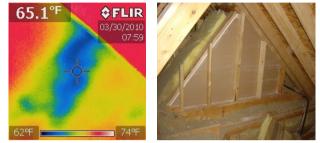


## Infrared: Facts and Fiction

A relative new comer to the home inspection tool bag is thermal imaging, or infrared technology. It is unclear whether home inspectors first introduced this new product or consumers started to inquire about infrared. What is clear is that the price and availability of infrared technology has become affordable and more and more home inspectors are using it. An unfortunate result of this increased availability of IR technology has been an influx of untrained inspectors performing infrared inspections. This coupled with unrealistic or uninformed expectations from clients has created a general state of confusion concerning the real capabilities of infrared technology.

In an attempt to clarity these misunderstandings let's look at a typical application for infrared (IR) in a home inspection. The picture on the right was taken with an IR camera and shows a much cooler part of a kitchen vaulted ceiling. The temperature range in the IR photo is from 62 to 74 degrees F. Looking at the date and time one would conclude that the space above the ceiling should be cool this time of day and this time of year. What is causing the change in temperature? Do we have a roof leak? The answer reveals itself in the right picture taken in the attic with a digital camera. The batt insulation has fallen out of place allowing this area of the ceiling to

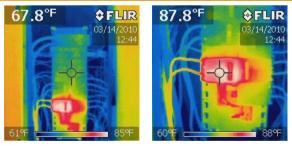


become cooler. The point that must be made here is that the missing insulation would have been discovered during the standard visual inspection of the attic. The IR scan simply helped the inspector provide a graphic for his report highlighting the importance, in temperature differential, of missing insulation.

- Thermal Imaging cameras cannot see inside walls and ceilings.
- Finding a temperature differential with a camera does not insure accurate diagnosis of the cause of the differential.
- An infrared picture can be a valuable tool in analyzing some residential and commercial issues that might surface during a standard home inspection.
- Other analysis is almost always needed to determine the source of a problem and the appropriate solution.

## THIS SET OF IR PICTURES DEMONSTRATES WHAT HAPPENS WHEN THE TECHNOLOGY IS USED BY AN INADEQUATELY TRAINED INSPECTOR.

Both of the pictures here are of the same electrical panel. The picture on the left shows a circuit breaker that is warmer than the other breakers in the panel. The inspector stated that this could be a fire hazard and recommended that the panel be inspected by a licensed electrician. By properly focusing in on the subject breaker, as indicated by the IR picture on the right, it was revealed thatThe circuit breaker was operating at almost 88 degrees. This was a double



pole circuit breaker feeding 240 volts to an electric water heater and the temperature was absolutely normal. No hazardous condition existed. Misinformed consumers can add to the problems with the perception of IR technology. In our experience almost half the clients requesting that IR be part of their home inspection think the camera can "see inside walls". One local area home inspector actually states in their marketing that their camera can see inside walls and ceilings. It is no wonder with this kind of marketing that confusion exists about the potential of IR technology.

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Since there are no required certifications or licensing needed to use an infrared camera anyone representing him/herself as a provider of Thermal Imaging services should at least be a Level 1 Thermographer. This requires a 32 hour class, successfully passing three exams and passing an independent field exercise.

HERE ARE

CHAMPIA HAS TRAINED INSPECTORS IN THE USE OF INFRARED THERMOGRAPHY. WE ENCOURAGE ITS USE WITH QUALIFIED INDIVIDUALS AND WILL GLADLY ANSWER ANY QUESTIONS YOU HAVE CONCERNING ITS USE, ADVANTAGES AND LIMITATIONS. WE ALSO HOLD TO THE STANDARDS OF THE AMERICAN SOCIETY OF HOME INSPECTORS, ASHI, WHICH DEFINES WHAT WE DO AS A VISUAL INSPECTION. THE NEW TECHNOLOGY HAS MANY ADVANTAGES BUT SHOULD ONLY BE USED BY QUALIFIED PERSONNEL AS AN ADDITIONAL TOOL TO HELP THE INSPECTOR TO PROVIDE THE MOST THOROUGH INSPECTION POSSIBLE FOR THEIR CLIENTS.

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