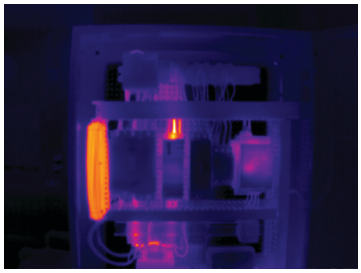
Fluke thermal cameras for electrical, industrial, and building applications

Get what you need, and a little bit more than you paid for!

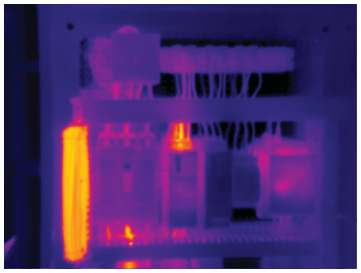
Fluke offers a wide portfolio of high-performance thermal cameras perfectly engineered for electrical, mechanical, and HVAC inspections, as well as for building diagnostics.

	TiS75+	TiS60+	TiS55+	TiS20+ MAX	TiS20+	PTi120
1 Infrared resolution	384 x 288	320 x 240	256 x 192	120 x 90		
2 Field of view	42° x 30°	34.1° x 25.6°	28° x 20°	50° x 38°		
3 Temperature range	-20° - 550°C -4° - 1022°F	-20° - 400°C -4° - 750°F	-20° - 550°C -4° - 1022°F	-20° - 400°C -4° - 750°F	-20° - 150°C -4° - 300°F	
4 Minimum operating distance /Pixel size	15 cm 0,3 mm	46 cm 0,86 mm	15 cm 0,3 mm	22,8 cm 1,73 mm		
5 Check your optimal distance	**FOV Calculator:** https://download.fluke.com/OnlineTools/EN/USEN/FOV_calc_index.html					
6 Spatial resolution	1.91 mRad 1.91 mm	1.86 mRad 1.86 mm	1.91 mRad 1.91 mm	7.6 mRad 7.6 mm		
7 Thermal sensitivity	40 mK	45 mK	40 mK	60 mK		
8 Focus systems	Manual Focus	Focus Free	Manual Focus	Focus Free		
9 IR-Fusion mode	IR-Fusion® Picture-in-Picture	IR-Fusion® Picture-in-Picture	IR-Fusion® Picture-in-Picture	IR-Fusion® Picture-in-Picture	IR-Fusion® Picture-in-Picture	IR-Fusion® Picture-in-Picture
10 Annotations options	PhotoNotes Asset Tagging	PhotoNotes	PhotoNotes Asset Tagging	Asset Tagging	Asset Tagging	Asset Tagging
11 Auto-capture	Yes	Yes	Yes	No	No	No
12 Video recording	Standard + Radiometric	Standard	Standard	No		
Article number	5160037	5133402	5159990	5206249	5124518	5074148

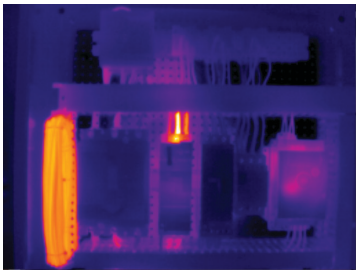
IR images, all pictures are taken from the distance of 1m – a safety standard for electrical cabinets.



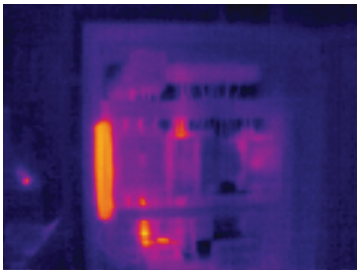
TiS75+ @ 1m distance



TiS60+ @ 1m distance



TiS55+ @ 1m distance



PTi120 @ 1m distance

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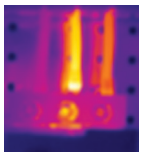
What do these parameters mean to me?

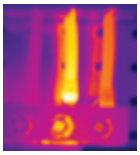
1 Infrared resolution

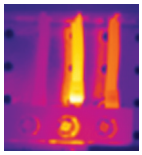
Defines the number of pixels in the thermal infrared image in horizontal and vertical directions. With the same field of view delivered by the camera, the camera with higher infrared resolution allows you to see more detail.

For example, the Fluke TiS75+ delivers infrared resolution of 384x288 pixels, which is compared to image quality delivered by VHS camcorders, and is equivalent to video CD resolution used for distribution of digital video content before the introduction of DVD and other higher resolution video formats.


120 x 90


256 x 192


320 x 240


384 x 288

2 Field of view

Defines the area in which the camera can see at a given (current) distance. For example, the Fluke TiS75+ has larger field of view than the TiS55+. But as TiS75+ also ha s a larger infrared resolution, both cameras can deliver the same detail with the only difference being in the area included in the infrared image.

3 Temperature range

Indicates the range of temperatures the camera can measure, shown as different colors.

4 Minimum operating distance

As any optical device, a thermal camera has a certain minimum distance from which it can be focused or still deliver acceptable images.

For the cameras with manual focus, the minimum operating distance is defined by the minimum distance from which the camera can be focused.

For cameras with focus-free optics, the minimum operating distance is the approximate distance from which the image still looks sharp.

5 Optimal operating distance

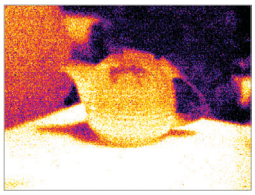
Optimal operating distance depends on the smallest details the thermal camera can view and measure and the size of your targets. You can use our Field of View Calculator to determine what the smallest size the camera can distinguish and measure from different distances.

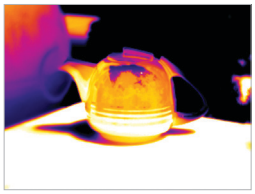
6 Spatial resolution

Spatial resolution, or Instantaneous Field of View (IFOV) indicates the field of view covered by one pixel in the thermal image.
The smaller the IFOV value of the camera, the smaller details you can see with it.

7 Thermal sensitivity

Thermal sensitivity shows the temperature range the camera can make visible. It also influences the detail you can see with the thermal camera because it defines how “noisy” or “grainy” your thermal images will appear. The lower the °C or mK, the more sensitive your camera.


Relatively low sensitivity of 0.3°C (300mK)

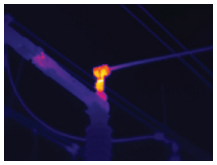

High sensitivity of 0.05°C (50mK)

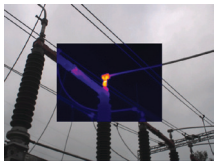
8 Focusing systems

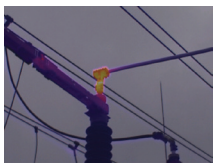
A camera with focus-free optics is designed so to deliver the image in focus for a broad range of distances. Cameras with manual focus are designed to bring the image into focus from the full range of distances a camera can be focused. For Fluke cameras, minimum distance for manual focus cameras is 15 cm. When the camera includes both focus-free and manual focus, you can both focus from as close as 15 cm or up to several meters.

9 IR-Fusion modes

Fluke cameras deliver patented technology to improve low-resolution infrared imaging interpretation.


Full IR


Picture-in-Picture


IR Blending


Color Alarm

10 Annotation options

Fluke cameras deliver different annotation options, including text, asset ID, and IR-PhotoNotes (a set of additional visual images saved together with the thermal image).

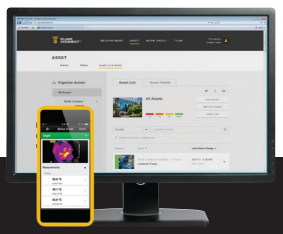
11 Auto capture

When you face intermittent problems, you can use the auto capture functionality to save a series of images over a specified period or record video for fast changes you need to capture over a short period.

12 Video recording

Cameras with standard video recording functionality record what you see on the camera as a standard video.

With radiometric video recording the thermal camera records the series of thermal images with all temperature measurement data as a thermal radiometric movie that needs to be converted into standard non-radiometric video for sharing purposes.



Share from anywhere, troubleshoot faster, save time reporting

FLUKE CONNECT

Preventive maintenance simplified. Rework eliminated.
Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect system.

- **Eliminate data-entry errors** by saving measurements directly from the tool and associating them with the work order, report or asset record.
- **Maximize uptime** and make confident maintenance decisions with data you can trust and trace.
- **Move away from clipboards**, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- **Access baseline,** historical and current measurements by asset.
- **Share your measurement data** using ShareLive™ video calls and emails.
- **Fluke's infrared cameras** are part of a growing system of connected test tools and equipment maintenance software.

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FLUKE CONNECT

Visit the Fluke website to learn more about the Fluke Connect system.
Find out more at **fluke.com**