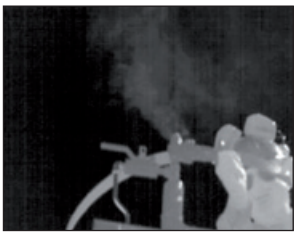
FLIR GF-Series

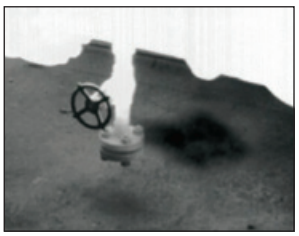
FLIR GF346

Revolutionary thermal imaging camera for detecting carbon monoxide

The new FLIR GF346 is a revolutionary thermal imaging camera capable of finding carbon monoxide and a number of other gases. It is unbeatable for detecting even the smallest leaks. The FLIR GF346 offers a complete unique method of tracing leaks to their source by visualizing this in an image.

- *Real-time visualization of gas leaks*
- *Can be used for a wide variety of thermal inspections*
- *Measures temperatures in a non-contact mode with an accuracy of +/-1%*
- *Temperature range: from -20°C to +300°C*
- *Internal data/video storage*
- *High sensitivity mode: detects even very small amounts of leaking gas*
- *Digital camera and GPS*
- *High-performance LCD and tiltable high-resolution viewfinder*
- *Lightweight and robust design*
- *Multi-angle handle with integrated direct-access buttons*





Scanning large areas from a safe distance
FLIR GF346 can scan large areas rapidly and pinpoint leaks in real time. It is ideal for monitoring plants where it is difficult to reach components with contact measurement tools such as gas sniffers. Literally thousands of components can be scanned per shift without the need to interrupt the process. FLIR GF346 reduces repair downtime and provides verification of the process. And above all it is exceptionally safe, allowing potentially dangerous leaks to be monitored from a safe distance.

FLIR GF346 will significantly improve work safety, environmental, and regulatory compliance.

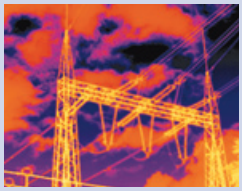
Detects the following gases:

- Acetonitrile
- Acetyl cyanide
- Arsine
- Bromine isocyanate
- Carbon monoxide
- Chlorine isocyanate
- Chlorodimethylsilane
- Cyanogen bromide
- Dichloromethylsilane
- Ethenone
- Ethyl thiocyanate
- Germane
- Hexyl isocyanide
- Ketene
- Methyl thiocyanate
- Nitrous oxide
- Silane

Tiltable, flip-out 4.3" High Contrast Color LCD allows you to view targets more safely from any angle.

Automatic (one Touch) and Manual Focus with 1-8x continuous digital zoom helps you to deliver the perfect picture at ease.

More than gas detection



The FLIR GF346 can be used for more than gas detection only. The camera can also be used for general predictive maintenance. High- and low voltage electrical installations, mechanical systems, pipework and insulation, it can all seamlessly be inspected with the FLIR GF346.

FLIR GF346 Technical Specifications

Imaging and optical data	
Field of view (FOV) / Minimum focus distance	24° × 18° / 0.3 m
Focal length	23 mm
F-number	1.5
Thermal sensitivity/NETD	<25 mK @ +30°C
Focus	Automatic (one touch) or manual (electric or on the lens)
Zoom	1–8× continuous, digital zoom
Digital image enhancement	Noise reduction filter, High Sensitivity Mode (HSM)
Focal Plane Array (FPA) / Spectral range	Cooled InSb / Built-in cold band pass filter 4.52 - 4.67 µm
IR resolution	320 × 240 pixels
Detector pitch	30 µm
Sensor cooling	Stirling Microcooler (FLIR MC-3)
Electronics and data rate	
Full frame rate	60 Hz
Image presentation	
Display	Built-in widescreen, 4.3 in. LCD, 800 × 480 pixels
Viewfinder	Built-in, tiltable OLED, 800 × 480 pixels
Automatic image adjustment	Continuous/manual; linear or histogram based
Manual image adjustment	Level/span
Image modes	IR-image, visual image, High Sensitivity Mode (HSM)
Measurement	
Temperature range	–20 °C to +300 °C
Accuracy	+/- 1 °C or +/- 1% of reading for temperature range 0° C to +300 °C
Measurement analysis	
Spotmeter	10
Area	5 boxes with max./min./average
Profile	1 live line (horizontal or vertical)
Difference temperature	Delta temperature between measurement functions or reference temperature
Reference temperature	Manually set or captured from any measurement function
Emissivity correction	Variable from 0.01 to 1.0 or selected from editable materials list
Set-up	
Menu commands	Level, span Auto adjust continuous/manual/semi-automatic Zoom Palette Overlay recording mode Start/stop recording Store image Playback/recall image
Color palettes	Iron, Gray, Rainbow
Set-up commands	1 programmable button, local adaptation of units, language, date and time formats
Storage of images	
Image storage type	Removable SD or SDHC Memory Card, two card slots
Image storage capacity	> 1200 images (JPEG) with post process capability per GB on memory card
Image storage mode	IR/visual images Visual image can automatically be associated with corresponding IR image
Periodic image storage	Every 10 seconds up to 24 hours
File formats	Standard JPEG, 14 bit measurement data included
GPS	Location data automatically added to every image from built-in GPS
Video recording and streaming	
Non radiometric IR-video recording	MPEG4/H.264 (up to 60 minutes/clip) to memory card. Visual image can automatically be associated with corresponding recording of non-radiometric IR-video.
Visual video recording	MPEG4/H.264 (25 minutes/clip) to memory card
Non radiometric IR-video streaming	RTP/H.264
Digital camera	
Built-in digital camera	3.2 Mpixel, auto focus, and two video lamps
Laser pointer	
Laser	Activated by dedicated button
Data communication interfaces	
USB	USB-A: Connect external USB device (e.g. memory stick) USB Mini-B: Data transfer to and from PC
USB, standard	USB Mini-B: 2.0 High Speed
Video out	Digital Video Output (image)
Power system	
Battery type	Rechargeable Li Ion battery
Battery voltage	7.2 V
Battery operating time	> 3 hours at 25°C and typical use
Charging system	In camera (AC adapter or 12 V from a vehicle) or 2-bay charger
Power	12,5 W typically
Start-up time	Typically 7 min. @ 25°C

Environmental data	
Operating temperature range	–20°C to +50°C
Storage temperature range	–30°C to +60°C
Humidity (operating and storage)	IEC 68-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F) (2 cycl)
EMC	EN61000-6-4 (Emission) EN61000-6-2 (Immunity) FCC 47 CFR Part 15 class A (Emission) EN 61 000-4-8, L5
Encapsulation	IP 54 (IEC 60529)
Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)
Physical data	
Camera weight, incl. lens and battery	2.48 kg
Cameras size, incl. lens (L × W × H)	306 × 169 × 161 mm
Tripod mounting	UNC, ¼"-20
Housing material	Aluminium, Magnesium
Grip material	TPE Thermoplastic Elastomers

Scope of delivery
Infrared camera with lens
Hard transport case
Battery charger
Battery, 2 ea.
Calibration certificate
Downloads brochure
FLIR QuickReport™ PC software CD-ROM
FLIR VideoReport™ PC software CD-ROM
HDMI-DVI cable
HDMI-HDMI cable
Lens cap (mounted on lens)
Memory card
Memory card adapter
Power supply, incl. multi-plugs
Printed Getting Started Guide
Registration card
Service & training brochure
Shoulder strap
USB cable
User documentation CD-ROM

Applications:

Steel manufacturing

Petrochemical & Chemical industries

Specifications and prices subject to change without notice. Images used for illustration purposes only.

FLIR Advanced Thermal Solutions
19, bld Bidault
77183 Croissy-Beaubourg
France
Tel.: +33 (0)1 60 37 01 00
Fax: +33 (0)1 64 11 37 55
e-mail : research@flir.com

FLIR Commercial Systems B.V.
The Netherlands
Tel. : +31 (0) 765 79 41 94
Fax : +31 (0) 765 79 41 99

FLIR Systems Sweden
Tel.: +46 (0)8 753 25 00
Fax: +46 (0)8 753 23 64

FLIR Systems UK
Tel.: +44 (0)1732 220 011
Fax: +44 (0)1732 843 707

FLIR Systems Germany
Tel.: +49 (0)69 95 00 900
Fax: +49 (0)69 95 00 9040

FLIR Systems Italy
Tel.: +39 (0)2 99 45 10 01
Fax: +39 (0)2 99 69 24 08

FLIR Systems Spain
Tel. : +34 91 573 48 27
Fax.: +34 91 662 97 48

FLIR Systems, Middle East FZE
United Arab Emirates
Tel.: +971 4 299 6898
Fax: +971 4 299 6895

FLIR Systems Russia
Tel.: + 7 495 669 70 72
Fax: + 7 495 669 70 72

www.flir.com

T559321 (en-SV)_A