



Testimonial

Fluke Ti400 IR Camera

Name: Brent Foster

Company:
Northwest Infrared

Application: Commercial
and Residential Building
Science Thermography

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Background

For 15 years I was a certified Master Mechanical and Structural private building inspector in Western Washington State. In 2000 I bought my first thermal imager and earned Level I and II Thermographer certifications. In 2005 I started Northwest Infrared Thermal Imaging focusing on Building Science applications, which means I use a thermal imager to find moisture problems, heat and energy loss, and potential electrical problems in commercial, industrial, and residential buildings. In 2012, I became one of the few certified Level III Thermographers in the state of Washington.

What I look for in an imager

Building science guys are looking for issues that are not blatant but are potentially very dangerous or very expensive. Building science thermography is mostly qualitative thermography so you’re comparing temperatures in an image, sometimes with as little as a six degree or less difference between the high and low. So image quality means everything. You can walk by a six degree difference pretty easily if you don’t have the capabilities to see it.

The Fluke Ti400 IR camera has very few buttons and has several features that make it easier to see critical temperature differences. For example, it has LaserSharp® Auto Focus which means that you point the laser at the image target and the camera focuses exactly on that target better and faster than you could do manually.

After you have the image in focus you hit the Auto Rescale button in Manual Level and Span mode to quickly adjust the temperature level and span for the image. That puts you within a reasonable range and then you can make quick adjustments to narrow that down if you need to get more detail or to capture slight temperature differences. When you’re going through a building you have to be able to get your level and span close, without hitting 14 buttons every time you take a picture. Otherwise you’d be there for two days.

Capturing images over time

Sometimes you want to capture temperature differences over several hours. With auto capture in the Ti400 I can set the camera to automatically start capturing images at a certain temperature level and then continue to capture and save images at specific intervals for an extended period of time.

The camera comes with two batteries that each last about four hours. These new batteries charge up really quick so you can always charge one in the truck while you’re still working. And with the battery life indicator you can instantly see the charge level on the LED display just by pushing the test button.



Residential inspection.



Exclusive LaserSharp® Auto Focus with a built-in laser distance meter calculates the distance to your designated target for pinpoint accuracy.



Quickly inspect for any insulation gaps or damage.



Intuitive, responsive LCD touchscreen.

Industrial grade performance

The Ti400 has a huge temperature range up to 1200 °C (2192 °F). That came in handy with an industrial customer when I was scanning the area around the ovens in a manufacturing plant. I found an anomaly and sent it live to the plant manager’s iPhone using the SmartView® Mobile App. He could see exactly how hot it was and told me to leave the area, while he got someone to repair it. It turned out there was a breach in one of the ovens.

Time is money

Perhaps one of the most important facts about the Ti400 is that it is the only imager I know of that is designed, built, shipped, and serviced in the United States. So if you ever need parts or service you don’t have to go far to get them.

Beyond that there are a lot of things in the Ti400 that save time. For example, when I’m scanning a roof, I take images every 100 square feet. With the wide angle lens on the Ti400 I can do the job in half the time and it’s easier to stitch together the whole picture because there are fewer images to deal with.

The voice annotation feature is also a big time saver. When you have a large expanse of roof or wall that all looks the same, it’s not easy to keep track of where the anomalies are. One client was having a hard time keeping an indoor environment at the correct relative humidity to protect historic artifacts. They wanted me to scan all their walls, which happened to be white, to see if any water was present. All the walls looked the same so I made a grid for each, and when I found an anomaly I verbally noted the grid number and any other details related to that image. That way the client could immediately identify where to begin their destructive discovery. That was a lot quicker and more accurate than taking written notes.

Another minor—but very useful—detail on the Ti400 is the lens cover that snaps shut and snaps open. That seems inconsequential but if you’re on a roof and you get a big gust of wind that blows the cover down over the lens you’ve just ruined that image.

Conclusion

For most people in thermography, it’s about speed, money, and accuracy. You’ve got to have it all, otherwise you’re not competitive. The Ti400 camera has just about every bell and whistle that you need to be an independent Level III qualified street-level thermographer.