



Volume 9 Issue 7 - July 2020

Director's Message



"A man's got to know his limitations." Clint Eastwood popularized this quote in a 1972 film; this sage observation can also be applied to infrared equipment.

When stating the potential accuracy of infrared thermometers, many manufacturers state radiometer accuracy as " $\pm 2\%$ ". The significance of this specification is often poorly understood causing many to overestimate the accuracy of non-contact temperature measurements.

An accuracy statement of " $\pm 2\%$ " is actually an abbreviated statement. The full statement is " $\pm 2\%$ of target temperature or 2°C , whichever is greater". The full statement is required since measurement accuracy generally decreases with lower temperature targets. Furthermore, an accuracy of " $\pm 2\%$ " would place accuracy at 0% when measuring targets operating at 0° .

When considering an accuracy statement, it is also important to note that manufacturers derive accuracy specs under laboratory conditions using high-emittance, blackbody simulators in a controlled environment. As a result, manufacturers derive accuracy specs under "best case" conditions which may not be possible to duplicate in a given work environment.

To help ensure measurement accuracy, be certain to:

- Always measure perpendicular to target
- Correctly set radiometer inputs for emittance, reflected temperature, distance, and humidity
- Ensure target size is adequate for subject radiometer's spot measurement size
- Temporarily modifying low E targets can help to improve measurement accuracy

Lastly, real-world challenges can create situations where it is not possible to measure temperatures to the accuracy level promised by an instrument's spec sheet. These challenges include, but are not limited to, hot or cold ambient temperatures, and the use of different lenses or filters. Whenever accurate infrared temperature measurement is not possible, one should consider using contact thermometry instead.

Lightning Safety

Each year lightning kills an average of 67 people in the United States; hundreds more are injured. Few people really understand the dangers of lightning and many fail to act promptly to protect their lives and property.



Thunderstorms are most likely to develop on warm summer days and go through various stages of growth, development, and dissipation. On a sunny day, as the sun heats the air, pockets of warm air start to rise in the atmosphere. When this air reaches a certain level in the atmosphere, cumulus clouds start to form. Continued heating can cause these clouds to grow vertically upward into "towering cumulus" clouds. These towering cumulus clouds may be one of the first indications of a developing thunderstorm.

Upcoming Courses

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

- Jul 13 - 17 Salt Lake City
- Jul 20 - 24 Melbourne
- Jul 20 - 24 Montreal
- Jul 27 - 31 Seal Beach
- Aug 17 - 21 Toronto
- Aug 17 - 21 Colorado Springs
- Aug 24 - 28 Seal Beach
- Aug 24 - 28 Kuala Lumpur
- Sep 7 - 11 Sydney
- Sep 14 - 18 Cheyenne
- Sep 28 - Oct 2 Portland

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

- Jul 13 - 17 Kuala Lumpur
- Sep 14 - 18 West Windsor
- Oct 9 - 13 Melbourne

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

- Sep 21 - 23 West Windsor
- Dec 7 - 9 Melbourne

* Flexible Learning Course

[Full 2020 Schedule](#)

Upcoming Conferences

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

[SMRP Conference](#)

October 19 - 22, 2020
Columbus, OH

[IR/INFO Conference](#)

January 17 - 20, 2021
Orlando, FL

During a thunderstorm, each flash of cloud-to-ground lightning is a potential killer. Whether a particular flash could be deadly depends on a person being in the path of the lightning discharge. In addition to the visible flash that travels through the air, the current associated with the lightning discharge travels along the ground.

Although some victims are struck directly by the main lightning stroke, many victims are struck as the current moves in and along the ground.

Lightning can strike as far as 10 miles away from the rain area in a thunderstorm. That's about the distance you can hear thunder. When a storm is 10 miles away, it may even be difficult to tell a storm is coming. If you can hear thunder, you are within striking distance and should seek shelter immediately.

[More Information](#)

Slash Reporting Time with TI Reporter™

In response to customer requests and capitalizing on advancements in technology, T/IR Systems LLC – the parent company of Infraspction Institute – has developed TI Reporter™. TI Reporter™ is the world's first cloud-based infrared reporting software that works with all thermal imagers. Designed by personnel from Infraspction Institute, TI Reporter™ is the perfect solution for thermographers seeking to cut their reporting time by up to 80%.

TI Reporter™ With TI Reporter™ reports can be generated quickly and easily from one's office or while in the field. Because it is cloud based, TI Reporter™ works with all computer operating systems and there is no need to install any type of program or software onto your computer.

Written by practicing thermographers, TI Reporter™ contains preformatted templates for a wide variety of infrared inspection applications including, but not limited to: electrical systems, mechanical systems, building envelopes, flat roofs, underground piping, and steam systems. TI Reporter™ automatically calculates temperature limits for electrical and mechanical equipment and can provide cost savings reports. The software is designed for in-house thermographers as well as thermographic consultants.

[More Information](#)

Call for Papers for IR/INFO 2021

Infraspction Institute are pleased to announce that our annual Advanced Training Conference, Technical Symposium and Technology Expo, IR/INFO 2021, will be held January 17 – 20, 2021 in Orlando, FL. Now in its 32nd year, IR/INFO features four days of networking, learning, and fun in a relaxed, yet professional, family atmosphere.



We are presently seeking papers and presenters for IR/INFO 2021. Invited topics include, but are not limited to: safety, emerging applications, building sciences, related NDT, case histories, as well as tips and tricks.

Presentations are typically 20-25 minutes with 5 minutes for questions and answers with the audience. All papers and presentations will be published in the IR/INFO Conference Proceedings. The deadline for abstract submissions is July 31.

[Submit an Abstract](#)

IR/INFO
CONFERENCE

[Thermal Imaging
Conference](#)

September 20 - 23, 2021
South Lake Tahoe, NV

Links of Interest

[IRINFO.ORG](#)

[CITA.ORG](#)

[The RAM Review](#)

[TI-Reporter.com](#)

[IRFeverScreen.com](#)

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