MSX® THERMAL CAMERA

FLIR TG165-X™

The FLIR TG165-X dramatically reduces inspection and diagnostic time by helping you visually pinpoint the source of electrical, mechanical, and HVAC/R system faults. Instead of searching for temperature anomalies with a single-spot IR thermometer, this non-contact temperature measurement and imaging tool displays a thermal picture of your target including any hot spots or cold zones that could indicate a problem. See wires or components clearly and even read labels thanks to FLIR patented MSX image enhancement, which adds visual details to full thermal images. The bullseye laser helps ensure you're always targeting the right component for measurement while the drop-tested, portable design with easy-to-use buttons and settings help you complete the job quickly and stress-free. With internal storage for up to 50,000 images and rechargeable Li-ion battery, the FLIR TG165-X is ready to go right out of the box.

www.flir.com/TG165-X

PINPOINT THE SOURCE OF SYSTEM FAILURES

Troubleshoot electrical, mechanical, and building issues with this handheld thermal imager

- See temperature anomalies immediately in the thermal image instead of searching for them with a single-spot IR thermometer
- Speed inspections with a thermal view that tells you instantly whether a target has overheating components or hidden air leaks
- Measure a wide range of temperatures, from -25°C to 300°C (-13°F to 572°F), with an accuracy of up to ±1.5°C (±3°F)

COMPLETE INSPECTIONS QUICKLY & EASILY

See the detail needed to troubleshoot faults and gauge their severity

- Interpret images faster and easier with MSX® two-camera technology, which enhances thermal images with crisp visual details
- Identify the exact area that you're measuring using the bullseye laser pointer
- Capture thermal MSX or visual images plus temperature readings with a simple trigger-pull
- Demonstrate the problem was found and corrected with recorded before-and-after images

WORK WITH CONFIDENCE

Take the TG165-X anywhere thanks to its portable design and protective IP54 enclosure

- Work safely and worry-free knowing that the thermal imager can withstand a 2-meter drop
- See into dark or hard-to-reach areas with the bright LED worklight
- Easily view live thermal or recorded images on 2.4-in. display
- Rely on the security of the world-class FLIR 2-10 warranty

SPECIFICATIONS

Imaging and optical data	
IR resolution	80 × 60 pixels
Digital image enhancement	No
Thermal sensitivity/NETD	<70 mK
Field of view (FOV)	51° × 66°
Minimum focus distance	0.3 m (0.98 ft)
Distance to spot ratio	24:1
Pseudo dual range	No
Image frequency	8.7 Hz
Focus	Fixed
Detector data	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	17 µm
Image presentation	
Display resolution	320 × 240 pixels
Screen	2.4 in. portrait, 80° viewing angle
Image adjustment	Automatic
Image modes	• MSX® (Multi Spectral Dynamic Imaging) • Visual (with temperature reading)
Gallery	Yes
Measurement and analysis	
Object temperature range	-25°C to 300°C (-13°F to 572°F)
Accuracy	• 50°C to 100°C (122°F to 212°F) - acc. of ±1.5°C (±3°F) • 0°C to 50°C/100°C to 300°C (32°F to 122°F/212°F to 572°F) - acc. of ±2.5°C (±5°F) • -25°C to 0°C (-13°F to 32°F) - acc. of ±3°C (±7°F)
Minimum measurement distance	0.26 m (0.85 ft.)
Spotmeter	Center spot on/off
Color palettes	Iron, Rainbow, Whitehot, Blackhot, Arctic, Lava
Set-up	
Set-up commands	• Local adaptation of units, language, date, and time formats • Screen brightness (high, medium, low) • Gallery, deletion of images
Emissivity correction	Yes: 4 pre-set levels with custom adjustment of 0.1–0.99

Storage of images	
Storage media	4 GB
Image storage capacity	50,000 images
Image file format	JPEG with spot temp in meta tag
Digital camera	
Resolution	2 MP (1600 × 1200 pixels)
Focus	Fixed
Field of view	71° × 56°, adapts to the IR lens
Worklight and Laser	
Worklight	LED on/off
Light output	100 lumens
Bullseye laser pointer	Indicating the size of the measurement area
Laser type	Class 1
Data communication interfaces	
Interfaces	USB 2.0
USB standard	USB Type-C High Speed; data transfer/power
Power system	
Battery type	Rechargeable Li-ion, 3.7 V battery
Battery operating time	5 hours of scanning (LCM medium brightness) 4.5 hours with laser on (LCM medium brightness)
Battery charge life	30 days minimum
Charging system	Battery is charged inside the camera; 4 hrs to 90%, 6 hrs. to 100%
Power management	Adjustable: off, 5 minutes, 15 minutes, 30 minutes
General	
Operating temperature range	-10°C to 45°C (14°F to 113°F)
Encapsulation	IP54 (IEC60529)
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Drop test	Designed for 2 m (6.56 ft.)
Safety	CE/CB/EN61010/UL
Weight	0.394 kg (13.9 oz)
Size (L × W × H)	210 × 64 × 81 mm (8.3 × 2.5 × 3.2 in)
Tripod mounting	UNC ¼"-20
Country of origin	Taiwan

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

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THERMAL CAMERA

FLIR TG267™

The FLIR TG267 takes you beyond the limitations of single-spot IR thermometers, allowing you to see the hot and cold spots that can indicate serious issues. Examine everything from electrical connections to mechanical breakdowns quickly and accurately. This handheld thermal camera reduces diagnostic time while simplifying reporting and long-term monitoring of equipment and systems throughout a facility. FLIR MSX® (Multi-Spectral Dynamic Imaging) improves image clarity by embossing visual scene details on thermal images, providing added context to help you accurately target potential faults and troubleshoot repairs. Record images to monitor maintenance history and reassure your customer that problems have been resolved. With a simple user interface, Bluetooth® connectivity, storage for up to 50,000 images, and rechargeable Li-ion battery, FLIR TG267 is ready to go out of the box.

www.flir.com/TG267

IDENTIFY PROBLEMS QUICKLY

Outfit your toolbox with this combination non-contact temperature measurement and thermal imaging camera

- Experience the difference you can make with a true 160 × 120 IR pixel imager (19,200 pixels)
- Measure a wide range of temperatures: -25°C to 380°C (-13°F to 716°F)
- Add contact-measurement readings with the included Type-K thermocouple (up to 260°C/500°F)
- Identify the exact area that you're measuring using the bullseye laser pointer

PRODUCE CRISP THERMAL IMAGES

See the detail needed to troubleshoot faults and gauge their severity

- Diagnose problems faster with FLIR-patented MSX image enhancement
- Display and capture thermal or visual images with temperature readings
- Compare before-and-after stored images with FLIR Tools® software to demonstrate the problem and your fix
- View thermal images in your preferred color palette on the bright 2.4-inch color display

WORK WITH CONFIDENCE IN RUGGED ENVIRONMENTS

Take the TG267 anywhere thanks to its portable design and protective IP54 enclosure

- Work safely and worry-free knowing that the thermal imager can withstand a 2-meter drop
- Peer into the darkness and hard-to-reach areas with the bright LED flashlight
- Upload measurement and images in the field via a METERLiNK® connection to the FLIR Tools mobile app
- Rely on the security of the world-class FLIR 2-10 warranty

SPECIFICATIONS

Imaging and optical data	
IR resolution	160 × 120 pixels
Digital image enhancement	Yes
Thermal sensitivity/NETD	<70 mK
Field of view (FOV)	57° × 44°
Minimum focus distance	0.3 m (0.98 ft)
Distance to spot ratio	24:1
Image frequency	8.7 Hz
Focus	Fixed
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	12 µm
Image presentation	
Display resolution	320 × 240 pixels
Screen size	2.4 in. portrait
Color palettes	Iron , Rainbow, White hot, Black hot, Arctic, Lava
Image adjustment	Automatic
Image modes	MSX® (Multi Spectral Dynamic Imaging) Visual with temperature reading
Gallery	Yes
Measurement and analysis	
Object temperature range	-25°C to 380°C (-13°F to 716°F)
Measurement accuracy	-25°C to 50°C (-13°F to 122°F): up to ±3°C (±7°F) 50 to 100°C (122 to 212°F): ±1.5°C (±3°F) or ± 1.5% whichever is greater 100°C to 380°C (212°F to 716°F): ±2.5°C (±6°F) or ± 2.5% whichever is greater
IR temperature resolution	0.1°C (0.2°F)
Repeatability of reading	±1% of reading or ±1°C (2°F), whichever is greater
Response time	150 ms
IR thermometer measurement	Continuous scanning
Minimum measurement distance	0.26 m (0.85 ft)
Type-K range	Included Type-K probe: up to 260°C (500°F)
Type-K accuracy	± (1.0% + 3°C (7°F))
Spotmeter	Center spot on/off

Set-up and service functions	
Set-up commands	Local adaptation of units, language, date, and time formats Screen brightness (high, medium, low) Gallery, deletion of images
Emissivity correction	Yes: 4 preset levels with custom adjustment of 0.1–0.99
Image storage and visual camera	
Storage capacity on 4 GB card	50,000 images
Image file format	JPEG w/ spot temp data
Digital camera resolution	2 MP (1600 × 1200 pixels)
Field of view (FOV)	71° × 56°, adapts to IR lens
Light and laser	
Flashlight	100 lumens LED, on/off option
Class 1 laser	Projects center spot and outlines circular measurement area to indicate size
Data communcation interfaces	
Bluetooth®	BLE
USB	Type-C: data transfer, power
Additional data	
Battery type	Rechargeable 3.7 V Li-ion battery
Battery operating time	5 hrs scanning
Battery charging time	4 hrs to 90%
Power management	Adjustable: off, 5 min, 15 min, 30 min
Shock/vibration	25 g (IEC 60068-2-27); 2 g (IEC 60068-2-6)
Drop	Designed for 2 m (6.56 ft)
Weight	0.394 kg (13.9 oz)
Size (L × W × H)	210 × 64 × 81 mm (8.3 × 2.5 × 3.2 in)

Package contents

Camera, wrist strap lanyard, USB cable, pouch, thermocouple, printed documentation

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19-1426-INS-TG267

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THERMAL CAMERA FOR AUTOMOTIVE DIAGNOSTICS

FLIR TG275™

The TG275 is the first FLIR camera specifically designed for the automotive maintenance and repair professional. Featuring IGM™ (Infrared Guided Measurement), this diagnostic tool combines non-contact temperature measurement and thermal imaging to help you quickly find the source of heat-related problems and spot potential faults early. Use the TG275 to record before and after images of repairs so you can reassure customers that the problem has been found and fixed. Affordable and easy to use, the TG275 is ideal for troubleshooting issues related to batteries, relays and switches, exhaust manifolds, AC condensers, drive train components, and much more.

www.flir.com/tg275

IDENTIFY PROBLEMS QUICKLY

This two-in-one temperature measurement and thermal imaging tool helps you troubleshoot failed systems fast

- See beyond the limitations of single-spot IR thermometers with this 160 × 120 (19,200 pixels) thermal imager
- Measure a wide range of temperatures, from -25°C to 550°C (-13°F to 1022°F)
- Ensure you're measuring the right component by targeting the area with a high-precision, energy-efficient laser

SUPERIOR IMAGE QUALITY AT AN AFFORDABLE PRICE

See the vehicle in a whole new way thanks to vibrant display and image enhancement features

- FLIR patented MSX® enhancement adds sharp visual detail to thermal images, making it easier to diagnose problems
- Bright 2.4-inch screen clearly displays thermal images in your preferred color palette
- Image recording feature helps to demonstrate that you correctly identified the source of the problem and made the appropriate repairs

STANDS UP TO TOUGH WORK ENVIRONMENTS

The TG275 is rugged and reliable enough for use in auto shops, outside, or anywhere

- Work safely while still measuring accurately thanks to the camera's 30:1 spot size ratio
- Rugged design with an IP54 enclosure that protects the camera from dirt, dust, and oil
- See into dark, difficult-to-reach areas with the help of the bright LED flashlight

SPECIFICATIONS

Image and Optical Data	
IR resolution	160 × 120 (19,200 pixels)
Thermal sensitivity/NETD	<70 mK
Field of View (FOV)	57° × 44°
Distance-to-spot ratio	30:1
Minimum focus distance	0.3 m (0.98 ft.)
Imaging range	–25°C to 550°C (–13°F to 1022°F)
Image frequency	8.7 Hz
Focus	Fixed
Digital camera	2 MP, 71° × 56° FOV
Image Presentation and Modes	
Display resolution	320 × 240 pixels
Screen size	2.4 in color LCD, portrait orientation
Aspect ratio	4:3
Image adjustment	Automatic
Visual image	Yes
MSX®	Yes
Gallery	Yes
Color palettes	Iron, Rainbow, White hot, Black hot, Arctic, Lava
Image storage capacity	4 GB for storage of up to 50,000 pictures
Image file format	JPEG
Measurement and Analysis	
Camera temperature range	–25°C to 550°C (–13°F to 1022°F)
Measurement accuracy	±1.5°C (2.7°F) for temperatures 50°C to 100°C (122°F to 212°F) Up to ±3°C (±5.4°F) for temperatures -25°C to 50°C (-13°F to 122°F) Up to ±3°C (±5.4°F) for temperatures 100°C to 550°C (212°F to 1022°F)
IR temperature resolution	0.1°C (0.2°F)
IR thermometer measurement	Continuous scanning
Spotmeter	Center spot on/off
Emissivity correction	Yes: 4 preset levels with custom adjustment of 0.1 to 0.99
Set-up commands	Local adaptation of units, language, date, and time formats Screen brightness (high, medium, low) Gallery, deletion of images
General	
Laser pointer	Center spot and circular area
Laser	Class 1
Interfaces	USB 2.0, Bluetooth® BLE
USB	USB Type-C: data transfer/power
Available languages	Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwgian, Polish, Portuguese, Russian, simplified Chinese, Spanish, Swedish, traditional Chinese, Turkish
Flashlight	Bright LED flashlight
Battery operating time	5 hours continuous scanning
Battery type	Rechargeable Li-ion battery
Battery voltage	3.7 V
Battery charging time	4 hours to 90%, 6 hours to 100%
Power management	Adjustable: off, 5 min, 15 min, 30 min
IP rating	IP54 (IEC60529)
Drop	Designed for 2 m (6.56 ft)
Safety	CE/CB/EN61010/UL
Operating temperature range	–10°C to 45°C (14°F to 113°F)
Tripod mounting	UNC 1/4"-20
Weight (including battery)	0.394 kg (13.9 oz)
Size (L x W x H)	210 mm × 64 mm × 81 mm (8.3 in × 2.5 in × 3.2 in)
Box contents	Thermal camera, wrist strap lanyard, USB cable, pouch, printed documentation

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

** After product registration on www.flir.com*

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19-1206-INS

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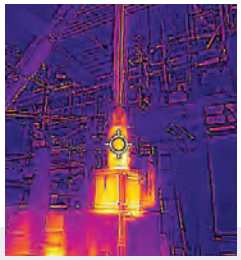
INDUSTRIAL HIGH-TEMP THERMAL CAMERA

FLIR TG297™

The FLIR TG297 combines accurate measurement with the ability to image temperatures as high as 1030°C (1886°F) in a one-of-a-kind diagnostic tool. Now you can both see and measure the source of common issues involving electrical and mechanical systems, diagnose breakdowns, and verify manufacturing processes. Examine anything from a furnace to a forge using thermal enhanced with FLIR MSX® (Multi-Spectral Dynamic Imaging), which improves image clarity by embossing visual scene details onto full thermal images. This can provide the perspective and context you need to accurately target potential faults, troubleshoot repairs, and monitor processes. Record images to assure team members that machinery and systems are functioning safely and at peak efficiency. With a simple user interface, Bluetooth® connectivity, storage for up to 50,000 images, and rechargeable Li-ion battery, the FLIR TG297 is ready to go out of the box.

www.flir.com/TG297



IDENTIFY PROBLEMS QUICKLY

Outfit your toolbox with this combination non-contact temperature measurement and thermal imaging camera

- Experience the difference you can make with a true 160 × 120 IR pixel imager (19,200 pixels)
- High-temperature filter allows camera to measure and image temperatures up to 1030°C (1886°F)
- Work from a safe distance while scanning high-temperature objects thanks to the 30:1 spot ratio
- Identify the exact area that you're measuring using the bullseye laser pointer

PRODUCE CRISP IMAGES FOR EASY INTERPRETATION

See the detail needed to troubleshoot faults and gauge their severity

- Diagnose problems faster with FLIR-patented MSX image enhancement
- Display and capture thermal or visual images with temperature readings
- Compare before-and-after stored images to demonstrate the problem and the repair
- View thermal images in your preferred color palette on the bright 2.4-inch color display

WORK WITH CONFIDENCE IN RUGGED ENVIRONMENTS

Take the TG297 anywhere thanks to its portable design and protective IP54 enclosure

- Work safely and worry-free knowing that the thermal imager can withstand a 2-meter drop
- Peer into the darkness and hard-to-reach areas with the bright LED flashlight
- Find this compact, durable imager in a crowded tool bag easily, thanks to the ergonomic handle design
- Rely on the security of the world-class FLIR 2-10 warranty

SPECIFICATIONS

Imaging and optical data	
IR resolution	160 × 120 pixels
Digital image enhancement	Yes
Thermal sensitivity/NETD	<70 mK
Field of view (FOV)	57° × 44°
Minimum focus distance	0.3 m (0.98 ft)
Distance to spot ratio	30:1
Image frequency	8.7 Hz
Focus	Fixed
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	12 µm

Image presentation	
Display resolution	320 × 240 pixels
Screen size	2.4 in. portrait
Color palettes	Iron , Rainbow, White hot, Black hot, Arctic, Lava
Image adjustment	Automatic
Image modes	MSX® (Multi Spectral Dynamic Imaging) Visual with temperature reading
Gallery	Yes

Measurement and analysis	
Object temperature range	-25°C to 1030°C (-13°F to 1886°F)
Measurement accuracy	-25°C to 50°C (-13°F to 122°F): up to ±3°C (±7°F) 50 to 100°C (122 to 212°F): ±1.5°C (±3°F) or ±1.5%, whichever is greater 100°C to 500°C (212°F to 932°F): ±2.5°C (±6°F) or ± 2.5% whichever is greater 500°C to 1030°C (932°F to 1886°F): ±3°C (±7°F) or ± 3%, whichever is greater
IR temperature resolution	0.1°C (0.2°F)
Repeatability of reading	±1% of reading or ±1°C (2°F), whichever is greater
Response time	150 ms
IR thermometer measurement	Continuous scanning
Minimum measurement distance	0.26 m (0.85 ft)
Spotmeter	Center spot on/off

Set-up and service functions	
Set-up commands	Local adaptation of units, language, date, and time formats Screen brightness (high, medium, low) Gallery, deletion of images
Emissivity correction	Yes: 4 pre-set levels with custom adjustment of 0.1–0.99

Image storage and visual camera	
Storage capacity on 4 GB card	50,000 images
Image file format	JPEG w/ spot temp data
Digital camera resolution	2 MP (1600 × 1200 pixels)
Field of view (FOV)	71° × 56°, adapts to IR lens

Light and laser	
Flashlight	100 lumens LED, on/off option
Class 1 laser	Projects center spot and outlines circular measurement area to indicate size

Data communcation interfaces	
Bluetooth®	BLE
USB	Type-C: data transfer, power

Additional data	
Battery type	Rechargeable 3.7 V Li-ion battery
Battery operating time	5 hrs scanning
Battery charging time	4 hrs to 90%
Power management	Adjustable: off, 5 min, 15 min, 30 min
Shock/vibration	25 g (IEC 60068-2-27); 2 g (IEC 60068-2-6)
Drop	Designed for 2 m (6.56 ft)
Weight	0.394 kg (13.9 oz)
Size (L × W × H)	210 × 64 × 81 mm (8.3 × 2.5 × 3.2 in)

Package contents
Camera, wrist strap lanyard, USB cable, pouch, printed documentation

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