

**FLUKE®**



# Fluke infrared tools

Experience. Performance. Confidence.

**TEMPERATURE MEASUREMENT SOLUTIONS**

# 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.

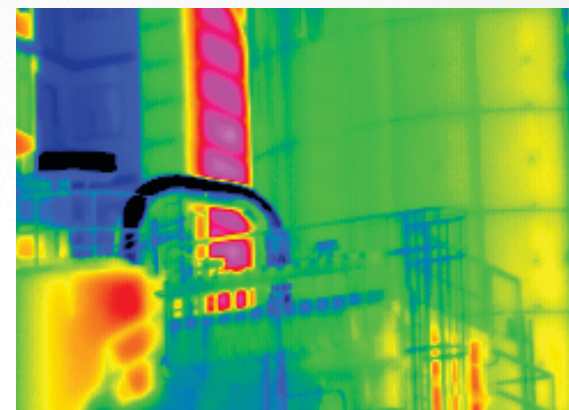
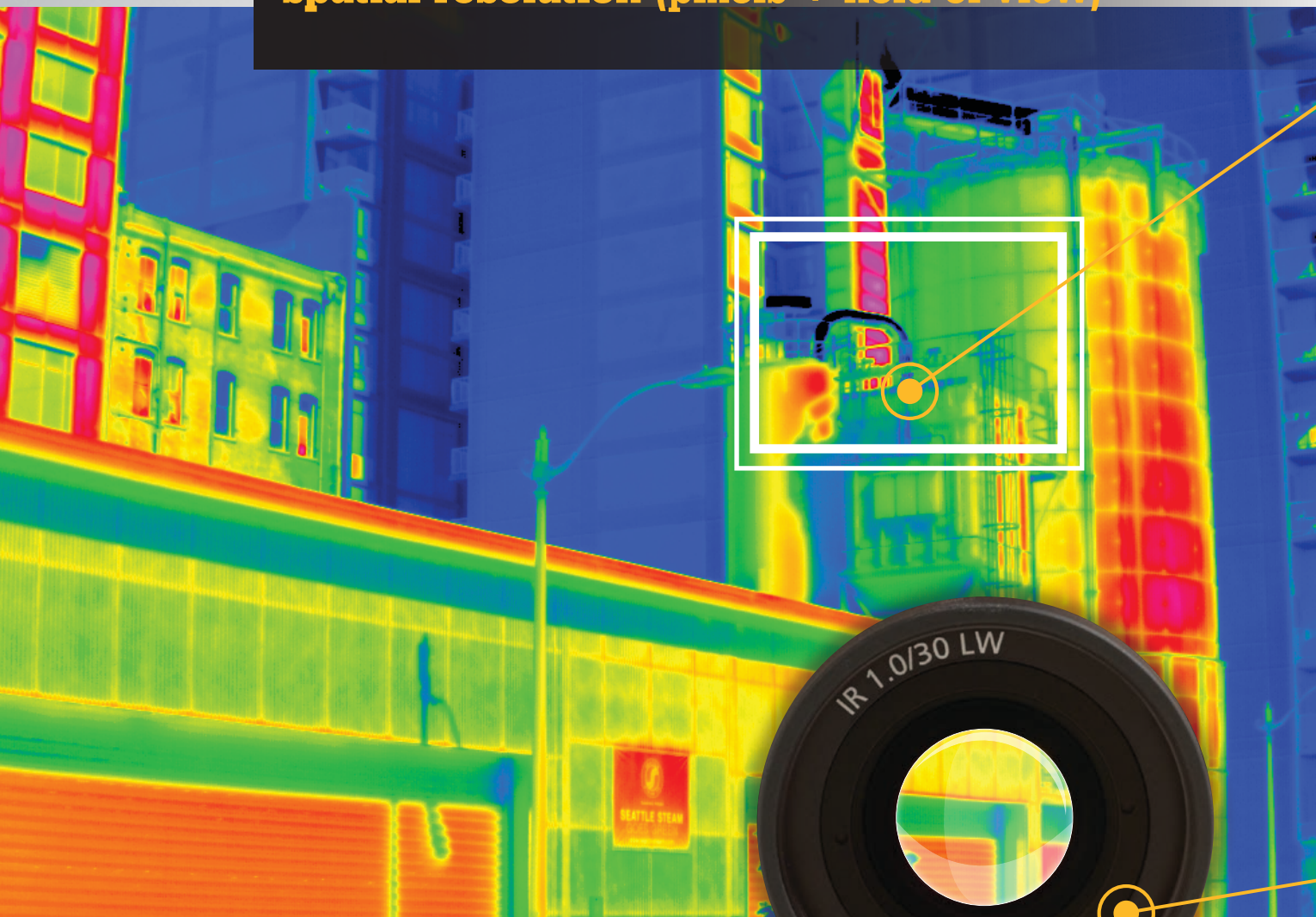
**PERFORMANCE** is recognizing job sites can be complex, messy and sometimes dangerous. Your tools must excel while helping to keep you safe in changing environments. You want them designed for one-handed simplicity and to deliver superb image quality and deep analytics. We call it Fit for Purpose—tools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

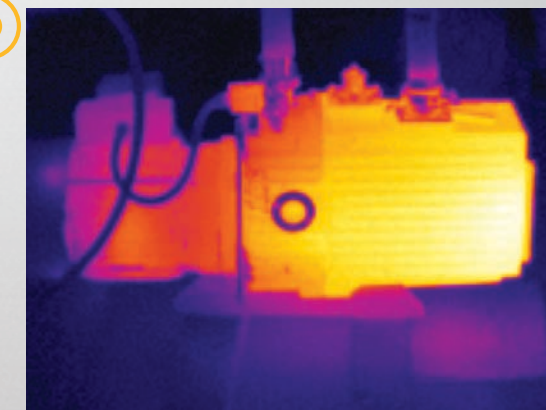
Getting in-focus images can be painstaking with manual focus systems, and some autofocus systems may not focus on your desired target. Fluke Professional and Expert Series cameras include some of the most innovative focus technologies available.

- LaserSharp® Auto Focus, only from Fluke, gives you the fastest way to precisely focused images
- EverSharp multifocal recording gives you edge-to-edge clarity of targets both near and far in one image

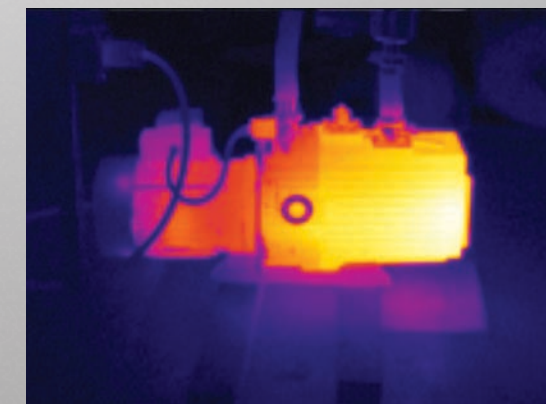


## Simply the best optics

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



3.39 mRad

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

The best spatial resolution has the largest number of detector pixels within the smallest field of view. This combination is measured in mRads, and the smaller the number, the more detailed the image. Fluke infrared cameras' mRads range from 0.6 mRad (best) to 5.6 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

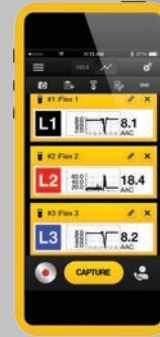
# Pushing the boundaries of team communication.



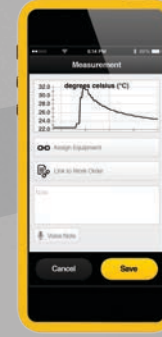
**ShareLive™ video call**  
Save and share measurements from the field with your team anytime, from anywhere.



**EquipmentLog™ history**  
Access equipment history so your equipment doesn't become history.



**TrendIt™ graphs**  
Evaluate the trends. Eliminate the trouble.



**AutoRecord™ measurements**  
Instantly save measurements to your phone.



**Fluke Cloud™ storage**  
Securely access equipment records anywhere, anytime.

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

—John Bohling, UA HVAC Service Technician

**See it. Save it. Share it. All the facts, right in the field.<sup>1</sup>**

Fluke Connect™ is a system that connects your Fluke test tools with an app on your smartphone wirelessly. It enables you to SEE images from your infrared camera and measurements from other Fluke Connect™ enabled tools on your smartphone screen, SAVE images to the asset's EquipmentLog™ history in the Fluke Cloud™, and SHARE images with your team—all without going back to your desk.



<sup>1</sup>Within your provider's wireless service area; Fluke Connect™ is not available in all countries. Compatible with iPhone 4x and up running iOS 7 or higher; iPad (in an iPhone frame on iPad); Samsung Galaxy S4 running Android 4.3.x or higher and Samsung Galaxy S, Nexus 5, HTC One and One M8 running Android™ 4.4.x or higher.

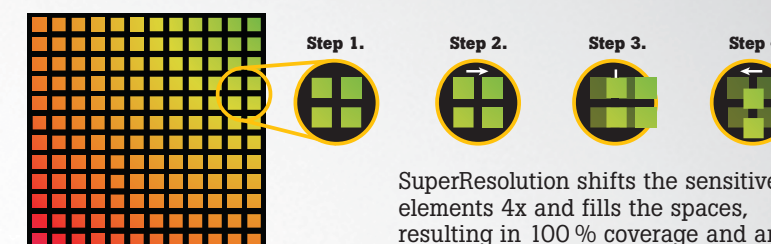
# The future of infrared is here in STUNNING HD resolution.

Your work as an expert thermographer is defined by the quality of the infrared images you take and your ability to analyze what's before you. The most pressing challenge lies not in analyzing what you see, but the fear of missing something you can't.

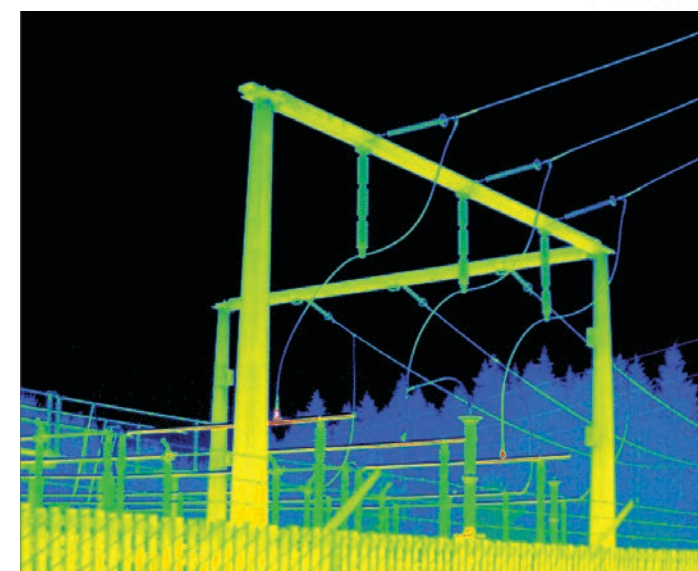
## It's time to see what you're missing. Up to 3.1 million pixels with SuperResolution.

Instantly capture highly detailed images and start analyzing your images while still in the field. See incredible detail from a distance or extremely close up. On camera, you get up to 10x the pixels of a standard 320x240 camera (based on the TiX1000).

SuperResolution mode, available when viewed in SmartView® software, lets you see HD resolution with up to 3.1 million pixels—4x the on-camera standard resolution.



SuperResolution shifts the sensitive elements 4x and fills the spaces, resulting in 100% coverage and an image with 4x more resolution.



## The industry's most advanced focus options.

LaserSharp® Auto Focus<sup>1</sup> gives you the fastest way to precisely focused images by calculating the distance to your target with a laser distance meter.<sup>2</sup>

EverSharp multifocal recording gives you edge-to-edge clarity of targets both near and far in one image, which is created by capturing multiple images from varying focal distances.

### TiX1000/660/640

- Capture the tough shots with a large 5.6 inch articulating LCD display
- Optimized for outdoor inspections with viewfinder that reduces outdoor glare<sup>1</sup>
- High temperature option up to 2000 °C<sup>1</sup>
- Capture spectacular images close up or from a distance with your choice of seven optional lenses
- Identify rapid changes in temperature with the optional Subwindowing feature (up to 240 Hz)
- Save and share images from the field with your team with the Fluke Connect™ app

<sup>1</sup>Features vary by model; see pages 18-19 for model specifications

<sup>2</sup>Compared to industrial infrared cameras without a user-designated laser-focus feature



# 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.

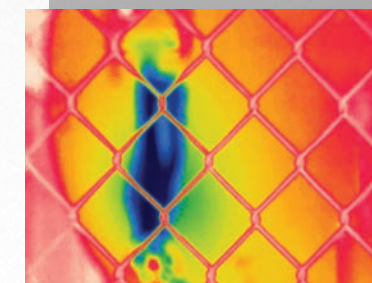


## Precisely focused images

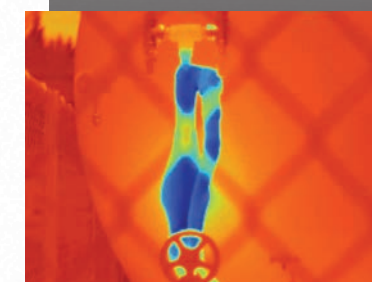
If your image is out of focus, temperature measurements could be off by up to 20 degrees or more. Getting crisp images in manual focus takes time and careful attention. With LaserSharp® Auto Focus, exclusive to Fluke, you get an in-focus image of your designated target with the push of a button. The 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
- Adjust to your environment to ensure you get the detail you need with an optional telephoto or wide-angle lens (available separately)
- Save and share images from the field with your team with the Fluke Connect™ app

<sup>1</sup>Varies by model; see pages 18–19 for model specifications

# Rugged, reliable PERFORMANCE from Fluke.

You need a high performance infrared camera to take along on inspections that helps you catch small details that could indicate a big problem.



## Precisely blended images offer more detail

Context is everything when it comes to quickly analyzing infrared images. You need surrounding details to pinpoint specific areas of concern. Fluke Performance Series infrared cameras can instantly blend visible light and infrared images using patented IR-Fusion® technology¹. More than just outlines, IR-Fusion® technology captures a clear 2MP real-world picture of your target, while infrared is recording the heat signature. The result is an incredibly revealing hybrid image.



Power Distribution-Full visible



Mid IR AutoBlend™ Mode



Precisely blended visible details

IR-Fusion® technology captures revealing blended images¹

## 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.



### Ti125/110/105/100/95/90

- Building diagnostic models available—get 20 % better thermal sensitivity than standard Ti125, Ti110, and Ti105 models (80 mK) due to a lower temp range with TiR models (TiR125, TiR110, TiR105)
- See more detail in your target, even when working from a safe distance, due to the tighter field of view than what many competitive models offer
- Get easy access to saved images with a removable SD card
- Monitor your battery charge and avoid an unexpected loss of power with the smart battery with LED charge indicator
- Automatically focus from 1.2 m (4 ft) and beyond or manually focus from as close as 15 cm (6 in) with IR-OptiFlex™ Focus System (Ti125, TiR125, Ti110, TiR110 models only)
- Save and share images from the field with your team with the Fluke Connect™ app

¹Not available with Ti100. IR-Fusion® execution varies by model; see pages 18-19 for model specifications

# 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

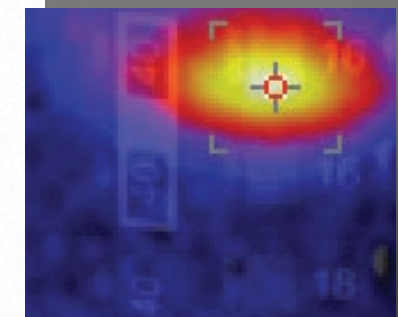
See issues in context by blending the infrared heat map with a visual image, and get the detail you need by choosing one of five on-screen blending modes. See aligned images from as close as 15 cm (6 in) in near mode or from a distance in far mode. Plus, obtain accurate temperature readings without taking 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.



25 % blended heat map



50 % blended heat map



75 % blended heat map

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

## Automate your inspections

Monitor equipment over time by setting up your camera 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.



### 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 18-19 for model specifications

	Expert Series IR Cameras			Professional Series IR Cameras			Performance Series IR Cameras					Visual IR Thermometers		IR Thermometers				
	TiX1000	TiX660	TiX640	Ti400	Ti300	Ti200	Ti125	Ti110	Ti105	Ti100	Ti95	Ti90	VT04/VT04A	572-2	568	62 Max+		
<b>IFOV (spatial resolution)/ distance to spot (D:S)</b>	0.6 mRad	0.8 mRad		1.31 mRad	1.75 mRad	2.09 mRad	3.39 mRad					5.6 mRad		Detection D:S – 43:1; measurement D:S – 9:1	D:S – 60:1	D:S – 50:1	D:S – 12:1	
<b>Detector resolution</b>	1024 x 768 (786,432 pixels) Super Resolution mode: 2048 x 1536 (3,145,728 pixels)	640 x 480 (307,200 pixels) Super Resolution mode: 1280 x 960 (1,228,800 pixels)	640 x 480 (307,200 pixels)	320 x 240 (76,800 pixels)	240 x 180 (43,200 pixels)	200 x 150 (30,000 pixels)	160 x 120 (19,200 pixels)					80 x 80 (6,400 pixels)	80 x 60 (4,800 pixels)	31 x 31 (961 pixels)		–		
<b>Field of view</b>	32.4° H x 24.7° V	30.9° H x 23.1° V		24° H x 17° V			22.5° H x 31° V					26° H x 26° V	19.5° H x 26° V	28° H x 28° V		–		
<b>Optional lenses</b>	Capture spectacular images close up or from a distance with optional lenses: 2 wide angle, 2 telephoto, and 3 macro			Optional telephoto and wide angle lenses available			–											
<b>Wireless connectivity<sup>1</sup></b>	Fluke Connect™ app compatible with Fluke Connect® WiFi SD Card <sup>1</sup>			Fluke Connect™ app compatible. Wireless connectivity to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN <sup>1</sup>			Fluke Connect™ app compatible with included wireless SD card <sup>1</sup>					–						
<b>Focus system</b>	LaserSharp® Auto Focus, autofocus, manual focus, and EverSharp multifocal recording		Autofocus, manual focus, and EverSharp multifocal recording	LaserSharp® Auto Focus for consistently in-focus images and manual focus			IR-OptiFlex™ focus system (focus free and manual focus)		Fixed focus					–				
<b>IR-Fusion® technology/ visible context</b>	IR-Fusion® AutoBlend mode and Picture-in-Picture, continuous blending			IR-Fusion® AutoBlend™ mode and Picture-in-Picture						IR-Fusion® AutoBlend™ mode (on camera mid IR only) and Picture-in-Picture	–	IR-Fusion® Picture-in-Picture (AutoBlend™ mode available in SmartView® software)	Only full visible on camera (IR-Fusion® AutoBlend™ mode available in SmartView® software)	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
<b>Display</b>	Extra-large 5.6 inch color TFT display, 1280 x 800 pixel resolution, suitable for daylight operation			Touchscreen capacitive 3.5 inch diagonal landscape color VGA (640 x 480) LCD with backlight			3.5 inch diagonal (portrait format)					2.2 inch portrait standard TFT LCD		Dot Matrix LCD		Segment LCD		
<b>Design</b>	Camcorder with handle, tiltable LCoS color viewfinder display, 800 x 600 pixel resolution		Camcorder	Rugged, ergonomic design for one-handed use; IP54 rated for protection against dust, limited ingress; and protection against water spray										Slim, pocket-sized design			Pocket-sized, 3-meter drop tested, IP54 rating	
<b>Thermal sensitivity</b>	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK)		≤ 0.05 °C at 30 °C target temp (50 mK)		≤ 0.075 °C at 30 °C target temp (75 mK)	Standard models: ≤ 0.10 °C at 30 °C target temp (100 mK) TiR models: ≤ 0.08 °C at 30 °C target temp (80 mK)		≤ 0.10 °C at 30 °C target temp (100 mK)		≤ 0.15 °C at 30 °C target temp (150 mK)		250 mK		–			
<b>Temperature measurement range</b>	-40 °C to +1200 °C (-40 °F to 2192 °F) High temperature option: up to 2000 °C (3632 °F)		-40 °C to +1200 °C (-40 °F to 2192 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)	-20 °C to +650 °C (-4 °F to +1202 °F)		-20 °C to +350 °C (-4 °F to +662 °F) (TiR125: -20 °C to +150 °C (-4 °F to +302 °F))	-20 °C to +250 °C (-4 °F to +482 °F) (TiR110 and TiR105: -20 °C to +150 °C (-4 °F to +302 °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)	
<b>Frame rate</b>	30 Hz or 9 Hz versions (Subwindowing options available up to 240 fps)	60 Hz or 9 Hz versions (Subwindowing options available up to 240 fps)		60 Hz or 9 Hz versions			30 Hz or 9 Hz versions (TiR models: 9 Hz only)			9 Hz			8 Hz		–			
<b>Software</b>	SmartView® software and Fluke Connect™ <sup>1</sup>			SmartView® software, Fluke Connect™, and SmartView® mobile app—full analysis and reporting software										SmartView® software		FlukeView® Forms		–
<b>Documentation features</b>	Voice annotation and text annotation			IR-PhotoNotes™, voice annotation, and text annotation			IR-PhotoNotes™ and voice annotation		–									
<b>Video recording (remote display)</b>	Standard and radiometric						Standard		–									
<b>Streaming video (remote display)</b>	Via HDMI; GigE Ethernet available in SmartView® software			Via USB or WiFi hot spot to PC or via HDMI to HDMI compatible screen			Via USB to PC		–									
<b>Remote control</b>	Yes. Available in 2015			Yes		–												
<b>Alarms</b>	High-temperature, low-temperature, and isotherm color alarms						High temperature and low temperature	High temperature		–			High/low temperature alarms, time-lapse image capture, auto-monitor alarm		Continuous monitoring with High/low alarms		High/low alarms	
<b>Warranty</b>	Two-years (standard), extended warranties are available										2 years			3 years				

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

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



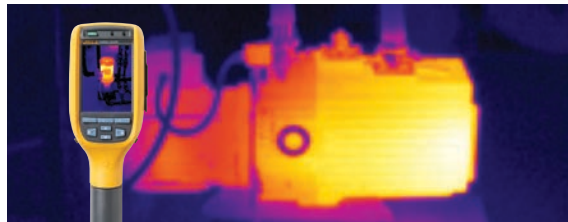
**Expert Series**

When you cannot be wrong, the Expert Series offers extremely detailed images. Plus, view images on a large 5.6 inch articulating display.



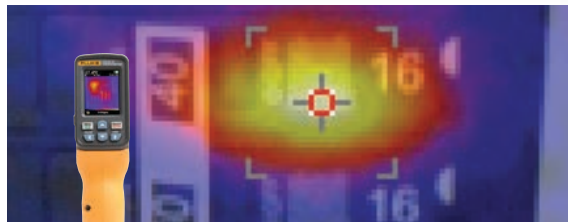
**Professional Series**

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



**Performance Series**

Get detailed images in an affordable infrared camera 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.

Visit: [fluke.com/infraredcameras](http://fluke.com/infraredcameras)

**Questions?**

Call 1-800-760-4523, email [thermography@fluke.com](mailto:thermography@fluke.com) or go to our website and request your free product demonstration.

**IR Windows**

Increase the safety and speed of your electrical infrared inspections, increase the safety of your personnel and reduce the risk of arc-flash and electrocution with easy-to-install Fluke ClirVu® IR Windows.

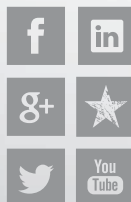
**Authentic Fluke accessories**

From car or battery chargers to special mounts and lenses, authentic Fluke accessories can help you get the most out of your Fluke infrared tools.

**Fluke training**

Between our online videos and seminars and live classes with our training partner, The Snell Group, you can continue to grow as a thermographer and infrared technician.

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



**Fluke Corporation**  
PO Box 9090, Everett, WA 98206 U.S.A.  
**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 (0)40 267 5100 or  
Fax +31 (0)40 267 5222  
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>

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