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## Director's Message



Water infiltration into buildings can have devastating effects on building materials. Left untreated, latent moisture can cause excess energy loss, mold growth, and/or structural failure. Latent moisture also causes changes in the thermal capacitance and conductivity of materials.

Prior to performing an infrared inspection, determine the best vantage point for imaging. Insulated roofs and exterior building finishes such as EIFS are traditionally inspected from the exterior of the building. Interior inspections are usually effective when moisture is affecting interior finishes of the building such as drywall. Thermal imaging may not be effective for low-emittance targets such as metal cladding or spandrel glass panels.

Next, choose an appropriate time to ensure that a detectable Delta T will be present. For roofs and building exteriors, best results are usually obtained during evening hours following a sunny day. As an alternative, inspections may also be performed when there is an inside/outside temperature differential of at least 10C°. In some cases, inspections performed from the interior may be performed with a smaller Delta T.

Thermal signatures associated with latent moisture will vary with the type of building material and the amount of moisture contained therein. Depending upon vantage point and time of inspection, exceptions caused by latent moisture may show as either hot or cold thermal anomalies. These anomalies may be amorphously shaped, mottled, or correspond to the size and shape of absorbent materials. All thermal data should be correlated with invasive testing to ascertain moisture content of inspected areas.

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## IR Thermography for Optical Gas Imaging

IR Thermography for Optical Gas Imaging is a 12 hour theory and application course for the use of thermal imaging to detect and document thermal patterns associated with gas leaks and venting. This is a specialty certification course focused on a single application.



## Upcoming Courses

### [Online Distance Learning](#)

#### [Level I Certified Infrared Thermographer®](#)

- Oct 11 - 15 Portland
- Oct 18 - 22 Santa Fe
- Oct 25 - 29 Brisbane
- Oct 25 - 28 Edmonton
- Nov 1 - 4 Saskatoon
- Nov 8 - 12 Melbourne
- Nov 8 - 12 Tempe
- Nov 8 - 11 Winnipeg
- Nov 15 - 18 Toronto
- Nov 22 - 26 Kuala Lumpur
- Nov 22 - 26 Ottawa
- Nov 29 - Dec 2 Moncton
- Dec 6 - 10 West Windsor
- Dec 6 - 9 Saint Johns
- Dec 13 - 17 Portland
- Dec 20 - 23 Calgary

#### [Level II Certified Infrared Thermographer®](#)

- Oct 4 - 8 Kuala Lumpur
- Nov 22 - 26 Melbourne

#### [Level III Certified Infrared Thermographer®](#)

- Mar 14 - 16 West Windsor

### [Full 2021 - 2022 Schedule](#)

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This course covers infrared theory, heat transfer concepts, equipment selection and operation, detectable gases, inspection procedures, image analysis, report generation, and standards compliance.

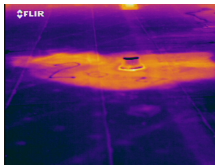
Students are trained to identify and document thermal patterns caused by gas leaks or gas venting for several types of gases including hydrocarbons, Sulphur Hexafluoride, Carbon Dioxide, Carbon Monoxide, Ammonia, and refrigerants. Self-directed learning activities are provided to help students gain practical experience; however, one need not have a thermal imager to successfully complete the course.

Course tuition includes 24/7 access to all online course presentations, downloadable Student Reference Manual, online quizzes, final exam fee and written proof of course completion. Student must complete training within 60 days of registration.

[More Information](#)

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## Preparing Roofs for Winter



With parts of the United States experiencing mild weather, it is hard to think about winter. For many, autumn provides a perfect opportunity to conduct infrared inspections of flat roofs to help ensure that they are ready for the upcoming colder months.

Summer can be especially tough on roofing systems. High temperatures, building movement, and UV radiation often cause cracks and splits in the waterproofing system. Left undetected, these cracks and splits can lead to roof leaks and premature roof failure. Performing an infrared roof inspection prior to the onset of colder weather can detect evidence of problems and help to direct repair efforts.

When performed under the proper conditions and with the right equipment, an infrared inspection can detect evidence of latent moisture within the roofing system often before leaks become evident in the building. For many locations, autumn provides perfect conditions for conducting an infrared inspection and performing any necessary roof repairs.

The best candidates for infrared inspection are flat or low slope roofs where the insulation is located between the roof deck and the membrane and is in direct contact with the underside of the membrane. Applicable constructions are roofs with either smooth or gravel-surfaced, built-up or single-ply membranes. If gravel is present, it should be less than 1/2" in diameter and less than 1" thick.

For smooth surfaced roofs, a short wave (2-5.6  $\mu$ ) imager will provide more accurate results especially if the roof is painted with a reflective coating. All infrared data should be verified by a qualified roofing professional via core sampling or invasive moisture meter readings.

[More Information](#)

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**Attend IR/INFO 2022 and  
Get Discounted Training!**

## Upcoming Conferences

Infraspection Institute invite you to see us at the following upcoming conferences. Be sure to stop by and say Hello!

[Reliable Plant](#)

October 19 - 21, 2021  
Louisville, KY

[SMRP Conference](#)

October 25 - 28, 2021  
Saint Louis, MO

[IR/INFO Conference](#)

January 16 - 19, 2022  
Orlando, FL

[Thermal Imaging  
Conference](#)

September 19 - 22, 2022  
South Lake Tahoe, NV

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## Links of Interest

[IRINFO.ORG](#)

[The RAM Review](#)

[TI-Reporter.com](#)

[IRFeverScreen.com](#)

In celebration of IR/INFO's 32nd anniversary, Infraspection Institute are pleased to announce several special offers combining the world's most respected infrared training and certification program with the industry's original technical conference.



Several packages are available featuring discounts on Level I, II, and III Infraspection Institute Certified Infrared Thermographer® training courses and TI Reporter™ software.

Discounted group rates are available for four or more persons.

[More Information](#)



## Treat Yourself



[Become an Infraspection Institute Master Thermographer®](#)

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