alarm		Continuous monitoring with High/low alarms		High/low alarms	
							Two-years				Three-years	

**Fluke infrared tools are on the job because they do the job.**



### Expert Series

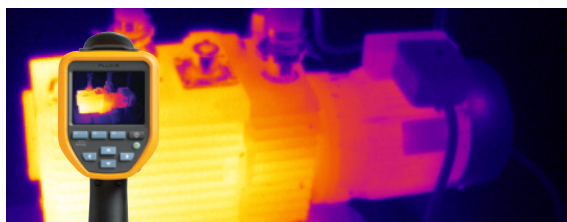
When you cannot be wrong, the Expert Series offers extremely detailed images. Plus, view images on a large articulating display—up to 5.7 inches.



### Professional Series

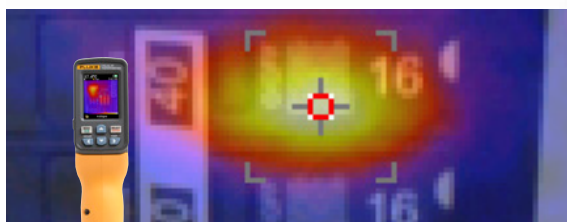
Focus with laser speed and accuracy on your designated target with LaserSharp® Auto Focus. Get highly detailed images and advanced features.

**Visit the Fluke website for more information.**



### Performance Series

Get detailed images in an affordable thermal imager that's rugged and reliable. The perfect tool for a quick inspection.



### Visual IR Thermometer

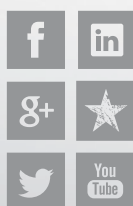
An infrared heat map with hot and cold markers reveals potential areas of concern. See issues in context by blending the heat map with a visual image.



### IR Thermometer

Get a quick temperature reading, even from a distance, with up to a 60:1 distance to spot ratio and a start-up time of a mere second.

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



**Fluke Europe B.V.**  
P.O. Box 1186  
5602 BD Eindhoven  
The Netherlands  
Web: [www.fluke.co.uk](http://www.fluke.co.uk)

#### For more information call:

In Europe/M-East/Africa  
+31 (0)40 267 5100 or  
Fax +31 (0)40 267 5222

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**Fluke (UK) Ltd.**  
52 Hurricane Way  
Norwich, Norfolk  
NR6 6JB  
United Kingdom  
Tel.: +44 (0) 20 7942 0700  
Fax: +44 (0) 20 7942 0701  
E-mail: [industrial@uk.fluke.nl](mailto:industrial@uk.fluke.nl)  
Web: [www.fluke.co.uk](http://www.fluke.co.uk)

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