



# FLIR TG165 FAQ

## Distribution

- **What is the price of the TG165 Imaging IR Thermometer?**

The MSRP is \$499 USD

- **Where can I purchase a TG?**

FLIR.com or one of our premier distribution partners.

- **Why launch an Imaging IR Thermometer?**

The advantage of an imaging IR thermometer is that it uses thermal imaging to reveal exactly where heating issues are occurring. Users no longer have to guess where to place their spot to gain the best temperature reading. The TG165 is also the perfect application for FLIR's new Lepton® micro thermal camera, which captures vibrant, non-radiometric images that are easy to interpret.

- **Who is the target customer?**

Anyone who regularly uses an IR thermometer will benefit from the advanced capabilities of the TG165. It is simple enough for entry level users, but also powerful enough for experienced thermographers.

- **Why do I need an Imaging IR thermometer?**

The TG165 is a non-contact tool for measuring the apparent temperature of surfaces that may be too hot or cold to touch, inaccessible, or simply too dangerous to be near.

- **How do Thermal imagers work?**

Thermal imagers capture and display invisible infrared "heat" radiation, which all objects emit, transmit, or reflect. The TG165 displays temperature differences as contrasting colors on its LCD screen, with hot areas appearing brighter and cooler areas darker. For more information please see "How it Works."

- **At what distances can the TG165 IR thermometer read a temperature?**

An IR thermometer takes the average surface temperature inside a given area, regardless of how far away you are. The farther from your target, the larger the area being measured is. For more accurate measurements, spot meters are generally used within a few feet of a given target. The TG165 has a spot ratio of 24 to 1, meaning it will measure a spot 1" in diameter from a distance of 24" (61 cm).

- **What do the Lasers mean?**

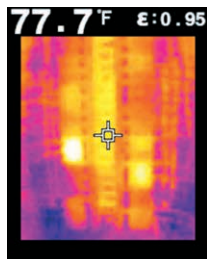
The TG165's dual lasers provide a general, visual indication of the area being measured. They are best used at distances at or beyond 36".

- **How does it compare to the e4 and FLIR ONE?**

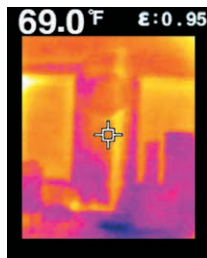
The FLIR ONE, TG165, and e4 offer the same resolution thermal imaging, but each has different strengths. Professionals who use IR thermometers regularly should immediately see the value of the TG165. Both the TG165 and e4 are well-suited for industrial applications, with large buttons, intuitive menus, and a comfortable grip for one-handed operation.

Priced at \$499, the TG165 offers a single spot IR thermometer for temperature measurement, while the e4, priced at \$999, is a fully radiometric thermal imaging camera, meaning that each of its 4,800 thermal pixels measures temperature. Also, the e4 features FLIR's exclusive MSX® imaging, while the TG165 does not.

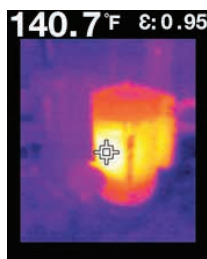
The TG165 differs significantly from the FLIR ONE in terms of form factor and features. The TG165 has the look and feel of a true test and measurement



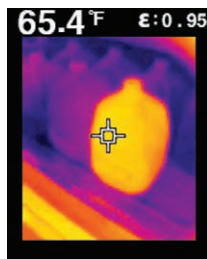
Electrical Troubleshooting



Warm Pipe in Wall



Mechanical Overheating



Refrigeration Issues

tool. It can measure temperatures ranging from -13 to 716°F (-25 to 380°C). While it only captures still images, the TG165 has four emissivity presets, as well as customizable emissivity settings from .1 to .99. The TG165 can also withstand a 2 meter drop.

The FLIR ONE must attach to an iPhone 5 or 5s to be operational. It uses MSX, and can capture both thermal video and stills, but has a more limited temperature range of 32° F to 212° F (0° C to 100° C). Plus, it's challenging to operate an iPhone one-handed or while wearing gloves, a safety requirement in many contexts. The TG165 is simply more suitable for the job site.

- **What is the Warranty?**

An automatic one-year warranty without registration. With registration within 60 days of purchase, FLIR offers an extended warranty of two years on the TG165 device and internal battery, and ten years on the Lepton sensor.

- **Where do I use my TG165?**

Any time someone would use an IR thermometer, the TG165 will provide superior performance. The TG165 will be a "must have" tool for electricians, HVAC techs, building contractors, maintenance techs, mechanics, and hobbyists.

- **Are there any privacy issues with thermal imagers?**

The TG165 does not provide "X-ray" vision. It can't see through clothing, glass, or solid objects or structures. The TG165 allows you to visualize and measure surface temperature, only. That said, in many cases, the surface temperature of an object can be affected by things behind or under it, such as wooden studs behind a wall. You can easily see the location of the studs due to their effect on the surface temperature of the wall, without actually seeing through the wall.

- **Are there accessories for the TG165?**

An EVA protective case is available as an optional accessory.

- **What is the resolution of the imager / display?**

80 x 60 pixel thermal image resolution with a two-inch LCD display.

- **Can I adjust the scale and span of the thermal image?**

No. The TG165 is fully automated for quick troubleshooting.

- **What is the temperature range?**

14–716°F (-25 to 380°C)

- **What are the emissivity settings?**

The amount of IR energy emitted by an object depends upon its current temperature and how efficiently it radiates thermal energy. This is called "emissivity." Emissivity values range from 0.1 for a very reflective object, such as a piece of shiny metal, to 1.00 for a flat black finish. See the appendix of the TG165 users' manual for a list of common substances and their emissivity values.

- **Can the TG165 store images?**

Yes. The TG165 comes with a removable 8 gb micro SD card installed, and can support memory cards up to 32 gb in size. Use the micro USB port to download via the included cord or remove the SD card.

- **How is the TG165 charged?**

The TG165 has an internal battery that is charged using the mini USB port and cable.

- **Can I use images from the TG165 in FLIR Tools?**

Yes and No. The TG165 generates non-radiometric bitmap images that cannot be directly imported into FLIR Tools. They must be converted to JPEGs first

using third party software, then imported into FLIR Tools for viewing purposes or for use in a report.

- **What data is saved in the image?**

Temperature, emissivity, and image numbers are visible on each TG165 image. Date and time are stored in an image's metadata.

- **Can I replace the batteries?**

No. FLIR will replace a TG165 battery at no cost within two years if the device is registered.

- **How long will a charge last?**

The TG165 can provide continuous scanning for 8+ hours. The typical use time between charges is five days. The shelf life of a fully-charged batter is 30 days.

- **How rugged is the TG165?**

The TG165 can withstand a 2 meter drop and is water resistant (IP54).