Publi. no.: T810215-en-US
Last updated: 2018-03-11

Latest catalogs: http://support.flir.com

Product Catalog 2018

ITC Training Courses

A hummingbird in infrared.

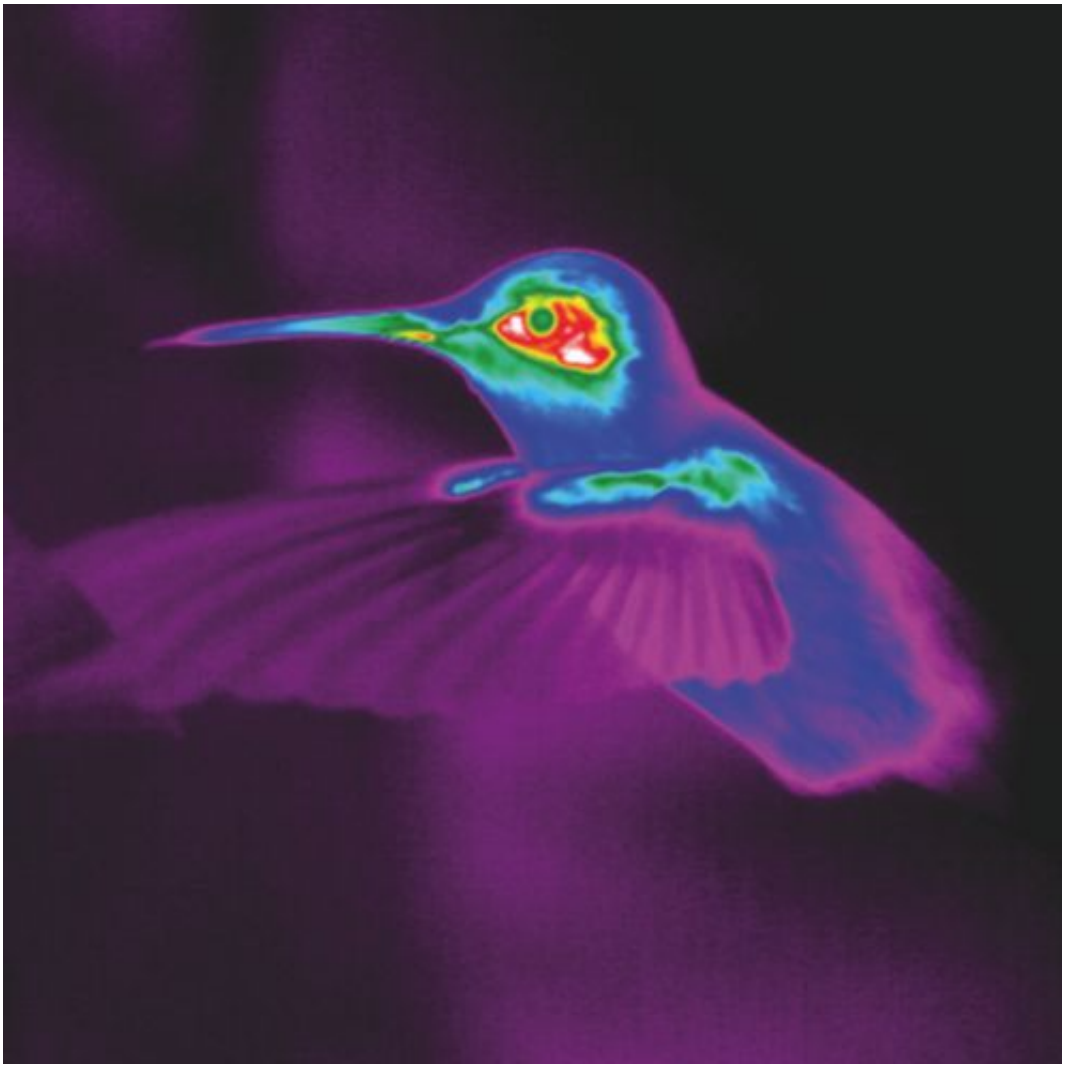

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Table of contents

Table of contents

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Introduction

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Disclaimers

Legal disclaimer

All products manufactured by FLIR Systems are warranted against defective materials and workmanship for a period of one (1) year from the delivery date of the original purchase, provided such products have been under normal storage, use and service, and in accordance with FLIR Systems instruction.

Uncooled handheld infrared cameras manufactured by FLIR Systems are warranted against defective materials and workmanship for a period of two (2) years from the delivery date of the original purchase, provided such products have been under normal storage, use and service, and in accordance with FLIR Systems instruction, and provided that the camera has been registered within 60 days of original purchase.

Detectors for uncooled handheld infrared cameras manufactured by FLIR Systems are warranted against defective materials and workmanship for a period of ten (10) years from the delivery date of the original purchase, provided such products have been under normal storage, use and service, and in accordance with FLIR Systems instruction, and provided that the camera has been registered within 60 days of original purchase.

Products which are not manufactured by FLIR Systems but included in systems delivered by FLIR Systems to the original purchaser, carry the warranty, if any, of the particular supplier only. FLIR Systems has no responsibility whatsoever for such products.

The warranty extends only to the original purchaser and is not transferable. It is not applicable to any product which has been subjected to misuse, neglect, accident or abnormal conditions of operation. Expendable parts are excluded from the warranty.

In the case of a defect in a product covered by this warranty the product must not be further used in order to prevent additional damage. The purchaser shall promptly report any defect to FLIR Systems or this warranty will not apply.

FLIR Systems will, at its option, repair or replace any such defective product free of charge if, upon inspection, it proves to be defective in material or workmanship and provided that it is returned to FLIR Systems within the said one-year period.

FLIR Systems has no other obligation or liability for defects than those set forth above.

No other warranty is expressed or implied. FLIR Systems specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

FLIR Systems shall not be liable for any direct, indirect, special, incidental or consequential loss or damage, whether based on contract, tort or any other legal theory.

This warranty shall be governed by Swedish law.

Any dispute, controversy or claim arising out of or in connection with this warranty, shall be finally settled by arbitration in accordance with the Rules of the Arbitration Institute of the Stockholm Chamber of Commerce. The place of arbitration shall be Stockholm. The language to be used in the arbitral proceedings shall be English.

Usage statistics

FLIR Systems reserves the right to gather anonymous usage statistics to help maintain and improve the quality of our software and services.

Changes to registry

The registry entry:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet

\Control\Lsa\LmCompatibilityLevel

will be automatically changed to level 2 if the FLIR Camera Monitor service detects a FLIR camera connected to the computer with a USB cable. The modification will only be executed if the camera device implements a remote network service that supports network logons.

U.S. Government Regulations

This product may be subject to U.S. Export Regulations. Please send any inquiries to exportquestions@flir.com.

Disclaimers

Copyright

Quality assurance

The Quality Management System under which these products are developed and manufactured has been certified in accordance with the ISO 9001 standard.

FLIR Systems is committed to a policy of continuous development; therefore we reserve the right to make changes and improvements on any of the products without prior notice.

Patents

One or several of the following patents and/or design patents may apply to the products and/or features. Additional pending patents and/or pending design patents may also apply.

000279476-0001; 000439161; 000499579-0001; 000653423; 000726344; 000859020; 001106306-0001; 001707738; 001707746; 001707787; 001776519; 001954074; 002021543; 002058180; 002249953; 002531178; 0600574-8; 1144833; 1182246; 1182620; 1285345; 1299699; 1325808; 1336775; 1391114; 1402918; 1404291; 1411581; 1415075; 1421497; 1458284; 1678485; 1732314; 2106017; 2107799; 2381417; 3006596; 3006597; 466540; 483782; 484155; 4889913; 5177595; 60122153.2; 602004011681.5-08; 6707044; 68657; 7034300; 7110035; 7154093; 7157705; 7237946; 7312822; 7332716; 7336823; 7544944; 7667198; 7809258 B2; 7826736; 8,153,971; 8,823,803; 8,853,631; 8018649 B2; 8212210 B2; 8289372; 8354639 B2; 8384783; 8520970; 8565547; 8595689; 8599262; 8654239; 8680468; 8803093; D540838; D549758; D579475; D584755; D599,392; D615,113; D664,580; D664,581; D665,004; D665,440; D677298; D710,424 S; D718801; DI6702302-9; DI6903617-9; DI7002221-6; DI7002891-5; DI7002892-3; DI7005799-0; DM/057692; DM/061609; EP 2115696 B1; EP2315433; SE 0700240-5; US 8340414 B2; ZL 201330267619.5; ZL01823221.3; ZL01823226.4; ZL02331553.9; ZL02331554.7; ZL200480034894.0; ZL200530120994.2; ZL200610088759.5; ZL200630130114.4; ZL200730151141.4; ZL200730339504.7; ZL200820105768.8; ZL200830128581.2; ZL200880105236.4; ZL200880105769.2; ZL200930190061.9; ZL201030176127.1; ZL201030176130.3; ZL201030176157.2; ZL201030595931.3; ZL201130442354.9; ZL201230471744.3; ZL201230620731.8.

EULA Terms

- You have acquired a device (“INFRARED CAMERA”) that includes software licensed by FLIR Systems from Microsoft Licensing, GP or its affiliates (“MS”). Those installed software products of MS origin, as well as associated media, printed materials, and “online” or electronic documentation (“SOFTWARE”) are protected by international intellectual property laws and treaties. The SOFTWARE is licensed, not sold. All rights reserved.
- IF YOU DO NOT AGREE TO THIS END USER LICENSE AGREEMENT (“EULA”), DO NOT USE THE DEVICE OR COPY THE SOFTWARE. INSTEAD, PROMPTLY CONTACT FLIR Systems FOR INSTRUCTIONS ON RETURN OF THE UNUSED DEVICE(S) FOR A REFUND. **ANY USE OF THE SOFTWARE, INCLUDING BUT NOT LIMITED TO USE ON THE DEVICE, WILL CONSTITUTE YOUR AGREEMENT TO THIS EULA (OR RATIFICATION OF ANY PREVIOUS CONSENT).**
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SUFFICIENT TESTING TO DETERMINE THAT THE SOFTWARE IS SUITABLE FOR SUCH USE.

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Qt4 Core and Qt4 GUI, Copyright ©2013 Nokia Corporation and FLIR Systems. This Qt library is a free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License, http://www.gnu.org/licenses/lgpl-2.1.html. The source code for the libraries Qt4 Core and Qt4 GUI may be requested from FLIR Systems.

User-to-user forums

Exchange ideas, problems, and infrared solutions with fellow thermographers around the world in our user-to-user forums. To go to the forums, visit:

http://forum.infraredtraining.com/

Calibration

We recommend that you send in the camera for calibration once a year. Contact your local sales office for instructions on where to send the camera.

Accuracy

For very accurate results, we recommend that you wait 5 minutes after you have started the camera before measuring a temperature.

For cameras where the detector is cooled by a mechanical cooler, this time period excludes the time it takes to cool down the detector.

Disposal of electronic waste

As with most electronic products, this equipment must be disposed of in an environmentally friendly way, and in accordance with existing regulations for electronic waste.

Please contact your FLIR Systems representative for more details.

Training

To read about infrared training, visit:

- http://www.infraredtraining.com
- http://www.irtraining.com
- http://www.irtraining.eu

Documentation updates

Our manuals are updated several times per year, and we also issue product-critical notifications of changes on a regular basis.

To access the latest manuals, translations of manuals, and notifications, go to the Download tab at:

http://support.flir.com

In the download area you will also find the latest releases of manuals for our other products, as well as manuals for our historical and obsolete products.

Software updates

FLIR Systems regularly issues software updates and you can update the software using this update service. Depending on your software, this update service is located at one or both of the following locations:

- FLIR Systems > [Software] > Check for updates
- Help > Check for updates.

Additional license information

For each purchased software license, the software may be installed, activated, and used on two devices, e.g., one laptop computer for on-site data acquisition, and one desktop computer for analysis in the office.

About FLIR Systems

FLIR Systems was established in 1978 to pioneer the development of high-performance infrared imaging systems, and is the world leader in the design, manufacture, and marketing of thermal imaging systems for a wide variety of commercial, industrial, and government applications. Today, FLIR Systems embraces five major companies with outstanding achievements in infrared technology since 1958—the Swedish AGEMA Infrared Systems (formerly AGA Infrared Systems), the three United States companies Indigo Systems, FSI, and Inframetrics, and the French company Cedip.

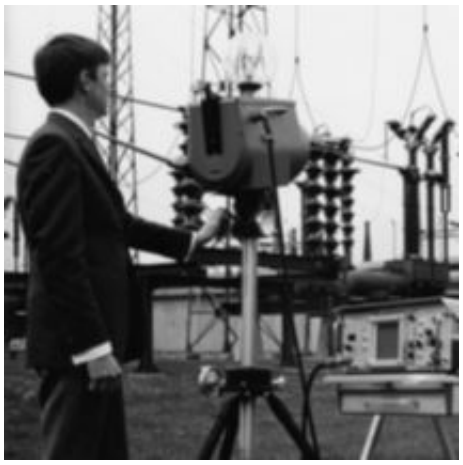
Since 2007, FLIR Systems has acquired several companies with world-leading expertise in sensor technologies:

- Extech Instruments (2007)
- Ifara Tecnologías (2008)
- Salvador Imaging (2009)
- OmniTech Partners (2009)
- Directed Perception (2009)
- Raymarine (2010)
- ICx Technologies (2010)
- TackTick Marine Digital Instruments (2011)
- Aerius Photonics (2011)
- Lorex Technology (2012)
- Traficon (2012)
- MARSS (2013)
- DigitalOptics micro-optics business (2013)
- DVTEL (2015)
- Point Grey Research (2016)
- Prox Dynamics (2016)

Patent documents from the early 1960s

FLIR Systems has three manufacturing plants in the United States (Portland, OR, Boston, MA, Santa Barbara, CA) and one in Sweden (Stockholm). Since 2007 there is also a manufacturing plant in Tallinn, Estonia. Direct sales offices in Belgium, Brazil, China, France, Germany, Great Britain, Hong Kong, Italy, Japan, Korea, Sweden, and the USA—together with a worldwide network of agents and distributors—support our international customer base.

FLIR Systems is at the forefront of innovation in the infrared camera industry. We anticipate market demand by constantly improving our existing cameras and developing new ones. The company has set milestones in product design and development such as the introduction of the first battery-operated portable camera for industrial inspections, and the first uncooled infrared camera, to mention just two innovations.



1969: Thermovision Model 661. The camera weighed approximately 25 kg (55 lb.), the oscilloscope 20 kg (44 lb.), and the tripod 15 kg (33 lb.). The operator also needed a 220 VAC generator set, and a 10 L (2.6 US gallon) jar with liquid nitrogen. To the left of the oscilloscope the Polaroid attachment (6 kg/13 lb.) can be seen.

2015: FLIR One, an accessory to iPhone and Android mobile phones. Weight: 90 g (3.2 oz.).

FLIR Systems manufactures all vital mechanical and electronic components of the camera systems itself. From detector design and manufacturing, to lenses and system electronics, to final testing and calibration, all production steps are carried out and supervised by our own engineers. The in-depth expertise of these infrared specialists ensures the accuracy and reliability of all vital components that are assembled into your infrared camera.

More than just an infrared camera

At FLIR Systems we recognize that our job is to go beyond just producing the best infrared camera systems. We are committed to enabling all users of our infrared camera systems to work more productively by providing them with the most powerful camera–software combination. Especially tailored software for predictive maintenance, R & D, and process monitoring is developed in-house. Most software is available in a wide variety of languages.

We support all our infrared cameras with a wide variety of accessories to adapt your equipment to the most demanding infrared applications.

Sharing our knowledge

Although our cameras are designed to be very user-friendly, there is a lot more to thermography than just knowing how to handle a camera. Therefore, FLIR Systems has founded the Infrared Training Center (ITC), a separate business unit, that provides certified training courses. Attending one of the ITC courses will give you a truly hands-on learning experience.

The staff of the ITC are also there to provide you with any application support you may need in putting infrared theory into practice.

Supporting our customers

FLIR Systems operates a worldwide service network to keep your camera running at all times. If you discover a problem with your camera, local service centers have all the

equipment and expertise to solve it within the shortest possible time. Therefore, there is no need to send your camera to the other side of the world or to talk to someone who does not speak your language.

About ITC

Welcome to ITC, the leading source of knowledge within infrared science and its applications

ITC is present in over 50 countries, and has instructors that speak 22 native languages. We offer everything from short introduction courses to certification courses. Our instructors are among the most knowledgeable people in the industry. ITC is proud that its products and services are compliant with industry, national, and international standards. Join our community, our conferences, or our courses at:

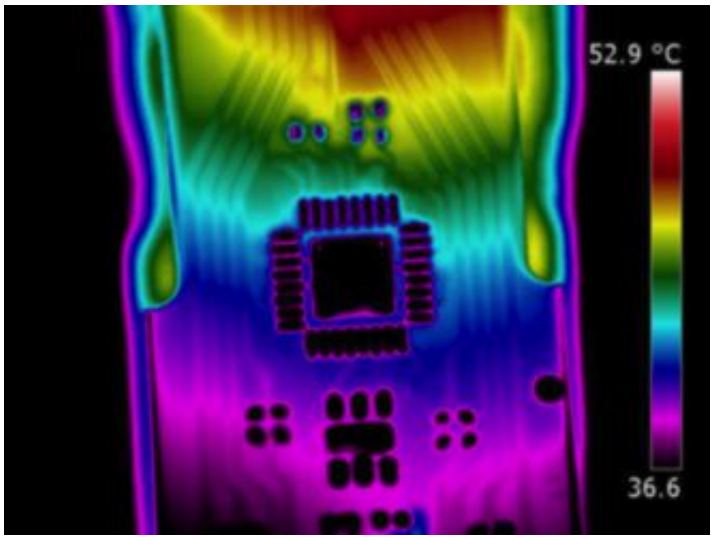
- http:// www.infraredtraining.com
- http://www.irtraining.eu.

Level 1 to 3 thermography courses

These courses prepare you for qualification as a certified thermographer. You will learn about infrared physics, camera technology, and thermographic applications and inspections at different levels. The courses include exercises, field studies, discussions, and traditional teaching classes, and end with a closed-book exam.

Advanced application courses

These interdisciplinary courses bridge the gap between infrared thermography, background science, and application theory. You will learn about important scientific concepts in, for example, physics, heat science, and chemistry. You will apply them together with relevant application theory, and thus be able to perform qualified inspections within your field of application on the basis of existing laws, standards, and regulations. The courses end with an exam. A prerequisite for these courses is a valid Level 1 certificate.



Short courses

These courses provide you with the most important basics of infrared thermography theory and applications, camera operation, and software usage. You will learn about the basics of emissivity and reflected apparent temperature and course-related applications. During the hands-on sessions you will operate a camera in different measurement situations. You will also learn how to analyze and report your findings. The courses include practical exercises and key laboratory sessions.

E-learning

Self-paced 24/7 on-demand online courses are available for infrared thermography basics, different applications, and camera handling. Visit http://www.irtraining.com.

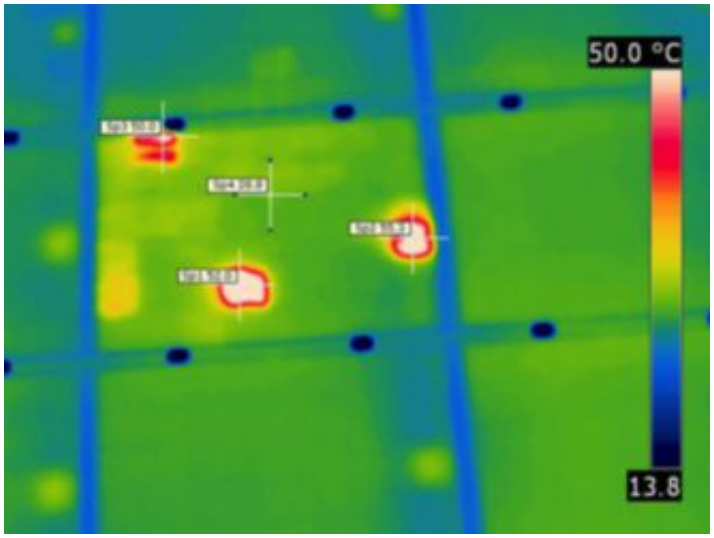
In-house classes

On-site training can be customized to your needs. Participants will learn about infrared thermography, inspections, measurements, applications, and reporting corresponding to the level needed to perform measurements and inspection in their working environment. The trainer will provide useful advice on how to best implement infrared thermography in your business.

About ITC

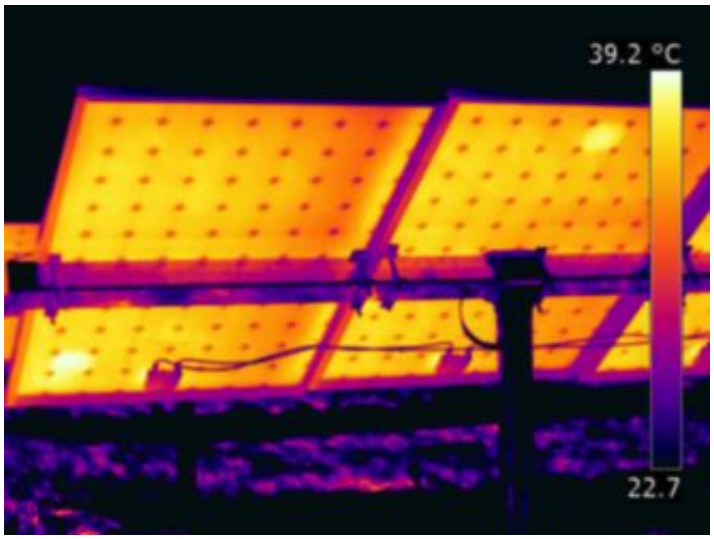
Software courses

In these hands-on classes you will learn to use the relevant FLIR Systems software for your needs. Depending on the software, the emphasis will be on analysis and reporting or camera connection, data acquisition, and analysis.



System training

Certain cameras and infrared measurement equipment require deeper understanding of the software and hardware components. In training classes for CVS, ATS, and automation cameras and products, you will learn about installation, configuration, and integration of the entire system for different applications. You will also learn about image acquisition optimization and image analysis.



Workshops and conferences

In many countries, ITC offers workshops and conferences on different infrared applications as well as user meetings. For information about InfraMation, the world's largest annual infrared applications conference, visit:

http://www.inframation.org

For the R&D and automation conference, infraR&D, visit:

http://www.infraredforum.eu

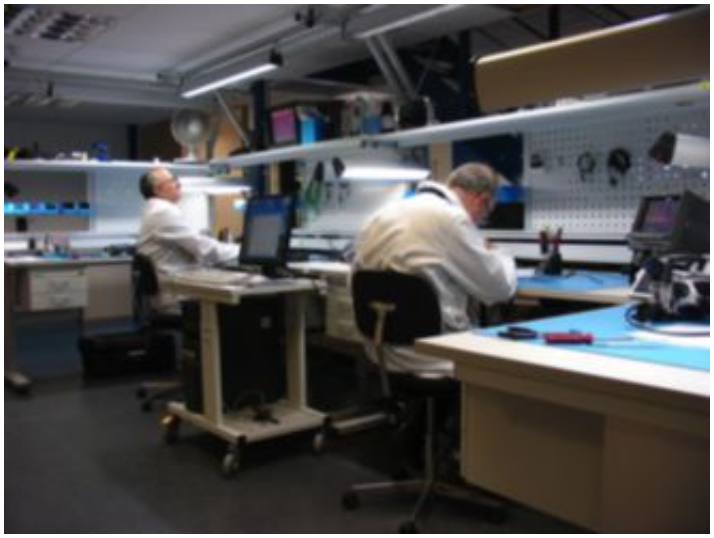
Contact details

- ITC Global operations: itc@flir.se
- ITC Americas: http://www.infraredtraining.com
- ITC EMEA: http://www.irtraining.eu
- info@irtraining.eu

Service and support

FLIR Systems' qualifications

FLIR Systems is the world's largest manufacturer of commercial-grade infrared cameras, with over 50 years' experience. FLIR Systems builds state-of-the-art, high-performance, field-worthy infrared cameras. We're serious about our infrared cameras and the accuracy of the temperature measurements they produce. It's our core business—and it's our only business. FLIR Systems Service is ISO 9001:2000 certified.



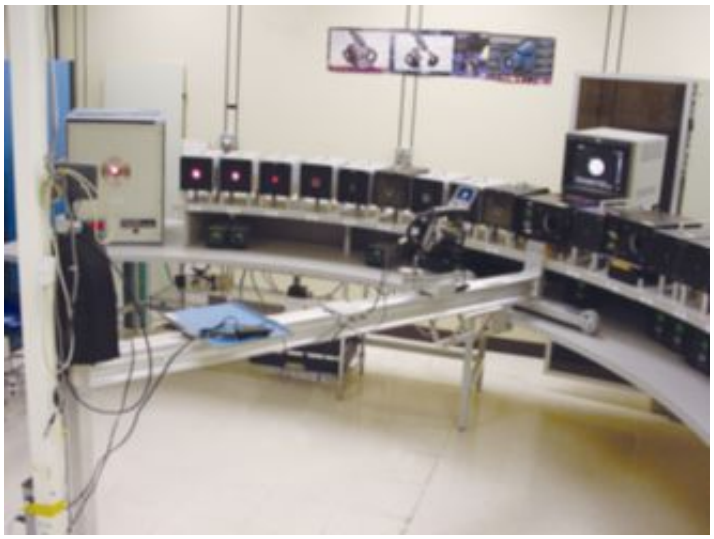
FLIR Systems service

The FLIR Systems service team's mission is to provide the world's best service and support for your high-performance infrared camera and accessories. FLIR Systems offers a variety of service packages to help you gain the most from your investment in an infrared camera. FLIR Systems also recommends its 14 Point Inspection & Calibration program on an annual basis to ensure correct temperature readings.

Service and support

FLIR Systems is committed to providing you with superior customer service and infrared camera support. Our customer service staff is available to take your calls during regular business hours. We have skilled technicians ready to assist you! Software and application support can be found 24 hours a day at:

http://support.flir.com



Documentation downloads

At http://support.flir.com you can search among more than 2500 manuals, mechanical drawings, and CAD data files from FLIR Systems (over 270,000 pages of technical information). The collection also includes manuals for our obsolete products, as well as manuals from our predecessors and acquired companies AGA, Agema, FSI, Inframetrics, Indigo Systems, and Cedip.

Software downloads

At http://support.flir.com you can also download evaluation versions of our software, as well as service packs, patches, bug fixes, etc. Downloading software requires a simple customer registration.

Downloads of datasheets and product catalogs

At http://support.flir.com we also provide datasheets and product catalogs for all our products. These publications are re-published every night (CET) to make sure that they contain the very latest information. They are available in A4 and US letter sizes. No customer registration is needed to download these publications.

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ITC Training

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Certification DIN EN ISO 9712 TT Level 1—attendance by 1 person (1 day)

P/N: ITC-FEE-0120

Revision

44105

Last modified

2017-08-15 14:19 UTC+1

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Certification DIN EN ISO 9712 TT Level 1.

Course information	
Available languages	German (Austria, Germany, Switzerland only).

Course details	
Duration	1 day.

DIN EN ISO 9712 TT Level 1 Certification Course—excluding certification, attendance by 1 person (5 days)

P/N: ITC-CER-6101

Revision

44105

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
DIN EN ISO 9712 TT Level 1 Certification Course—excluding certification, attendance by 1 person (5 days).
Content
• Certification and standards. • Physics of infrared. • Radiation laws: Planck, Wien, and Stefan–Boltzmann. • Infrared camera technology. • Measurement parameters. • Transmission and reflection. • Thermal and spatial resolution (NETD, IFOV, and SRF) • Thermal image software. • Basics of heat, temperature, and thermodynamics. • Basics of temperature measurement. • Measurement uncertainty. • Heat transfer: conduction, convection, and radiation. • Applications
Laboratory sessions
• Camera handling. • Level and span. • Measurement parameters. • Temperature measurement. • Useful camera functions. • Thermal capacity. • Emissivity determination • Building applications. • Electrical applications. • Industrial applications.

Course information	
Available languages	German (DACH only).
Target group	• Professional users. • Thermographers with some experience of camera handling and limited infrared knowledge who want to take their first step to becoming a professional thermographer and to qualifying as a Level 1 certified thermographer.

DIN EN ISO 9712 TT Level 1 Certification Course—excluding certification, attendance by 1 person (5 days)

P/N: ITC-CER-6101

Revision

44105

Last modified

2017-08-15 14:19 UTC+1

Website

http://www.flir.com

Customer support

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Course information	
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons who already have some basic experience of infrared thermography. • Persons with knowledge of the basic functions of an infrared camera. • Persons who want to become a certified thermographer to gain a competitive advantage or who need the certification because of legal reasons or company internal regulations.
Prerequisites	• Technical background or education. • Familiar with the basic operation of an infrared camera. • Proof of practical experience: 7 days of practical work with a thermal camera or attended a 2 day introduction course. • Proof of near-vision acuity and color vision, not older than 1 year.
Recommendations	• 6 months of practical thermography experience. • An understanding of physics.

Course details	
Duration	• Course: 5 days • Examination by external certification body (optional): 1 day
Structure	
Exam	Optional examination by external certification body (1 day): • Written exam (closed book) including multiple-choice questions. • Practical examination and thermal image interpretation.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.
Note	Examination is not included in the course and must be ordered and paid separately.

Course organization	
ITC	The DIN EN ISO 9712 TT Level 1 Certification Course is offered by ITC Germany in Germany, Austria, and Switzerland. Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).

DIN EN ISO 9712 TT Level 1 Certification Course—excluding certification, group of up to 10 persons (5 days)

P/N: ITC-CER-6109

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44105

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
DIN EN ISO 9712 TT Level 1 Certification Course—excluding certification, group of up to 10 persons (5 days)

Course information	
Available languages	German (DACH only).

Course details	
Duration	5 days.

FLIR Advanced R&D Measurements—attendance by 1 person (2 days)

P/N: ITC-ADV-3041

Revision

44105

Last modified

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
The core of the course (2 days) consists of lectures on theoretical subjects, plus hands-on practice. Additional days can be booked (ITC-ADV-3006). After a general review of heat and heat transfer, the participants will learn about radiative heat transfer. Starting with the standard measurement situation they will learn about the importance of emissivity and the reflected apparent temperature. The participants will compute and estimate emissivity and compensate for the reflected apparent temperature. They will also learn about calibration and FLIR's HyperCal software. Depending on the needs of the participants and the time available, additional topics to be covered may include measurement through windows, measurable figures of merit, signal generation, the influence of integration time, read-out integrated circuits (ROICs), etc., triggering and synchronization, and non-uniformity correction (NUC) and bad pixel replacement.
Content
• Introduction. • Review of thermal transfer. • Radiative heat transfer. • What does a camera see? Definition of a standard measurement situation. • Computing the emissivity. Estimating the emissivity and reflected apparent temperature(with practice). • From radiation to signal. • Measurable figures of merit (with practice). • Triggering and synchronization (additional content, on request, with practice). • Measuring through a window (additional content, on request, with practice). • Calibration (additional content, on request, with practice). • Spectral filters (additional content, on request, with practice). • NUC and bad pixel replacement (additional content, on request, with practice). • Transient, lock-in and pulse, and the basics of non-destructive testing (NDT) (additional content, on request).
Laboratory sessions
• Practice according to the content listed above.

Course information	
Available languages	English. Other languages on request.
Target group	• Users of FLIR cooled thermal cameras and systems (cameras connected to a PC with, for example, the software Altair, AltairLI, or Thesa). • Users of uncooled thermal cameras with an interest in advanced thermal measurement applications.
Typical student	• Laboratory and industry technical personnel. • Researchers and scientists. • University students. • Persons working with NDT.
Prerequisites	• None.
Recommendations	• Basic knowledge of thermography and related areas. • Experience of measurement techniques and general software skills.

FLIR Advanced R&D Measurements—attendance by 1 person (2 days)

P/N: ITC-ADV-3041

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Duration	Standard: 2 days (in succession or separate). On request: Additional day including complementary topics (ITC-ADV-3006). On request: 1 day only (for experienced users with sufficient theoretical background).
Structure	Theory and hands-on sessions.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, refreshments, instructor's travel expenses, etc., depending on the location and the organizing body.
Note	This is normally an on-site course organized at a customer's facility. For open classes, please contact your closest ITC, ITC partner, or FLIR sales representative.

Course organization	
ITC	The FLIR Advanced R&D Measurements course is offered by ITC direct operations in EMEA. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The FLIR Advanced R&D Measurements course is delivered by ITC-qualified instructors having relevant expertise in advanced thermal measurement, infrared applications, and use of the camera equipment including software.

FLIR Advanced R&D Measurements—group of up to 6 persons (2 days)

P/N: ITC-ADV-3046

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
The core of the course (2 days) consists of lectures on theoretical subjects, plus hands-on practice. Additional days can be booked (ITC-ADV-3006). After a general review of heat and heat transfer, the participants will learn about radiative heat transfer. Starting with the standard measurement situation they will learn about the importance of emissivity and the reflected apparent temperature. The participants will compute and estimate emissivity and compensate for the reflected apparent temperature. They will also learn about calibration and FLIR's HyperCal software. Depending on the needs of the participants and the time available, additional topics to be covered may include measurement through windows, measurable figures of merit, signal generation, the influence of integration time, read-out integrated circuits (ROICs), etc., triggering and synchronization, and non-uniformity correction (NUC) and bad pixel replacement.
Content
• Introduction. • Review of thermal transfer. • Radiative heat transfer. • What does a camera see? Definition of a standard measurement situation. • Computing the emissivity. Estimating the emissivity and reflected apparent temperature(with practice). • From radiation to signal. • Measurable figures of merit (with practice). • Triggering and synchronization (additional content, on request, with practice). • Measuring through a window (additional content, on request, with practice). • Calibration (additional content, on request, with practice). • Spectral filters (additional content, on request, with practice). • NUC and bad pixel replacement (additional content, on request, with practice). • Transient, lock-in and pulse, and the basics of non-destructive testing (NDT) (additional content, on request).
Labs
• Practice according to content listed above

Course information	
Available languages	English. Other languages on request.
Target group	• Users of FLIR cooled thermal cameras and systems (cameras connected to a PC with, for example, the software Altair, AltairLI, or Thesa). • Users of uncooled thermal cameras with an interest in advanced thermal measurement applications.
Typical student	• Laboratory and industry technical personnel. • Researchers and scientists. • University students. • Persons working with NDT.
Prerequisites	• None.
Recommendations	• Basic knowledge of thermography and related areas. • Experience of measurement techniques and general software skills.

FLIR Advanced R&D Measurements—group of up to 6 persons (2 days)

P/N: ITC-ADV-3046

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Website

http://www.flir.com

Customer support

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Course details	
Duration	Standard: 2 days (in succession or separate). On request: Additional day including complementary topics (ITC-ADV-3006). On request: 1 day only (for experienced users with sufficient theoretical background).
Structure	Theory and hands-on sessions.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by up to 6 persons. • May include more, such as lunch, refreshments, instructor's travel expenses, etc., depending on the location and the organizing body.
Note	This is normally an on-site course organized at a customer's facility. The fee does not include costs for the instructor's travel or lodging. The customer is responsible for providing access to the equipment or objects to be analyzed or measured, a suitable meeting room, and, ideally, refreshments/lunch.

Course organization	
ITC	The FLIR Advanced R&D Measurements course is offered by ITC direct operations in EMEA. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The FLIR Advanced R&D Measurements course is delivered by ITC-qualified instructors having relevant expertise in advanced thermal measurement, infrared applications, and use of the camera equipment including software.

FLIR Industrial R&D Measurements—group of up to 6 persons (2 days)

P/N: ITC-EXP-2036

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This 2-day course consists of lectures on theoretical subjects, plus hands-on sessions. After a general review of heat and heat transfer, the participants will learn about radiative heat transfer and thermography equipment. Intensive practice using software is provided.
Content
• Introduction. • Review of thermal transfer. • Radiative heat transfer (includes estimation of the reflected apparent temperature and emissivity) with practice. • Thermography equipment. • Software, e.g., FLIR ThermaCAM Researcher, FLIR QuickPlot, or FLIR ResearchIR.
Laboratory sessions
• Measurements and software exercises.

Course information	
Available languages	English. Other languages on request.
Target group	• Users of FLIR uncooled thermal cameras working with software programs such as FLIR ThermaCAM Researcher, FLIR QuickPlot, or FLIR ResearchIR. • Users of FLIR infrared applications in industry or at research institutions.
Typical student	• Laboratory and industry technical personnel. • Researchers and scientists. • University students.
Prerequisites	• None.
Recommendations	• Basic knowledge of thermography and related areas. • Experience of measurement techniques and general software skills.

Course details	
Duration	Standard: 2 days (in succession or separate). On request: Additional day including complementary topics (ITC-EXP-3006). Oon request: 1 day only (for experienced users with sufficient theoretical background).
Structure	Theory and hands-on sessions.
Exam	None.

FLIR Industrial R&D Measurements—group of up to 6 persons (2 days)

P/N: ITC-EXP-2036

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Website

http://www.flir.com

Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training and/or reference materials in printed format. • Diploma of attendance. • Attendance by a group of up to 6 persons.
Note	This is normally an on-site course organized at a customer's facility. The fee does not include the cost of the instructor's travel or lodging. The customer is responsible for providing access to the equipment or objects to be analyzed or measured, a suitable meeting room, and, ideally, also refreshments/lunch.

Course organization	
ITC	The FLIR Industrial R&D Measurements course is offered by ITC direct operations in EMEA. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The FLIR Industrial R&D Measurements course is taught by ITC qualified instructors having relevant expertise in advanced thermal measurement, infrared applications, and the use of camera equipment including software.

ITC Advanced General Thermography Course—attendance by 1 person (3 days)

P/N: ITC-ADV-3021

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This interdisciplinary course bridges the gap between infrared thermography, background science, and applications. Being an overview course, it deals with three main application areas of thermography: electrical, industrial, and buildings. For each application the participant will learn about the specific theory, typical faults, and how to detect faults with a thermography camera. The student will also learn about the basics of condition monitoring, and maintenance. Examples and case studies from the real world illustrate the course content and are discussed with the participants. Participants will be trained in discovering and identifying common faults by typical thermal patterns.
Content
• Introduction. • Electrical applications (current, voltage, resistance, electrical systems, Ohm's law, some important properties of materials, typical faults, surveying methodology and criteria, safety, voltage limits). • Industrial applications (bearings, pumps, gears, belts, misalignment and couplings, gaskets, seals, rings, glands, steam traps, furnaces). • Building applications (definition of the building envelope, steady state thermal transfer in a building envelope, transient thermal transfer in a building envelope, applications).

Course information	
Available languages	English.
Target group	• Professional thermographers holding a Level 1 or a Level 2 certificate • with an interest in increasing their knowledge of different thermographic applications and their limitations or • with a special interest in condition monitoring of machines.
Typical student	• Knows how to operate an infrared camera. • Knows how to create reports. • Works in industry on, for example, maintenance and condition monitoring or is a consultant.
Prerequisites	• Valid Level 1 thermography certificate. • Infrared-related education and experience.

Course details	
Duration	3 days (24 hours).
Structure	The course is divided into the three parts: electrical applications, industrial applications, and building applications. Theory sessions and case studies including interactive discussions alternate.
Exam	A final exam (30 multiple-choice questions) will be taken on day 3 in the afternoon. The correct answers will be discussed afterwards by the instructor and the participants.

ITC Advanced General Thermography Course—attendance by 1 person (3 days)

P/N: ITC-ADV-3021

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Website

http://www.flir.com

Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The Advanced General Thermography Course is offered worldwide by ITC as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach Advanced General Thermography Courses.

ITC Advanced General Thermography Course—group of up to 10 persons (3 days)

P/N: ITC-ADV-3029

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This interdisciplinary course bridges the gap between infrared thermography, background science, and applications. Being an overview course, it deals with three main application areas of thermography: electrical, industrial, and buildings. For each application the participant will learn about the specific theory, typical faults, and how to detect faults with a thermography camera. The student will also learn about the basics of condition monitoring, and maintenance. Examples and case studies from the real world illustrate the course content and are discussed with the participants. Participants will be trained in discovering and identifying common faults by typical thermal patterns.
Content
• Introduction. • Electrical applications (current, voltage, resistance, electrical systems, Ohm's law, some important properties of materials, typical faults, surveying methodology and criteria, safety, voltage limits). • Industrial applications (bearings, pumps, gears, belts, misalignment and couplings, gaskets, seals, rings, glands, steam traps, furnaces). • Building applications (definition of the building envelope, steady state thermal transfer in a building envelope, transient thermal transfer in a building envelope, applications).

Course information	
Available languages	English.
Target group	• Professional thermographers holding a Level 1 or a Level 2 certificate • with an interest in increasing their knowledge of different thermographic applications and their limitations or • with a special interest in condition monitoring of machines.
Typical student	• Knows how to operate an infrared camera. • Knows how to create reports. • Works in industry on, for example, maintenance and condition monitoring or is a consultant.
Prerequisites	• Valid Level 1 thermography certificate. • Infrared-related education and experience.

Course details	
Duration	3 days (24 hours).
Structure	The course is divided into the three parts: electrical applications, industrial applications, and building applications. Theory sessions and case studies including interactive discussions alternate.
Exam	A final exam (30 multiple-choice questions) will be taken on day 3 in the afternoon. The correct answers will be discussed afterwards by the instructor and the participants.

ITC Advanced General Thermography Course—group of up to 10 persons (3 days)

P/N: ITC-ADV-3029

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The Advanced General Thermography Course is offered worldwide by ITC as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach Advanced General Thermography Courses.

ITC Advanced Thermal Applications—attendance by 1 person (3 days)

P/N: ITC-ADV-3061

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Website

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Customer support

http://support.flir.com

General description
ITC Advanced Thermal Applications—attendance by 1 person (3 days)

Course information	
Available languages	DACH only

Course details	
Duration	3 days

ITC Advanced Thermal Applications—group of up to 10 persons (3 days)

P/N: ITC-ADV-3069

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Website

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Customer support

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General description
ITC Advanced Thermal Applications—group of up to 10 persons (3 days)

Course information	
Available languages	DACH only

Course details	
Duration	3 days

ITC Category 1 Thermography Course—additional student to an on-site class, 1 person

P/N: ITC-CER-5105

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course prepares the student for qualification as a Category 1 certified thermographer. The participant will learn about the basics of infrared, how to operate an infrared camera under different conditions and for various purposes, how to an appropriately judge the measurement situation in the field, and how to identify potential error sources. After the course, the participant will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.
Note: This part number is reserved for adding additional students to a Category 1 on-site course.
Content
• Introduction to thermography. • Understand your thermal camera. • Basic physics of heat. • Basic physics of infrared. • Thermal pattern recognition and infrared applications. • Infrared temperature measurement techniques. • Thermography in condition-monitoring. • Applications and inspections. • Surveys and reporting.
Student presentation
• During the seminar, students will generate a small case study to be presented to the class, based on the laboratory exercises.
Laboratory sessions
• Camera handling. • Level and span. • Conduction pattern. • Forced convection. • Direct and indirect thermal measurement. • Thermal capacity. • Steady state and transient heat flow. • Evaporation and condensation. • Electrical application. • Emissivity and reflected apparent temperature. • Spatial resolution. • Location and temperature measurement of a hot/cold spot. • Image transfer to the computer.

Course information	
Available languages	Chinese, Danish, Dutch, English, Finish, French, German, Greek, Hebrew, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazilian), Romanian, Russian, Serbo-Croatian, Spanish, Swedish, Thai.

ITC Category 1 Thermography Course—additional student to an on-site class, 1 person

P/N: ITC-CER-5105

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course information	
Target group	• Practical users. • Beginners in thermography with some experience of camera handling and limited infrared knowledge who want to take their first step to becoming a professional thermographer and to qualifying as a Category 1 certified thermographer.
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons who already have some basic experience of infrared thermography. • Persons with knowledge of the basic functions of an infrared camera. • Persons who want to become a certified thermographer to gain a competitive advantage or who need the certification because of legal reasons or company internal regulations.
Prerequisites	• Familiar with the basic operation of an infrared camera. • Has the recommended experience of thermography to the relevant standards.

Course details	
Duration	35–40 hours.
Structure	Theory and camera practice (hands on) on alternate days with additional laboratory sessions and software exercises on some days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.
Note	Only for non-EURO, non-SEK, non NOK, non-£, non-CHF countries.

Course organization	
ITC	The ITC Category 1 Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC Trainers and Licensed Trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Category 1 Thermography Course.

Category 1 Thermography Course—attendance by 1 person

P/N: ITC-CER-5101

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course prepares the student for qualification as a category 1 certified thermographer. The participant will learn about the basics of infrared, how to operate an infrared camera under different conditions and for various purposes, how to an appropriately judge the measurement situation in the field, and how to identify potential error sources. After the course, the participant will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.
Content
• Introduction to thermography. • Understand your thermal camera. • Basic physics of heat. • Basic physics of infrared. • Thermal pattern recognition and infrared applications. • Infrared temperature measurement techniques. • Thermography in condition-monitoring. • Applications and inspections. • Surveys and reporting.
Student presentation
• During the seminar, students will generate a small case study to be presented to the class, based on the laboratory exercises.
Laboratory sessions
• Camera handling. • Level and span. • Conduction pattern. • Forced convection. • Direct and indirect thermal measurement. • Thermal capacity. • Steady state and transient heat flow. • Evaporation and condensation. • Electrical application. • Emissivity and reflected apparent temperature. • Spatial resolution. • Location and temperature measurement of a hot/cold spot. • Image transfer to the computer.

Course information	
Available languages	Chinese, Danish, Dutch, English, Finish, French, German, Greek, Hebrew, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazilian), Romanian, Russian, Serbo-Croatian, Spanish, Swedish, Thai.
Target group	• Practical users. • Beginners in thermography with some experience of camera handling and limited infrared knowledge who want to take their first step to becoming a professional thermographer and to qualifying as a Category 1 certified thermographer.

Category 1 Thermography Course—attendance by 1 person

P/N: ITC-CER-5101

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course information	
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons who already have some basic experience of infrared thermography. • Persons with knowledge of the basic functions of an infrared camera. • Persons who want to become a certified thermographer to gain a competitive advantage or who need the certification because of legal reasons or company internal regulations.
Prerequisites	• Familiar with the basic operation of an infrared camera. • Has the recommended experience of thermography to the relevant standards.

Course details	
Duration	35–40 hours.
Structure	Theory and camera practice (hands on) on alternate days with additional laboratory sessions and software exercises on some days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Category 1 Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Category 1 Thermography Course.

ITC Category 1 Thermography Course—group of up to 10 persons

P/N: ITC-CER-5109

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course prepares the student for qualification as a category 1 certified thermographer. The participant will learn about the basics of infrared, how to operate an infrared camera under different conditions and for various purposes, how to an appropriately judge the measurement situation in the field, and how to identify potential error sources. After the course, the participant will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.
Content
• Introduction to thermography. • Understand your thermal camera. • Basic physics of heat. • Basic physics of infrared. • Thermal pattern recognition and infrared applications. • Infrared temperature measurement techniques. • Thermography in condition-monitoring. • Applications and inspections. • Surveys and reporting.
Student presentation
• During the seminar, students will generate a small case study to be presented to the class, based on the laboratory exercises.
Laboratory sessions
• Camera handling. • Level and span. • Conduction pattern. • Forced convection. • Direct and indirect thermal measurement. • Thermal capacity. • Steady state and transient heat flow. • Evaporation and condensation. • Electrical application. • Emissivity and reflected apparent temperature. • Spatial resolution. • Location and temperature measurement of a hot/cold spot. • Image transfer to the computer.

Course information	
Available languages	Chinese, Danish, Dutch, English, Finish, French, German, Greek, Hebrew, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazilian), Romanian, Russian, Serbo-Croatian, Spanish, Swedish, Thai.
Target group	• Practical users. • Beginners in thermography with some experience of camera handling and limited infrared knowledge who want to take their first step to becoming a professional thermographer and to qualifying as a Category 1 certified thermographer.

ITC Category 1 Thermography Course—group of up to 10 persons

P/N: ITC-CER-5109

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course information	
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons who already have some basic experience of infrared thermography. • Persons with knowledge of the basic functions of an infrared camera. • Persons who want to become a certified thermographer to gain a competitive advantage or who need the certification because of legal reasons or company internal regulations.
Prerequisites	• Familiar with the basic operation of an infrared camera. • Has the recommended experience of thermography to the relevant standards.

Course details	
Duration	35–40 hours.
Structure	Theory and camera practice (hands on) on alternate days with additional laboratory sessions and software exercises on some days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by a group of up to 10 persons. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Category 1 Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC Trainers and Licensed Trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Category 1 Thermography Course.

ITC Level 2 (Category 2)Thermography Course—additional student to an on-site course, 1 person

P/N: ITC-CER-5205

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course prepares the student for qualification as a category 2 certified thermographer. The participant will learn about topics in infrared thermography to increase the knowledge about infrared physics, heat science, infrared measurement equipment and its application. As a Category 2 thermographer the participant shall provide guidance to category 1 personnel in the areas of equipment selection, techniques, limitations, data analysis, corrective actions and reporting.
Note: This part number is reserved for adding additional students to a Category 2 on-site course.
Content
• Thermal science. • Heat transfer. • Temperature measurement. • Infrared science. • Infrared equipment and applications.
Student presentation
• During the seminar, students will present a prepared case study to the class. The maximum duration (excluding discussion) will be 7 minutes, with a maximum of 7 slides.
Laboratory sessions
• Newton’s law (M). • Advanced emissivity measurement (M). • Variation of emissivity with angle (M). • Transient thermal transfer. • Indirect power measurement (M). • Infrared window transmission (M). • Slit response function. • Hole response function (M). • Parallel circuits. Note: Laboratory sessions denoted by “M” are mandatory.

Course information	
Available languages	Dutch, English, German, French, Italian, Portuguese (Brazilian), Spanish, Swedish.
Target group	• Professional users. • This course is designed for thermographers holding a Category 1 certificate who want to increase their knowledge of infrared thermography and who want to qualify as a Category 2 certified thermographer.

ITC Level 2 (Category 2)Thermography Course—additional student to an on-site course, 1 person

P/N: ITC-CER-5205

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course information	
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons with several months of professional experience of thermography. • Persons with experience of infrared camera operation and reporting. • Persons holding a Category 1 certificate. • Persons who need the Category 2 Certification for guidance and supervision of other thermographers or are interested in a deeper understanding of thermography.
Prerequisites	• Valid Category 1 thermography certificate. • Recommended experience within thermography according to the relevant standards.

Course details	
Duration	40 hours.
Structure	Theory, camera practice (hands on), and prepared case studies on alternate days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.
Note	Only for non-EURO, non-SEK, non NOK, non-£, non-CHF countries.

Course organization	
ITC	The ITC Level 2 (Category 2) Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Level 2 (Category 2) Thermography Course.

ITC Level 2 (Category 2) Thermography Course—attendance by 1 person

P/N: ITC-CER-5201

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course prepares the student for qualification as a category 2 certified thermographer. The participant will learn about topics in infrared thermography to increase their knowledge of infrared physics, heat science, and infrared measurement equipment and its application. As a Category 2 thermographer the participant can provide guidance to category 1 personnel in the areas of equipment selection, techniques, limitations, data analysis, corrective actions, and reporting.
Content
• Thermal science. • Heat transfer. • Temperature measurement. • Infrared science. • Infrared equipment and applications.
Student presentation
• During the seminar, students will present a prepared case study to the class. The maximum duration (excluding discussion) will be 7 minutes, with a maximum of 7 slides.
Laboratory sessions
• Newton’s law (M). • Advanced emissivity measurement (M). • Variation of emissivity with angle (M). • Transient thermal transfer. • Indirect power measurement (M). • Infrared window transmission (M). • Slit response function. • Hole response function (M). • Parallel circuits. Note: Laboratory sessions denoted by “M” are mandatory.

Course information	
Available languages	Dutch, English, German, French, Italian, Portuguese (Brazilian), Spanish, Swedish.
Target group	• Professional users. • This course is designed for thermographers holding a Category 1 certificate who want to increase their knowledge of infrared thermography and who want to qualify as a Category 2 certified thermographer.

ITC Level 2 (Category 2) Thermography Course—attendance by 1 person

P/N: ITC-CER-5201

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course information	
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons with several months of professional experience of thermography. • Persons with experience of infrared camera operation and reporting. • Persons holding a Category 1 certificate. • Persons who need the Category 2 Certification for guidance and supervision of other thermographers or are interested in a deeper understanding of thermography.
Prerequisites	• Valid Category 1 thermography certificate. • Recommended experience within thermography according to the relevant standards.

Course details	
Duration	40 hours.
Structure	Theory, camera practice (hands on), and prepared case studies on alternate days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Level 2 (Category 2) Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Level 2 (Category 2) Thermography Course.

ITC Level 2 (Category 2)Thermography Course—group of up to 10 persons

P/N: ITC-CER-5209

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course prepares the student for qualification as a category 2 certified thermographer. The participant will learn about topics in infrared thermography to increase their knowledge of infrared physics, heat science, and infrared measurement equipment and its application. As a Category 2 thermographer the participant can provide guidance to category 1 personnel in the areas of equipment selection, techniques, limitations, data analysis, corrective actions, and reporting.
Content
• Thermal science. • Heat transfer. • Temperature measurement. • Infrared science. • Infrared equipment and applications.
Student presentation
• During the seminar, students will present a prepared case study to the class. The maximum duration (excluding discussion) will be 7 minutes, with a maximum of 7 slides.
Laboratory sessions
• Newton’s law (M). • Advanced emissivity measurement (M). • Variation of emissivity with angle (M). • Transient thermal transfer. • Indirect power measurement (M). • Infrared window transmission (M). • Slit response function. • Hole response function (M). • Parallel circuits. Note: Laboratory sessions denoted by “M” are mandatory.

Course information	
Available languages	Dutch, English, German, French, Italian, Portuguese (Brazilian), Spanish, Swedish.
Target group	• Professional users. • This course is designed for thermographers holding a Category 1 certificate who want to increase their knowledge of infrared thermography and who want to qualify as a Category 2 certified thermographer.

ITC Level 2 (Category 2)Thermography Course—group of up to 10 persons

P/N: ITC-CER-5209

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Website

http://www.flir.com

Customer support

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Course information	
Typical student	• Persons with a professional technical background such as technicians, engineers, consultants, or researchers who work in maintenance, building inspection, mechanical, or electrical applications, production, or R&D. • Persons with several months of professional experience of thermography. • Persons with experience of infrared camera operation and reporting. • Persons holding a Category 1 certificate. • Persons who need the Category 2 Certification for guidance and supervision of other thermographers or are interested in a deeper understanding of thermography.
Prerequisites	• Valid Category 1 thermography certificate. • Recommended experience within thermography according to the relevant standards.

Course details	
Duration	40 hours.
Structure	Theory, camera practice (hands on), and prepared case studies on alternate days.
Exam	Written exam (closed book) including multiple-choice questions and practical image interpretation on the last day. The maximum duration is as defined by the relevant certification standards.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Certificate of conformance with certification requirements (subject to passing the exam). • Attendance by a group of up to 10 persons • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Level 2 (Category 2) Thermography Course is offered worldwide by ITC subsidiaries and ITC partners as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary listed in the "ITC Directory" (1560096).
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Level 2 (Category 2) Thermography Course.

ITC conference fee

P/N: ITC-CON-1001

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
ITC conference fee

ITC customized workshop—per person (per day)

P/N: ITC-EXP-1041

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This is a special course on the specifications of equipment used in particular applications (e.g., triggering or high speed). It addresses predominantly the needs of high-end infrared camera users in scientific or industrial fields.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, French. Other languages on request.
Target group	• Highly specialized users with advanced and scientific applications as well as persons interested in these applications and related infrared equipment.
Typical student	• Researchers. • Scientists. • University students.
Prerequisites	• None.
Recommendations	• Basic knowledge of thermography and related areas. • Experience in measurement techniques and general software skills.

Course details	
Duration	Typically 1 day
Structure	Theory and hands-on sessions, depending on the topics.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials. • Diploma of attendance. • Attendance by 1 person.
Note	This course is typically organized at the customer's site. The course fee does not include the cost of the instructor's travel or lodging. The customer is responsible for providing a suitable classroom and preferably also refreshments/lunch.

ITC customized workshop—per person (per day)

P/N: ITC-EXP-1041

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course organization	
ITC	ITC customized workshops are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	ITC customized workshops are taught by ITC qualified specialists having relevant expertise in the workshop's subject and related fields of application.

ITC Getting Started with Thermography—attendance by 1 person

P/N: ITC-EXP-0511

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
ITC Getting Started with Thermography—attendance by 1 person.

Course information	
Available languages	German, French, Italian, Dutch, Swedish.

Course details	
Duration	4 hours.

ITC Getting Started with Thermography (evening or weekend)—attendance by 1 person

P/N: ITC-EXP-0521

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
ITC Getting Started with Thermography (evening or weekend)—attendance by 1 person.

Course information	
Available languages	German, French, Italian, Dutch, Swedish.

Course details	
Duration	4 hours.

ITC infrared application and system consultancy (per day)

P/N: ITC-EXP-1050

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Consultancy can be described as any action or arrangement that is not strictly a training course. Most likely, a thermal camera will be involved. It can be, but is not restricted to: • Pre-sales equipment or software demonstration. • Equipment and software demonstration and explanation. • Advanced technical support. • Application support. • Comparative study involving a camera, either alone or in conjunction with other instruments. • General measurements in a difficult or unusual situation.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, French. Other languages on request.
Target group	• Advanced users who wish to receive in-depth guidance to complex problems related to infrared equipment, applications, and measurement.
Typical student	• Industry technical personnel. • Researchers. • Scientists. • University students.
Prerequisites	• None.
Recommendations	• Basic knowledge of thermography and related parameters. • Experience in measurement techniques and general software skills.

Course details	
Duration	Typically 1 day.
Structure	Theory and hands-on sessions, depending on the topics.
Exam	None.
Course fee includes	• Consultancy by a qualified ITC specialist. • Training and/or reference material.

ITC infrared application and system consultancy (per day)

P/N: ITC-EXP-1050

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Website

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Customer support

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Course details	
Note	Consultancy is typically carried out at the customer's site. The fee does not include the cost of the instructor's travel or lodging. The customer is responsible for providing access to the equipment or objects to be analyzed or measured, a suitable meeting room, and, ideally, also refreshments/lunch.

Course organization	
ITC	ITC consultancy is offered by ITC in EMEA. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	ITC consultancy is delivered by ITC qualified specialists having relevant expertise in infrared measurement and related fields of application.

ITC in-house training—additional attendance, 1 person (per day)

P/N: ITC-EXP-1021

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
On-site training that can be customized to your needs. The participants will learn about infrared thermography, inspections, measurements, applications, and reporting corresponding to the level needed for performing measurements and inspection in their working environment. The trainer will give useful advice on how to best implement infrared thermography in your business.
Note: This part number is reserved for adding additional students to an on-site course.
Content
• An on-site course can be any course, from a 1-day introduction to general thermography, to a customized application course, to a complete certification course.
Laboratory sessions
• Classroom laboratory sessions. • On-site field training as agreed with the customer.

Course information	
Available languages	English, Dutch, German, French, Italian, Spanish, Swedish. Other languages on request.
Target group	• Employees of a company or particular departments who would like to minimize travel costs and receive training directly on their daily working site.
Prerequisites	• Refer to the prerequisites applicable to an equivalent in-house course.
Recommendations	• Refer to the recommendations applicable to an equivalent in-house course.

Course details	
Duration	Customized or in accordance with an equivalent in-house course.
Structure	Theory, camera handling, demonstrations, laboratory practice, and field training.
Exam	As applicable to an equivalent in-house course.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person.

ITC in-house training—additional attendance, 1 person (per day)

P/N: ITC-EXP-1021

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course organization	
ITC	ITC in-house courses are offered worldwide by ITC and its partners as listed. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	ITC in-house courses are taught by ITC qualified instructors with experience in the relevant fields of application.

ITC in-house training—group of up to 10 persons (per day)

P/N: ITC-EXP-1029

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
On-site training that can be customized to your needs. The participants will learn about infrared thermography, inspections, measurements, applications, and reporting corresponding to the level needed for performing measurements and inspection in their working environment. The trainer will give useful advice on how to best implement infrared thermography in your business.
Content
• An on-site course can be any course, from a 1-day introduction to general thermography, to a customized application course, to a complete certification course.
Laboratory sessions
• Classroom laboratory sessions. • On-site field training as agreed with the customer.

Course information	
Available languages	English, Dutch, German, French, Italian, Spanish, Swedish. Other languages on request.
Target group	• Employees of a company or particular departments who would like to minimize travel costs and receive training directly on their daily working site.
Prerequisites	• Refer to the prerequisites applicable to an equivalent in-house course.
Recommendations	• Refer to the recommendations applicable to an equivalent in-house course.

Course details	
Duration	Customized or in accordance with an equivalent in-house course.
Structure	Theory, camera handling, demonstrations, laboratory practice, and field training.
Exam	As applicable to an equivalent in-house course.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons.
Note	The course fee does not include the cost of the instructor's travel or lodging. When organized at the customer's site, the customer is responsible for providing a suitable classroom and ideally also refreshments/lunch.

ITC in-house training—group of up to 10 persons (per day)

P/N: ITC-EXP-1029

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Website

http://www.flir.com

Customer support

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Course organization	
ITC	ITC in-house courses are offered worldwide by ITC and its partners as listed. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	ITC in-house courses are taught by ITC qualified instructors with experience in the relevant fields of application.

ITC Introduction to Building Thermography—attendance by 1 person (2 days)

P/N: ITC-EXP-2011

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course gives a general introduction to infrared thermography and an overview on its specific use for the inspection of buildings. It aims to give you suggestions on what you can do with your camera. During the first day, you learn the basics of thermography and how to use your camera the best way. The second day you will start with a brief summary of thermal transfer before you learn about the building envelope, important physical parameters, and typical faults. Emphasis is put on case studies, selected from the field.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Infrared camera handling. • Basics of heat transfer. • The building envelope. • Important physical parameters. • Major anomalies. • Thermal patterns. • Application guidelines. • Data analysis and reports.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement. • Building application laboratory sessions.

Course information	
Available languages	English, French, German, Swedish.
Target group	• Beginners and anyone interested in infrared thermography and building applications.
Typical student	• Persons from the building sector. • Someone looking to purchase a camera. • Someone who just purchased a camera. • Students and pupils with thermography and building-application-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to Building Thermography—attendance by 1 person (2 days)

P/N: ITC-EXP-2011

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Website

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Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to Building Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Building Thermography course is taught by qualified ITC instructors with particular experience in the field of building applications.

ITC Introduction to Building Thermography—group of up 10 persons (2 days)

P/N: ITC-EXP-2019

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course gives a general introduction to infrared thermography and an overview on its specific use for the inspection of buildings. It aims to give you suggestions on what you can do with your camera. During the first day, you learn the basics of thermography and how to use your camera the best way. The second day you will start with a brief summary of thermal transfer before you learn about the building envelope, important physical parameters, and typical faults. Emphasis is put on case studies, selected from the field.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Infrared camera handling. • Basics of heat transfer. • The building envelope. • Important physical parameters. • Major anomalies. • Thermal patterns. • Application guidelines. • Data analysis and reports.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement. • Building application laboratory sessions.

Course information	
Available languages	English, French, German, Swedish.
Target group	• Beginners and anyone interested in infrared thermography and building applications.
Typical student	• Persons from the building sector. • Someone looking to purchase a camera. • Someone who just purchased a camera. • Students and pupils with thermography and building-application-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to Building Thermography—group of up 10 persons (2 days)

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Website

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Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training material in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments, lunch, the instructor's travel expenses, etc. depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to Building Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Building Thermography course is taught by qualified ITC instructors with particular experience in the field of building applications.

ITC Introduction Electrical Thermography—attendance by 1 person (2 days)

P/N: ITC-EXP-2041

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course gives a general introduction to infrared thermography and an overview of its specific use for inspections of electrical systems. It aims to give suggestions on what you can do with your camera. During the first day, you learn the basics of thermography and how to use your camera the best way. The second day you will start with a brief summary of thermal transfer before you learn about electrical systems and components, material properties, and typical problems and faults. Emphasis is placed on case studies, selected from the field.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Infrared camera handling. • Basics of heat transfer. • Electrical systems. • Important properties of material. • Most common problems. • Case studies. • Common mistakes. • Application guidelines. • Data analysis and reports.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement. • Electrical application laboratory sessions.

Course information	
Available languages	English, French, German, Swedish.
Target group	• Beginners and anyone interested in infrared thermography and electrical applications.
Typical student	• Persons working in the maintenance or installation of electrical systems. • Someone looking to purchase a camera. • Someone who just purchased a camera. • Students and pupils with thermography and building-application-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction Electrical Thermography—attendance by 1 person (2 days)

P/N: ITC-EXP-2041

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Website

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Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to Electrical Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Electrical Thermography course is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Introduction to Electrical Thermography—group of up to 10 persons (2 days)

P/N: ITC-EXP-2049

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of electrical systems. It aims to give you suggestions on what you can do with your camera. During the first day, you learn the basics of thermography and how to use your camera the best way. The second day you will start with a brief summary of thermal transfer before you learn about electrical systems and components, material properties, and typical problems and faults. Emphasis is placed on case studies, selected from the field.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Infrared camera handling. • Basics of heat transfer. • Electrical systems. • Important properties of material. • Most common problems. • Case studies. • Common mistakes. • Application guidelines. • Data analysis and reports.
Labs
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement. • Electrical application laboratory sessions.

Course information	
Available languages	English, French, German, Swedish.
Target group	• Beginners and anyone interested in infrared thermography and electrical applications.
Typical student	• Persons working in the maintenance or installation of electrical systems. • Someone looking to purchase a camera. • Someone who just purchased a camera. • Students and pupils with thermography and building-application-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to Electrical Thermography—group of up to 10 persons (2 days)

P/N: ITC-EXP-2049

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments, lunch, the instructor's travel expenses, etc., depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to Electrical Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Electrical Thermography course is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Introduction to HVAC and Plumbing Inspections—attendance by 1 person (2 days)

P/N: ITC-EXP-2061

Revision

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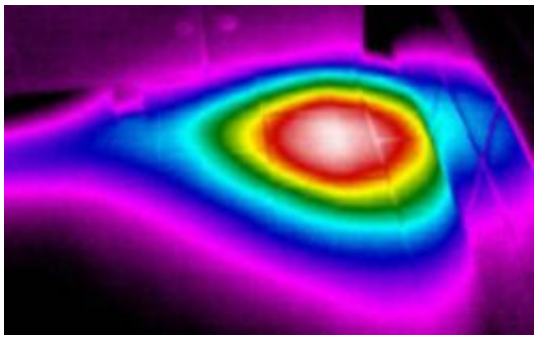
Website

http://www.flir.com

Customer support

http://support.flir.com



General description
This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of heating and HVAC systems, and related installations. It aims at giving you suggestions on what you can do with your camera. During the first day, you learn the basics of thermography, and how to use your camera the best way. The second day you will get introduced to various heating systems before you learn about typical faults and how thermography helps you to locate and analyze these. Emphasis is placed on case studies, selected from the field.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Infrared camera handling. • Heating systems. • Pipe tracing and localization or water circuits. • Water leaks. • Moisture and humidity. • Water radiators. • Tanks, manifolds, and plenums. • HVAC systems. • Industrial heat exchangers. • Photovoltaic panel inspection. • Data analysis and reports.
Laboratory sessions
• Emissivity and reflected apparent temperature. • Influence of the angle on the measurement. • Influence of the object size on the measurement. • Laboratory sessions on applications.

Course information	
Available languages	English, French, German, Italian, Spanish, Swedish.
Target group	• Beginners and anyone interested in thermography, plumbing, and HVAC applications.
Typical student	• Plumbers or persons working with plumbing and/or HVAC systems. • Facility managers. • Anyone looking to purchase a camera. • Anyone who has just purchased a camera.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to HVAC and Plumbing Inspections—attendance by 1 person (2 days)

P/N: ITC-EXP-2061

Revision

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Website

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Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to HVAC and Plumbing Inspections course is offered in EMEA by ITC and partners. Specific customer requests should be forwarded to the closest ITC or ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to HVAC and Plumbing Inspections course is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Introduction to HVAC and Plumbing Inspections—group of up to 10 persons (2 days)

P/N: ITC-EXP-2069

Revision

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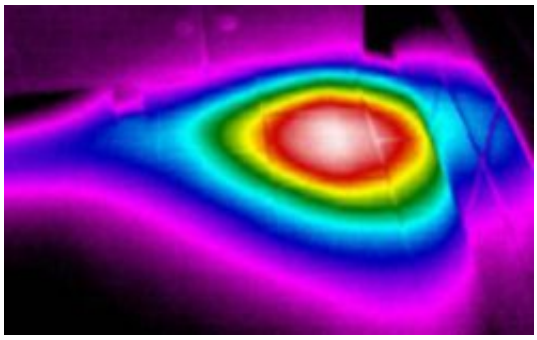
Website

http://www.flir.com

Customer support

http://support.flir.com



General description
This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of heating and HVAC systems, and related installations. It aims at giving you suggestions on what you can do with your camera. During the first day, you learn the basics of thermography, and how to use your camera the best way. The second day you will get introduced to various heating systems before you learn about typical faults and how thermography helps you to locate and analyze these. Emphasis is placed on case studies, selected from the field.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Infrared camera handling. • Heating systems. • Pipe tracing and localization or water circuits. • Water leaks. • Moisture and humidity. • Water radiators. • Tanks, manifolds, and plenums. • HVAC systems. • Industrial heat exchangers. • Photovoltaic panel inspection. • Data analysis and reports.
Labs
• Emissivity and reflected apparent temperature. • Influence of the angle on the measurement. • Influence of the object size on the measurement. • Laboratory sessions on applications.

Course information	
Available languages	English, French, German, Italian, Spanish, Swedish.
Target group	• Beginners and anyone interested in thermography, plumbing, and HVAC applications.
Typical student	• Plumbers or persons working with plumbing and/or HVAC systems. • Facility managers. • Anyone looking to purchase a camera. • Anyone who has just purchased a camera.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to HVAC and Plumbing Inspections—group of up to 10 persons (2 days)

P/N: ITC-EXP-2069

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as lunch, depending on the location and the organizing body.
Note	Course fee does not include the cost of the instructor's travel or lodging.

Course organization	
ITC	The ITC Introduction to HVAC and Plumbing Inspections course g is offered in EMEA by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to HVAC and Plumbing Inspections course is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Introduction to Solar Panel Inspection—attendance by 1 person (2 days)

P/N: ITC-PRA-2011

Revision

44105

Last modified

2017-08-15 14:19 UTC+1

Website

http://www.flir.com

Customer support

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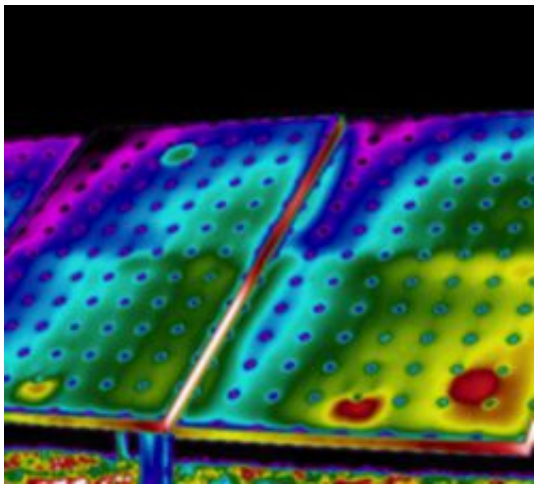

General description
This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of photovoltaic solar systems. During the first day, you learn about the basics of thermography, how a thermal camera works, and how to use it correctly. The second day starts with the basics of photovoltaic solar systems and solar panel installations. You learn about infrared measurements that are critical for solar panel inspections with a thermal camera, how to interpret the displayed thermal images, and how they are associated with typical problems and faults. Emphasis is placed on case studies, selected from the field, as well as on practical exercises.
Content
• Basics of thermography (radiation, spectral waveband, influences of the atmosphere). • Infrared camera: principles, design and operation (the focal plane array, measurement ranges, thermal tuning: level and span, color palettes). • Infrared measurement technique: measurement parameters (emissivity, radiation from the environment, distance, relative humidity, atmospheric temperature). • Infrared camera figures of merit: resolution limits (thermal, spatial, time related). • Practical exercises. • Basics of photovoltaic solar systems (terminology, design, principle of operation, module types). • Solar panel installation: connection types (string, bypass diodes, shadowing). • Infrared measurements (spectral bands, inspection conditions, spatial resolution, camera position and angle). • Typical thermal readouts (examples, sources, interpretation—defect/no defect, practical exercises).

Course information	
Available languages	English, French, German, Swedish, Italian, Dutch, Spanish.
Target group	• Anyone, including beginners, interested in the use of infrared thermography for the inspection of photovoltaic solar systems.
Typical student	• Persons working in the maintenance or installation of solar panels. • Thermographers familiar with electrical inspections and interested in solar panel inspections.
Prerequisites	• None.
Recommendations	• Basic knowledge of electrical installations or another technical field.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to Solar Panel Inspection—attendance by 1 person (2 days)

P/N: ITC-PRA-2011

Revision

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Website

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Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to Solar Panel Inspection course is offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Solar Panel Inspection course is taught by qualified ITC instructors with particular experience of solar panel installations.

ITC Introduction to Solar Panel Inspection—group of up to 10 persons (2 days)

P/N: ITC-PRA-2019

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Website

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Customer support

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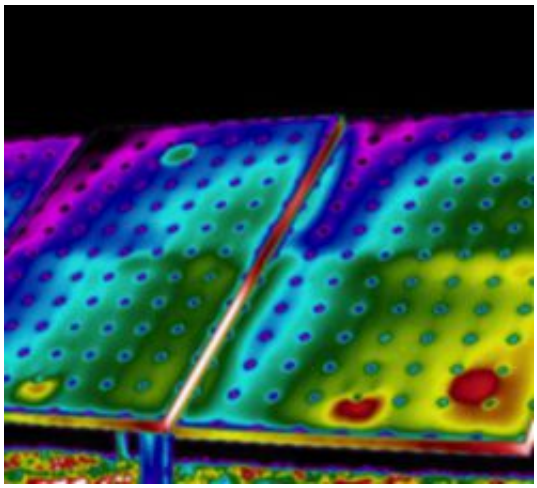

General description
This course gives a general introduction to infrared thermography and an overview on its specific use for inspections of photovoltaic solar systems. During the first day, you learn about the basics of thermography, how a thermal camera works, and how to use it correctly. The second day starts with the basics of photovoltaic solar systems and solar panel installations. You learn about infrared measurements that are critical for solar panel inspections with a thermal camera, how to interpret the displayed thermal images, and how they are associated with typical problems and faults. Emphasis is placed on case studies, selected from the field, as well as on practical exercises.
Content
• Basics of thermography (radiation, spectral waveband, influences of the atmosphere). • Infrared camera: principles, design and operation (the focal plane array, measurement ranges, thermal tuning: level and span, color palettes). • Infrared measurement technique: measurement parameters (emissivity, radiation from the environment, distance, relative humidity, atmospheric temperature). • Infrared camera figures of merit: resolution limits (thermal, spatial, time related). • Practical exercises. • Basics of photovoltaic solar systems (terminology, design, principle of operation, module types). • Solar panel installation: connection types (string, bypass diodes, shadowing). • Infrared measurements (spectral bands, inspection conditions, spatial resolution, camera position and angle). • Typical thermal readouts (examples, sources, interpretation—defect/no defect, practical exercises).

Course information	
Available languages	English, French, German, Swedish, Italian, Dutch, Spanish.
Target group	• Anyone, including beginners, interested in the use of infrared thermography for the inspection of photovoltaic solar systems.
Typical student	• Persons working in the maintenance or installation of solar panels. • Thermographers familiar with electrical inspections and interested in solar panel inspections.
Prerequisites	• None.
Recommendations	• Basic knowledge of electrical installations or another technical field.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations, and practical laboratory sessions.
Exam	None.

ITC Introduction to Solar Panel Inspection—group of up to 10 persons (2 days)

P/N: ITC-PRA-2019

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Website

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Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments or lunch, depending on the location and the organizing body.
Note	Course fee does not include the cost of the instructor's travel or lodging.

Course organization	
ITC	The ITC Introduction to Solar Panel Inspection course is offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Solar Panel Inspection course is taught by qualified ITC instructors with particular experience of solar panel installations.

ITC Introduction to Thermography—attendance by 1 person (1 day)

P/N: ITC-EXP-1011

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This is a full 1 day course for beginners and anyone interested in infrared thermography and its applications. The course covers the basics of infrared theory, and includes demonstrations, hands-on camera experience, and practical exercises using relevant key laboratory sessions.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Introduction to electrical and building inspections. • Infrared camera handling. • Data analysis and reports.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement.

Course information	
Available languages	English, French, German, Swedish, Danish.
Target group	• Beginners and anyone interested in infrared thermography and its applications.
Typical student	• Someone looking to purchase a camera. • Someone who just purchased a camera. • Persons starting to use infrared cameras for work. • Students and pupils with thermography-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	1 day.
Structure	Theory, camera handling and demonstrations in the morning. Practical laboratory sessions in the afternoon.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

ITC Introduction to Thermography—attendance by 1 person (1 day)

P/N: ITC-EXP-1011

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Website

http://www.flir.com

Customer support

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Course organization	
ITC	The ITC Introduction to Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Thermography course is taught by qualified ITC instructors with long experience in the various fields of thermography.

ITC Introduction to Thermography—group of up to 10 persons (1 day)

P/N: ITC-EXP-1019

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This is a full 1 day course for beginners and anyone interested in infrared thermography and its applications. The course covers the basics of infrared theory, and includes demonstrations, hands-on camera experience, and practical exercises using relevant key laboratory sessions.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Introduction to electrical and building inspections. • Infrared camera handling. • Data analysis and reports.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement.

Course information	
Available languages	English, French, German, Swedish, Danish.
Target group	• Beginners and anyone interested in infrared thermography and its applications.
Typical student	• Someone looking to purchase a camera. • Someone who just purchased a camera. • Persons starting to use infrared cameras for work. • Students and pupils with thermography-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	1 day.
Structure	Theory, camera handling and demonstrations in the morning. Practical laboratory sessions in the afternoon.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training material in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments, lunch, the instructor's travel expenses, etc., depending on the location and the organizing body.

ITC Introduction to Thermography—group of up to 10 persons (1 day)

P/N: ITC-EXP-1019

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course organization	
ITC	The ITC Introduction to Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Thermography course is taught by qualified ITC instructors with long experience in the various fields of thermography.

ITC Introduction to Thermography - group of up to 6 persons (1 day)

P/N: ITC-EXP-1026

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This is a full 1 day course for beginners and anyone interested in infrared thermography and its applications. The course covers the basics of infrared theory, and includes demonstrations, hands-on camera experience, and practical exercises using relevant key laboratory sessions.
Content
• Basics of thermography. • Basics of emissivity and reflected apparent temperature. • Introduction to electrical and building inspections. • Infrared camera handling. • Data analysis and reports.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Influence of the angle of reflection on the measurement. • Influence of the object size on the measurement.

Course information	
Available languages	English, French, German, Swedish, Danish.
Target group	• Beginners and anyone interested in infrared thermography and its applications.
Typical student	• Someone looking to purchase a camera. • Someone who just purchased a camera. • Persons starting to use infrared cameras for work. • Students and pupils with thermography-related projects.
Prerequisites	• None.
Recommendations	• Interest in the technology and its applications.

Course details	
Duration	1 day.
Structure	Theory, camera handling and demonstrations in the morning. Practical laboratory sessions in the afternoon.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training material in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments, lunch, the instructor's travel expenses, etc., depending on the location and the organizing body.

ITC Introduction to Thermography - group of up to 6 persons (1 day)

P/N: ITC-EXP-1026

Revision

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Website

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Customer support

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Course organization	
ITC	The ITC Introduction to Thermography course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Thermography course is taught by qualified ITC instructors with long experience in the various fields of thermography.

ITC Professional Building Inspection—attendance by 1 person (3 days)

P/N: ITC-ADV-3011

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared thermography, background science, and applications. The participant will learn the physical concepts of heat transfer and apply them together with relevant building science. After the course, the participant will be able to undertake a qualified building inspections on the basis of existing laws, standards, and regulations.
Note: This course refers mainly to European building standards. Please consult ITC before selling it in other countries.
Content
• Introduction to and refresher of infrared basics. • Thermal transfer and wall structures. • Insulating materials. • Humidity, moisture, and the dew point. • Air leaks, pressure profiles, and air permeability. • Survey methodology.
Laboratory sessions
• Outside inspection. • Air permeability test (with blower door). • Reporting.

Course information	
Available languages	English
Target group	• Professional users in building applications who want to become experts in building thermography.
Typical student	• Knows how to operate an infrared camera. • Knows how to create a report. • Has a background in a building profession but moderate experience of infrared or has experience in another infrared application field but moderate knowledge of building science.
Prerequisites	• Valid Level 1 thermography certificate. • Infrared-related education and experience.
Recommendations	• Knowledge of building techniques. • Bring own PC for calculations and exercises.

Course details	
Duration	3 days (24 hours).
Structure	Theory takes place in the mornings. Practical laboratory sessions, calculations, and software exercises are scheduled for the afternoons.

ITC Professional Building Inspection—attendance by 1 person (3 days)

P/N: ITC-ADV-3011

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Website

http://www.flir.com

Customer support

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Course details	
Exam	A final test (20 multiple-choice questions) will be taken on the day 3 in the afternoon. The correct answers will be discussed by the instructor and the participants.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Professional Building Inspection course is offered worldwide by ITC as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Professional Building Inspection course.

ITC Professional Building Inspection—group of up to 10 persons (3 days)

P/N: ITC-ADV-3019

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared thermography, background science, and applications. The participant will learn the physical concepts of heat transfer and apply them together with relevant building science. After the course, the participant will be able to undertake a qualified building inspections on the basis of existing laws, standards, and regulations.
Note: This course refers mainly to European building standards. Please consult ITC before selling it in other countries.
Content
• Introduction to and refresher of infrared basics. • Thermal transfer and wall structures. • Insulating materials. • Humidity, moisture, and the dew point. • Air leaks, pressure profiles, and air permeability. • Survey methodology.
Laboratory sessions
• Outside inspection. • Air permeability test (with blower door). • Reporting.

Course information	
Available languages	English
Target group	• Professional users in building applications who want to become experts in building thermography.
Typical student	• Knows how to operate an infrared camera. • Knows how to create a report. • Has a background in a building profession but moderate experience of infrared or has experience in another infrared application field but moderate knowledge of building science.
Prerequisites	• Valid Level 1 thermography certificate. • Infrared-related education and experience.
Recommendations	• Knowledge of building techniques. • Bring own PC for calculations and exercises.

Course details	
Duration	3 days (24 hours).
Structure	Theory takes place in the mornings. Practical laboratory sessions, calculations, and software exercises are scheduled for the afternoons.

ITC Professional Building Inspection—group of up to 10 persons (3 days)

P/N: ITC-ADV-3019

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Exam	A final test (20 multiple-choice questions) will be taken on the day 3 in the afternoon. The correct answers will be discussed by the instructor and the participants.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Professional Building Inspection course is offered worldwide by ITC as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Professional Building Inspection course.

ITC Professional Furnace Inspection—additional student to an on-site course, 1 person (3 days)

P/N: ITC-ADV-3055

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared thermography, background science, and applications. The participant will learn fundamental concepts of heat and chemistry, and how to set up and operate the furnace camera, and to adjust it for environmental conditions related to furnace applications. Laboratory and/or field practice is a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting.
Note: This part number is reserved for adding additional students to an ITC Professional Furnace Inspection on-site course.
Content
• Introduction. • Working environment (refineries, units, furnaces). • General rules, camera set up and operation. • On-site job organization and related procedures. • Basics of radiative thermal transfer. • Principles and limitations of infrared furnace applications. • Discussion and evaluation of inspection and measurement results. • Methodology. • Reporting.
Laboratory sessions
• On-site job organization. • Following the site inspection procedure. • Site measurements. • If possible, field work on site, inspecting real equipment.

Course information	
Available languages	English, French.
Target group	• Users of FLIR furnace cameras such as the FLIR GF309. • Users of cameras such as the AGEMA 550, Inframetrics 290/390, and FLIR ThermaCAM P25F/P50F. • Qualified thermographers who want to learn more about furnace applications. • Non-thermographers who want to learn how to use furnace cameras or other cameras suited for furnace applications for measurements in their industry.
Typical student	• Persons working with furnace applications in the industry and/or with surveillance and/or predictive maintenance and rather moderate knowledge of infrared thermography. • Or persons from other infrared application fields with moderate knowledge of furnace applications and little experience of furnace cameras.

ITC Professional Furnace Inspection—additional student to an on-site course, 1 person (3 days)

P/N: ITC-ADV-3055

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course information	
Prerequisites	• Basic understanding and knowledge of the natural sciences. • Technical background.

Course details	
Duration	3 days. Additional days upon request (ITC-ADV-4006).
Structure	Theory classes with integrated hands-on during day one and the morning of day two and three, practical labs in the afternoon of day two and three.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • May include more, such as refreshments or lunch, depending on the location and the organizing body.
Note	This course can only be booked via ITC due to FLIR GF camera export restrictions.

Course organization	
ITC	The ITC Professional Furnace Inspection course is offered worldwide by ITC subsidiaries. Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	The ITC Professional Furnace Inspection course is taught by qualified ITC trainers with special expertise in handling furnace cameras and in furnace applications.

ITC Professional Furnace Inspection—attendance by 1 person (3 days)

P/N: ITC-ADV-3051

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared thermography, background science, and applications. The participant will learn fundamental concepts of heat and chemistry, and how to set up and operate the furnace camera, and to adjust it for environmental conditions related to furnace applications. Laboratory and/or field practice is a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting.
Content
• Introduction. • Working environment (refineries, units, furnaces). • General rules, camera set up and operation. • On-site job organization and related procedures. • Basics of radiative thermal transfer. • Principles and limitations of infrared furnace applications. • Discussion and evaluation of inspection and measurement results. • Methodology. • Reporting.
Laboratory sessions
• On-site job organization. • Following the site inspection procedure. • Site measurements. • If possible, field work on site, inspecting real equipment.

Course information	
Available languages	English, French.
Target group	• Users of FLIR furnace cameras such as the FLIR GF309. • Users of cameras such as the AGEMA 550, Inframetrics 290/390, and FLIR ThermaCAM P25F/P50F. • Qualified thermographers who want to learn more about furnace applications. • Non-thermographers who want to learn how to use furnace cameras or other cameras suited for furnace applications for measurements in their industry.
Typical student	• Persons working with furnace applications in the industry and/or with surveillance and/or predictive maintenance and rather moderate knowledge of infrared thermography. • Or persons from other infrared application fields with moderate knowledge of furnace applications and little experience of furnace cameras.
Prerequisites	• Basic understanding and knowledge of the natural sciences. • Technical background.

ITC Professional Furnace Inspection—attendance by 1 person (3 days)

P/N: ITC-ADV-3051

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Website

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Customer support

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Course details	
Duration	3 days. Additional days upon request (ITC-ADV-4006).
Structure	Theory classes with integrated hands-on during day one and the morning of day two and three, practical labs in the afternoon of day two and three.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • May include more, such as refreshments or lunch, depending on the location and the organizing body.
Note	This course can only be booked via ITC due to FLIR GF camera export restrictions.

Course organization	
ITC	The ITC Professional Furnace Inspection course is offered worldwide by ITC subsidiaries. Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	The ITC Professional Furnace Inspection course is taught by qualified ITC trainers with special expertise in handling furnace cameras and in furnace applications.

ITC Professional Furnace Inspection—group of up to 10 persons (3 days)

P/N: ITC-ADV-3059

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared thermography, background science, and applications. The participant will learn fundamental concepts of heat and chemistry, and how to set up and operate the furnace camera, and to adjust it for environmental conditions related to furnace applications. Laboratory and/or field practice is a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting.
Content
• Introduction. • Working environment (refineries, units, furnaces). • General rules, camera set up and operation. • On-site job organization and related procedures. • Basics of radiative thermal transfer. • Principles and limitations of infrared furnace applications. • Discussion and evaluation of inspection and measurement results. • Methodology. • Reporting.
Laboratory sessions
• On-site job organization. • Following the site inspection procedure. • Site measurements. • If possible, field work on site, inspecting real equipment.

Course information	
Available languages	English, French.
Target group	• Users of FLIR furnace cameras such as the FLIR GF309. • Users of cameras such as the AGEMA 550, Inframetrics 290/390, and FLIR ThermaCAM P25F/P50F. • Qualified thermographers who want to learn more about furnace applications. • Non-thermographers who want to learn how to use furnace cameras or other cameras suited for furnace applications for measurements in their industry.
Typical student	• Persons working with furnace applications in the industry and/or with surveillance and/or predictive maintenance and rather moderate knowledge of infrared thermography. • Or persons from other infrared application fields with moderate knowledge of furnace applications and little experience of furnace cameras.
Prerequisites	• Basic understanding and knowledge of the natural sciences. • Technical background.

ITC Professional Furnace Inspection—group of up to 10 persons (3 days)

P/N: ITC-ADV-3059

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Website

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Customer support

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Course details	
Duration	3 days. Additional days upon request (ITC-ADV-4006).
Structure	Theory classes with integrated hands-on during day one and the morning of day two and three, practical labs in the afternoon of day two and three.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • May include more, such as refreshments or lunch, depending on the location and the organizing body.
Note	This course can only be booked via ITC due to FLIR GF camera export restrictions.

Course organization	
ITC	The ITC Professional Furnace Inspection course is offered worldwide by ITC subsidiaries. Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	The ITC Professional Furnace Inspection course is taught by qualified ITC trainers with special expertise in handling furnace cameras and in furnace applications.

ITC Professional Furnace Inspection—group of up to 6 persons (3 days)

P/N: ITC-ADV-3056

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Website

http://www.flir.com

Customer support

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General description
This course bridges the gap between IR thermography, background science and application theory. The participant will learn fundamental concepts of heat and chemistry, to setup and to operate the furnace camera, and to adjust it for environmental conditions related to furnace applications. Lab and/or field practice is a key part of this class. Basic inspection procedures will be covered including equipment checkout, route planning, permitting requirements, safety practices/equipment and reporting concepts.
Content
• Introduction • Working environment (refineries, units, furnaces) • General rules, camera set up and operation • On site job organization and related procedures • Basics of radiative thermal transfer • Principles and limitations of IR furnace applications • Discussion and evaluation of inspection and measurement results • Methodology • Reporting
Labs
• On site job organization • Follow the site inspection procedure • Site measurements • If possible, field work on-site inspecting real equipment

Course information	
Available languages	English, French
Target group	• Users of FLIR furnace cameras such as the FLIR GF309. • Users of models like AGEMA 550, Inframetrics 290/390, FLIR ThermaCAM P25F/P50F • Qualified thermographers who want to learn more about furnace applications • Non thermographers who want to learn how to use GF cameras or other cameras suited for furnace applications for measurements in their industry
Typical student	• A person working with furnace applications in the industry and/or with surveillance and/or predictive maintenance and rather moderate knowledge on IR thermography or • A person from another IR application field, with rather moderate knowledge about furnace applications and not too much experience of GF cameras.
Pre-requisites	• Basic understanding and knowledge of natural sciences • Technical background

ITC Professional Furnace Inspection—group of up to 6 persons (3 days)

P/N: ITC-ADV-3056

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Duration	3 days, additional days upon request (ITC-ADV-4006)
Structure	Theory classes with integrated hands-on during day one and the morning of day two and three, practical labs in the afternoon of day two and three.
Exam	None
Course fee includes	• ITC qualified instructor teaching the class • Training material in printed format • Diploma of attendance • Attendance of a group up to 6 persons • Might include more, such as lunch, refreshments, instructor's travel expenses, etc. depending on location and organizing entity
Note	This course can only be booked via ITC due to the FLIR GF camera export restrictions.

Course organization	
ITC	The ITC Advanced Furnace Application Course is offered worldwide by ITC subsidiaries. Specific customer requests shall be forwarded to the closest ITC subsidiary.
ITC Trainers and Licensed Trainers	The ITC Advanced Furnace Application is lectured by qualified ITC trainers with special expertise in handling the GF cameras and furnace applications.

ITC Professional Optical Gas Imaging—additional student to an on-site course, 1 person (3 days)

P/N: ITC-ADV-3035

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Website

http://www.flir.com

Customer support

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General description
This course bridges the gap between infrared (IR) thermography, background science, and applications. Participants will learn fundamental concepts of heat and chemistry, and how to set up and operate FLIR's optical gas imaging (OGI) cameras, and to adjust them for environmental conditions to find gas leaks. Laboratory sessions and/or field practice in finding leaks are a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting. After the course, participants will be able to undertake qualified inspections on the basis of existing laws, standards, and regulations.
Note 1: This course can only be booked via ITC due to camera export restrictions. Please inform ITC if the customer has a medium-wave (MW) or long-wave (LW) OGI camera. Note 2: This part number is reserved for adding additional students to a gas detection on-site course.
Content
• Introduction. • Camera set up and operation. • Thermal science fundamentals. • Heat transfer. • IR theory. • Volatile organic compound (VOC) absorption characteristics. • Survey and reporting. • Safety considerations.
Laboratory sessions
• Hands-on and practical exercises during the afternoon of day 2. • If possible, field work on-site inspecting real equipment. If not, exercises on ITC's specially tailored OGI laboratory equipment.

Course information	
Available languages	English.
Target group	• Qualified thermographers who want to learn more about the special applications of volatile gas detection within the petrochemical industry with an MW IR camera. • Qualified thermographers who want to learn more about the special applications of volatile gas detection for the surveillance of electrical equipment with an LW IR camera. • Non-thermographers who want to learn how to use their MW IR camera to complement or replace existing leak detection and repair (LDAR) techniques, e.g., in the petrochemical industry. • Non-thermographers who want to learn how to use their LW IR camera to complement or replace existing LDAR techniques.

ITC Professional Optical Gas Imaging—additional student to an on-site course, 1 person (3 days)

P/N: ITC-ADV-3035

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Website

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Customer support

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Course information	
Typical student	• Persons working in the petrochemical industry in surveillance and/or predictive maintenance and with moderate knowledge of thermography. • Persons working in surveillance and/or predictive maintenance of electrical equipment and with moderate knowledge of thermography. • Persons from other IR application fields, with moderate knowledge of VOC gases and little experience of OGI cameras.
Pre-requisites	• A basic understanding and knowledge of the natural sciences. • A technical background.

Course details	
Duration	3 days (20 hours).
Structure	Theory classes with integrated hands-on practice during day 1 and the morning of days 2 and 3, and a practical laboratory exam in the afternoon of days 2 and 3.
Exam	A final exam (30 multiple-choice questions) will be taken on day 3 in the afternoon. The correct answers will be discussed afterwards by the instructor and the participants.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.
Note	Only for non-EURO, non-SEK, non NOK, non- £, non-CHF countries.

Course organization	
ITC	The ITC Professional Optical Gas Imaging course is offered worldwide by ITC subsidiaries as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Professional Optical Gas Imaging course.

ITC Professional Optical Gas Imaging—attendance by 1 person (3 days)

P/N: ITC-ADV-3031

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared (IR) thermography, background science, and applications. Participants will learn fundamental concepts of heat and chemistry, and how to set up and operate FLIR's optical gas imaging (OGI) cameras, and to adjust them for environmental conditions to find gas leaks. Laboratory sessions and/or field practice in finding leaks are a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting. After the course, participants will be able to undertake qualified inspections on the basis of existing laws, standards, and regulations.
Note: This course can only be booked via ITC due to camera export restrictions. Please inform ITC if the customer has a medium-wave (MW) or long-wave (LW) OGI camera.
Content
• Introduction. • Camera set up and operation. • Thermal science fundamentals. • Heat transfer. • IR theory. • Volatile organic compound (VOC) absorption characteristics. • Survey and reporting. • Safety considerations.
Laboratory sessions
• Hands-on and practical exercises during the afternoon of day 2. • If possible, field work on-site inspecting real equipment. If not, exercises on ITC's specially tailored OGI laboratory equipment.

Course information	
Available languages	English, French.
Target group	• Qualified thermographers who want to learn more about the special applications of volatile gas detection within the petrochemical industry with an MW IR camera. • Qualified thermographers who want to learn more about the special applications of volatile gas detection for the surveillance of electrical equipment with an LW IR camera. • Non-thermographers who want to learn how to use their MW IR camera to complement or replace existing leak detection and repair (LDAR) techniques, e.g., in the petrochemical industry. • Non-thermographers who want to learn how to use their LW IR camera to complement or replace existing LDAR techniques.

ITC Professional Optical Gas Imaging—attendance by 1 person (3 days)

P/N: ITC-ADV-3031

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Website

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Customer support

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Course information	
Typical student	• Persons working in the petrochemical industry in surveillance and/or predictive maintenance and with moderate knowledge of thermography. • Persons working in surveillance and/or predictive maintenance of electrical equipment and with moderate knowledge of thermography. • Persons from other IR application fields, with moderate knowledge of VOC gases and little experience of OGI cameras.
Prerequisites	• A basic understanding and knowledge of the natural sciences. • A technical background.

Course details	
Duration	3 days (20 hours).
Structure	Theory classes with integrated hands-on practice during day 1 and the morning of days 2 and 3, and a practical laboratory exam in the afternoon of days 2 and 3.
Exam	A final exam (30 multiple-choice questions) will be taken on day 3 in the afternoon. The correct answers will be discussed afterwards by the instructor and the participants.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by 1 person. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Professional Optical Gas Imaging course is offered worldwide by ITC subsidiaries as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Professional Optical Gas Imaging course.

ITC Professional Optical Gas Imaging—group of up to 10 persons (3 days)

P/N: ITC-ADV-3039

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared (IR) thermography, background science, and applications. Participants will learn fundamental concepts of heat and chemistry, and how to set up and operate FLIR's optical gas imaging (OGI) cameras, and to adjust them for environmental conditions to find gas leaks. Laboratory sessions and/or field practice in finding leaks are a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting. After the course, participants will be able to undertake qualified inspections on the basis of existing laws, standards, and regulations.
Note: This course can only be booked via ITC due to camera export restrictions. Please inform ITC if the customer has a medium-wave (MW) or long-wave (LW) OGI camera.
Content
• Introduction. • Camera set up and operation. • Thermal science fundamentals. • Heat transfer. • IR theory. • Volatile organic compound (VOC) absorption characteristics. • Survey and reporting. • Safety considerations.
Labs
• Hands-on and practical exercises during the afternoon of day 2. • If possible, field work on-site inspecting real equipment. If not, exercises on ITC's specially tailored OGI laboratory equipment.

Course information	
Available languages	English.
Target group	• Qualified thermographers who want to learn more about the special applications of volatile gas detection within the petrochemical industry with an MW IR camera. • Qualified thermographers who want to learn more about the special applications of volatile gas detection for the surveillance of electrical equipment with an LW IR camera. • Non-thermographers who want to learn how to use their MW IR camera to complement or replace existing leak detection and repair (LDAR) techniques, e.g., in the petrochemical industry. • Non-thermographers who want to learn how to use their LW IR camera to complement or replace existing LDAR techniques.

ITC Professional Optical Gas Imaging—group of up to 10 persons (3 days)

P/N: ITC-ADV-3039

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Website

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Customer support

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Course information	
Typical student	• Persons working in the petrochemical industry in surveillance and/or predictive maintenance and with moderate knowledge of thermography. • Persons working in surveillance and/or predictive maintenance of electrical equipment and with moderate knowledge of thermography. • Persons from other IR application fields, with moderate knowledge of VOC gases and little experience of OGI cameras.
Prerequisites	• A basic understanding and knowledge of the natural sciences. • A technical background.

Course details	
Duration	3 days (20 hours).
Structure	Theory classes with integrated hands-on practice during day 1 and the morning of days 2 and 3, and a practical laboratory exam in the afternoon of days 2 and 3.
Exam	A final exam (30 multiple-choice questions) will be taken on day 3 in the afternoon. The correct answers will be discussed afterwards by the instructor and the participants.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Professional Optical Gas Imaging course is offered worldwide by ITC subsidiaries as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Professional Optical Gas Imaging course.

ITC Professional Optical Gas Imaging—group of up to 6 persons (3 days)

P/N: ITC-ADV-3036

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course bridges the gap between infrared (IR) thermography, background science, and applications. Participants will learn fundamental concepts of heat and chemistry, and how to set up and operate FLIR's optical gas imaging (OGI) cameras, and to adjust them for environmental conditions to find gas leaks. Laboratory sessions and/or field practice in finding leaks are a key part of this class. Basic inspection procedures will be covered, including equipment setup, route planning, access requirements, safety practices/equipment, and reporting. After the course, participants will be able to undertake qualified inspections on the basis of existing laws, standards, and regulations.
Note: This course can only be booked via ITC due to camera export restrictions. Please inform ITC if the customer has a medium-wave (MW) or long-wave (LW) OGI camera.
Content
• Introduction. • Camera set up and operation. • Thermal science fundamentals. • Heat transfer. • IR theory. • Volatile organic compound (VOC) absorption characteristics. • Survey and reporting. • Safety considerations.
Laboratory sessions
• Hands-on and practical exercises during the afternoon of day 2. • If possible, field work on-site inspecting real equipment. If not, exercises on ITC's specially tailored OGI laboratory equipment.

Course information	
Available languages	English, French.
Target group	• Qualified thermographers who want to learn more about the special applications of volatile gas detection within the petrochemical industry with an MW IR camera. • Qualified thermographers who want to learn more about the special applications of volatile gas detection for the surveillance of electrical equipment with an LW IR camera. • Non-thermographers who want to learn how to use their MW IR camera to complement or replace existing leak detection and repair (LDAR) techniques, e.g., in the petrochemical industry. • Non-thermographers who want to learn how to use their LW IR camera to complement or replace existing LDAR techniques.

ITC Professional Optical Gas Imaging—group of up to 6 persons (3 days)

P/N: ITC-ADV-3036

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Website

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Customer support

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Course information	
Typical student	• Persons working in the petrochemical industry in surveillance and/or predictive maintenance and with moderate knowledge of thermography. • Persons working in surveillance and/or predictive maintenance of electrical equipment and with moderate knowledge of thermography. • Persons from other IR application fields, with moderate knowledge of VOC gases and little experience of OGI cameras.
Prerequisites	• A basic understanding and knowledge of the natural sciences. • A technical background.

Course details	
Duration	3 days (20 hours). Additional days on request (ITC-ADV-4006).
Structure	Theory classes with integrated hands-on practice during day 1 and the morning of days 2 and 3, and a practical laboratory exam in the afternoon of days 2 and 3.
Exam	A final exam (30 multiple-choice questions) will be taken on day 3 in the afternoon. The correct answers will be discussed afterwards by the instructor and the participants.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Refreshments. • Diploma of attendance. • May include more, such as lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Professional Optical Gas Imaging course is offered worldwide by ITC subsidiaries as listed in "Courses offered by ITC partners" (T560393). Specific customer requests should be forwarded to the closest ITC subsidiary.
ITC trainers and Licensed trainers	"Courses taught by ITC instructors" (T560392) lists all licensed trainers and ITC trainers authorized to teach the ITC Professional Optical Gas Imaging course.

ITC Introduction to Human Temperature Measurement—additional student to an on-site course (2 days)

P/N: ITC-EXP-2025

Revision

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This full 2-day course aims to explain how to set up a procedure for the temperature control of a human population. It is designed for persons who might have to implement a control scenario (medical authorities, customs, civil security, etc.). It starts with a brief, but necessary, summary of thermal transfer and of the fundamentals of thermography. Key factors such as NETD, drift and drift compensation, baseline measurement and updating, and factors influencing the diagnosis are explained in detail. Camera setup is included. ITC recommends organizing the course simultaneously with a full-scale field test (airport, ferry port, seaport, river port, stadium, etc.).
This part number is reserved for adding additional students to a Human Temperature Measurement on site class.
Content
• Introduction. • Human physiological factors. • Basic thermography. • Infrared camera basics. • Human temperature measurement methodology.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Camera settings. • Influence of the object size on the measurement.

Course information	
Available languages	English.
Target group	• Persons with professional interest in human febrile temperature screening.
Typical student	• Airline operative personnel. • Reception personnel.
Prerequisites	• None.
Recommendations	• Basic technical understanding. • Should be organized alongside a full-scale field test.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations in the morning and practical laboratory sessions.
Exam	None.

ITC Introduction to Human Temperature Measurement—additional student to an on-site course (2 days)

P/N: ITC-EXP-2025

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Website

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Customer support

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Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training material in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	The ITC Introduction to Human Temperature Measurement course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Human Temperature Measurement course is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Introduction to Human Temperature Measurement—attendance by 1 person (2 days)

P/N: ITC-EXP-2021

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Website

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Customer support

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General description
This full 2-day course aims to explain how to set up a procedure for the temperature control of a human population. It is designed for persons who might have to implement a control scenario (medical authorities, customs, civil security, etc.). It starts with a brief, but necessary, summary of thermal transfer and of the fundamentals of thermography. Key factors such as NETD, drift and drift compensation, baseline measurement and updating, and factors influencing the diagnosis are explained in detail. Camera setup is included. ITC recommends organizing the course simultaneously with a full-scale field test (airport, ferry port, seaport, river port, stadium, etc.).
Content
• Introduction. • Human physiological factors. • Basic thermography. • Infrared camera basics. • Human temperature measurement methodology.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Camera settings. • Influence of the object size on the measurement.

Course information	
Available languages	English.
Target group	• Persons with professional interest in human febrile temperature screening.
Typical student	• Airline operative personnel. • Reception personnel.
Prerequisites	• None.
Recommendations	• Basic technical understanding. • Should be organized alongside a full-scale field test.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations in the morning, and practical laboratory sessions.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training material in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

ITC Introduction to Human Temperature Measurement—attendance by 1 person (2 days)

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course organization	
ITC	The ITC Introduction to Human Temperature Measurement course is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Introduction to Human Temperature Measurement course is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Short Course Human Temperature Measurement—group of up to 10 persons (2 days)

P/N: ITC-EXP-2029

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This full 2-day course aims to explain how to set up a procedure for the temperature control of a human population. It is designed for persons who might have to implement a control scenario (medical authorities, customs, civil security, etc.). It starts with a brief, but necessary, summary of thermal transfer and of the fundamentals of thermography. Key factors such as NETD, drift and drift compensation, baseline measurement and updating, and factors influencing the diagnosis are explained in detail. Camera setup is included. ITC recommends organizing the course simultaneously with a full-scale field test (airport, ferry port, seaport, river port, stadium, etc.).
Content
• Introduction. • Human physiological factors. • Basic thermography. • Infrared camera basics. • Human temperature measurement methodology.
Laboratory sessions
• Emissivity and the reflected apparent temperature. • Camera settings. • Influence of the object size on the measurement.

Course information	
Available languages	English.
Target group	• Persons with professional interest in human febrile temperature screening.
Typical student	• Airline operative personnel. • Reception personnel.
Prerequisites	• None.
Recommendations	• Basic technical understanding. • Should be organized alongside a full-scale field test.

Course details	
Duration	2 days.
Structure	Theory, camera handling, demonstrations in the morning and practical laboratory sessions.
Exam	None.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training material in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments, lunch, the instructor's travel expenses, etc., depending on the location and the organizing body.

ITC Short Course Human Temperature Measurement—group of up to 10 persons (2 days)

P/N: ITC-EXP-2029

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course organization	
ITC	The ITC Short Course Human Temperature Measurement is offered worldwide by ITC and partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	The ITC Short Course Human Temperature Measurement is taught by qualified ITC instructors with particular experience in the field of electrical installations.

ITC Software Course—attendance by 1 person (per day)

P/N: ITC-SOW-0001

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
This course is for users of FLIR software such as FLIR Tools+ or FLIR ResearchIR. Please note that the content and laboratory sessions depend on the software being taught.
Content
• System requirements. • Configuration. • Analyzing functions. • Templates. • Reporting functions. • Data exchange.
Laboratory sessions
• System setup. • Importing data. • Data analysis. • Creating templates. • Creating reports. • Exporting data. • Triggering.

Course information	
Available languages	English, French, German. Other languages on request.
Target group	• Persons interested in, or users, of the specific software.
Typical student	• Consultants interested in reporting. • Building inspectors with reporting needs. • R&D staff interested in advanced data analysis.
Prerequisites	• Laptop with installed software—full version or 30 day demo (download from www.flir.com).
Recommendations	• Basic knowledge of thermography and related areas.

Course details	
Duration	Depends on the software.
Structure	Short system introduction, then demostrations and practical exercises.
Exam	None.

ITC Software Course—attendance by 1 person (per day)

P/N: ITC-SOW-0001

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials. • Diploma of attendance. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	Software courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner or FLIR sales representative.
ITC trainers and licensed trainers	Software courses are taught by ITC qualified instructors experienced in using the software that is the subject of the course.

ITC Software Course—group of up to 10 persons (per day)

P/N: ITC-SOW-0009

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description	
This course is for users of FLIR software such as FLIR Tools+ or FLIR ResearchIR. Please note that the content and laboratory sessions depend on the software being taught.	
Content	
• System requirements. • Configuration. • Analyzing functions. • Templates. • Reporting functions. • Data exchange.	
Laboratory sessions	
• System setup. • Importing data. • Data analysis. • Creating templates. • Creating reports. • Exporting data. • Triggering.	

Course information	
Available languages	English, French, German. Other languages on request.
Target group	• Persons interested in, or users, of the specific software.
Typical student	• Consultants interested in reporting. • Building inspectors with reporting needs. • R&D staff interested in advanced data analysis.
Prerequisites	• Laptop with installed software—full version or 30 day demo (download from www.flir.com).
Recommendations	• Basic knowledge of thermography and related areas.

Course details	
Duration	Depends on the software.
Structure	Short system introduction, then demostrations and practical exercises.
Exam	None.

ITC Software Course—group of up to 10 persons (per day)

P/N: ITC-SOW-0009

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Website

http://www.flir.com

Customer support

http://support.flir.com

Course details	
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments, lunch, the instructor's travel expenses, etc., depending on the location and the organizing body.

Course organization	
ITC	Software courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner or FLIR sales representative.
ITC trainers and licensed trainers	Software courses are taught by ITC qualified instructors experienced in using the software that is the subject of the course.

ITC training 1 day—attendance by 1 person

P/N: ITC-EXP-1001

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Website

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Customer support

http://support.flir.com

General description
Customized courses or courses that are offered locally. Please contact you nearest ITC or FLIR office for information.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, Dutch, French, German, Italian, Spanish, Swedish. Other languages on request.
Target group	• Depends on the course.
Typical student	• Persons with very specific requirements. • Persons requesting customized training, e.g., R&D training. • Persons requesting product/system training.
Prerequisites	• Depends on the course.
Recommendations	• Depends on the course.

Course details	
Duration	1 day.
Structure	Typically theory and practical exercises.
Exam	On request.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	Customized courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	Customized courses are taught by ITC qualified trainers with experience in the relevant field of application.

ITC training 1 day—group of up to 10 persons

P/N: ITC-EXP-1009

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Customized courses or courses that are offered locally. Please contact you nearest ITC or FLIR office for information.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, Dutch, French, German, Italian, Spanish, Swedish. Other languages on request.
Target group	• Depends on the course.
Typical student	• Persons with very specific requirements. • Persons requesting customized training, e.g., R&D training. • Persons requesting product/system training.
Prerequisites	• Depends on the course.
Recommendations	• Depends on the course.

Course details	
Duration	1 day.
Structure	Typically theory and practical exercises.
Exam	On request.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	Customized courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	Customized courses are taught by ITC qualified trainers with experience in the relevant field of application.

ITC training 2 days—attendance by 1 person

P/N: ITC-EXP-2001

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Customized courses or courses that are offered locally. Please contact you nearest ITC or FLIR office for information.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, Dutch, French, German, Italian, Spanish, Swedish. Other languages on request.
Target group	• Depends on the course.
Typical student	• Persons with very specific requirements. • Persons requesting customized training, e.g., R&D training. • Persons requesting product/system training.
Pre-requisites	• Depends on the course.
Recommendations	• Depends on the course.

Course details	
Duration	2 days.
Structure	Typically theory and practical exercises.
Exam	On request.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	Customized courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	Customized courses are taught by ITC qualified trainers with experience in the relevant field of application.

ITC training 2 days—group of up to 10 persons

P/N: ITC-EXP-2009

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Customized courses or courses that are offered locally. Please contact you nearest ITC or FLIR office for information.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, Dutch, French, German, Italian, Spanish, Swedish. Other languages on request.
Target group	• Depends on the course.
Typical student	• Persons with very specific requirements. • Persons requesting customized training, e.g., R&D training. • Persons requesting product/system training.
Prerequisites	• Depends on the course.
Recommendations	• Depends on the course.

Course details	
Duration	2 days.
Structure	Typically theory and practical exercises.
Exam	On request.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by a group of up to 10 persons. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	Customized courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC trainers and licensed trainers	Customized courses are taught by ITC qualified trainers with experience in the relevant field of application.

ITC training 3 days—attendance by 1 person

P/N: ITC-EXP-3001

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Website

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Customer support

http://support.flir.com

General description
Customized courses or courses that are offered locally. Please contact you nearest ITC or FLIR office for information.
Content
• Customized.
Laboratory sessions
• Customized.

Course information	
Available languages	English, Dutch, French, German, Italian, Spanish, Swedish. Other languages on request.
Target group	• Depends on the course.
Typical student	• Persons with very specific requirements. • Persons requesting customized training, e.g., R&D training. • Persons requesting product/system training.
Pre-requisites	• Depends on the course.
Recommendations	• Depends on the course.

Course details	
Duration	3 days.
Structure	Typically theory and practical exercises.
Exam	On request.
Course fee includes	• Tuition by an ITC-licensed instructor. • Training materials in printed format. • Diploma of attendance. • Attendance by 1 person. • May include more, such as refreshments or lunch, depending on the location and the organizing body.

Course organization	
ITC	Customized courses are offered worldwide by ITC and its partners. Specific customer requests should be forwarded to the closest ITC, ITC partner, or FLIR sales representative.
ITC Trainers and Licensed Trainers	Customized courses are taught by ITC qualified trainers with experience in the relevant field of application.

ITC Training FLIR Software—attendance by 1 person (1 day)

P/N: ITC-SOW-1001

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
ITC Training FLIR Software—attendance by 1 person (1 day).

Course details	
Duration	1 day.

ITC Training FLIR Software—attendance by 1 person (2 days)

P/N: ITC-SOW-2001

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Website

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Customer support

http://support.flir.com

General description
ITC Training FLIR Software—attendance by 1 person (2 days).

Course details	
Duration	2 days.

Travel time for the instructor

P/N: ITC-TFT-0100

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Travel time for the instructor.

Repeat Certification DIN EN ISO 9712 TT Level 1—attendance by 1 person (1 day)

P/N: ITC-FEE-0130

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Repeat Certification DIN EN ISO 9712 TT Level 1.

Course information	
Available languages	German (Austria, Germany, Switzerland only).

Course details	
Duration	1 day.

Travel and lodging expenses for the instructor (Russia/CIS, North Africa)

P/N: ITC-TOL-1002

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Website

http://www.flir.com

Customer support

http://support.flir.com

General description
Travel and lodging expenses for the instructor (Russia/CIS, North Africa)

Travel and lodging expenses for the instructor (Middle East, Central and South Africa)

P/N: ITC-TOL-1003

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Website

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Customer support

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General description
Travel and lodging expenses for the instructor (Middle East, Central and South Africa).

Travel and lodging expenses for the instructor (Europe, Balkans, Turkey, Cyprus)

P/N: ITC-TOL-1001

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Website

http://www.flir.com

Customer support

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General description
Travel and lodging expenses for the instructor (Europe, Balkans, Turkey, Cyprus).

Travel and lodging expenses for the instructor (other)

P/N: ITC-TOL-1005

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Website

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Customer support

http://support.flir.com

General description
Travel and lodging expenses for the instructor (other).

Travel and lodging expenses for the instructor (various)

P/N: ITC-TOL-1004

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Website

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Customer support

http://support.flir.com

General description
Travel and lodging expenses for the instructor (various).

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