

FLIR GF320

Infrared camera for gas leak detection and electrical inspections

The new FLIR GF320 is a revolutionary infrared camera capable of finding Methane emissions or other Volatile Organic Compounds (VOC). It is unbeatable for detecting even the smallest gas leaks.

- Real-time visualization of even very small amount of gas leak thanks to the Excellent High Sensitivity Mode (<25mK)
- Measures temperatures from -40 °C to +350 °C with ±1 °C accuracy
- Built-in Video Recording, Digital Camera, Laser pointer
- Embedded GPS Data helps to identify the precise locations of non-compliance
- High performance LCD & Tilttable high resolution viewfinder delivers bright and vivid image in poor lighting environment or under sunlight
- Lightweight (2.4kg) and robust design
- User-Inspired Ergonomics: Rotating Handle, Direct Access Buttons
- Dual use, detects gas leaks and carries out electrical inspections.



Visualized gas leak in real-time

FLIR GF320 can scan large areas rapidly and pinpoint leaks in real time. It is ideal for monitoring plants that it is difficult to reach with contact measurement tools. Literally thousands of components can be scanned per shift without the need to interrupt the process. It reduces repair downtime and provides verification of the process. And above all it is exceptionally safe, allowing potentially dangerous leaks to be monitored from several meters away.

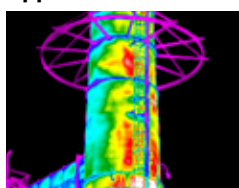
Multi-purposes in gas leak detection

FLIR GF320 will significantly improve your work safety, environmental and regulatory compliance, not to mention helping to improve the bottom line by finding leaks that essentially decrease profits.

Detects the following gases:

- Benzene
- Ethanol
- Ethylbenzene
- Heptane
- Hexane
- Isoprene
- Methanol
- MEK
- MIBK
- Octane
- Pentane
- 1-Pentene
- Toluene
- Xylene
- Butane
- Ethane
- Methane
- Propane
- Ethylene
- Propylene

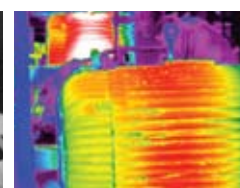
Applications:



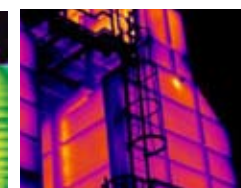
Gas leak detection in oil refineries



Natural gas



Power generation



Petrochemical & chemical industries



The sniffer is detecting gas but unable to trace its source, whereas this thermal image shows the leak source clearly on the left.



Tilttable, Flip-out 4.3" High Contrast Color LCD allows you to view targets more safely from any angle, and avoid eye strain after long time.



Automatic (one Touch) and Manual Focus w/ 8 to 1 Continuous Digital Zoom helps you to deliver the perfect picture at ease.

FLIR GF320 Technical Specifications

Imaging and optical data	
Field of view (FOV) / Minimum focus distance	24° x 18° / 0.3 m
Lens identification	Automatic
F-number	1.5
Thermal sensitivity/NETD	<25 mK @ +30°C
Focus	Automatic (one touch) or manual (electric or on the lens)
Zoom	1–8x continuous, digital zoom
Digital image enhancement	Noise reduction filter, scene based NUC, High Sensitivity Mode (HSM)
Focal Plane Array (FPA) / Spectral range	Cooled InSb / 3–5 µm
IR resolution	320 x 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 x 480 pixels
Viewfinder	Built-in, tiltable OLED, 800 x 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	–40 to +350°C
Accuracy	±1°C for temperature range or ±2% of reading for temperature range
Measurement analysis	
Spotmeter	3
Area	1 box
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
Reflected apparent temperature correction	Automatic, based on input of reflected temperature
Measurement corrections	Reflected temperature, distance, atmospheric transmission, humidity, external optics
Set-up	
Menu commands	Level, span Auto adjust continuous/manual/semi-automatic Zoom Palette Start/stop recording Store image Playback/recall image
Set-up commands	Local adaptation of units, language, date and time formats
Web interface	Admin camera setup and viewing IR images
Storage of images	
Image storage type	Removable SD or SDHC Memory Card, two card slots
Image storage capacity	> 5000 images (JPEG) with post process capability (4 GB SDHC card)
Image storage mode	IR/visual images. Visual image is automatically associated with corresponding IR image.
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	
Radiometric IR-video recording	—
Non radiometric IR-video recording	H.264 (60 minutes/clip) to memory card
Digital camera video recording	H.264 (25 minutes/clip) to memory card
Non radiometric IR-video streaming	H.264 and MPEG-4
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 2.0 High Speed
	HDMI
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
Charging time	2.5 h to 95% capacity, charging status indicated by LED's
External power operation	AC adapter 90–260 VAC, 50/60 Hz or 12 V from a vehicle (cable with standard plug, optional)
DC operation	10.8 to 16V DC, Polarity protected (proprietary protected)
Power	8 W typically
Start-up time	Stirling cool down: < 5 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 (2 cycl)
Directives	73/23/EEC, 89/336/EEC, 2002/ 95/EC, 2002/96/EC
EMC	*EN61000-6-3 (Emission) EN61000-6-2 (Immunity) FCC 47 CFR Part 15 class B (Emission) EN 61 000-4-8, L5 EN/UL/CSA 60950-1**
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	2.4 kg
Battery weight	0.24 kg
Cameras size, incl. lens (L x W x H)	305 x 169 x 161 mm
Tripod mounting	Standard, 1/4"-20
Housing material	Aluminium, Magnesium
Grip material	TPE Thermoplastic Elastomers

Scope of delivery	
Packaging, contents	
Infrared camera	
Standard Lens, 24° (Si)	
Shipping case	
Lens cap (mounted on lens)	
Lens cap (2 ea., backside of lens and opening on camera body)	
Lens cap strap, 2 ea.	
Shoulder strap	
Batteries 2 ea. (1 of the batteries inside camera)	
Charger	
Power supply	
Power supply cord	
HDMI cable	
USB cable	
SD card	
SD card adapter (connects via USB to PC)	
Getting Started Guide (printed)	
Manual for GF-series on CD	
FLIR Quick report on CD	
Video Report 1.0 with manual on CD	
System Calibration Certificate	
Lens Cleaning Cloth	



Asia Pacific Headquarter
Hong Kong
FLIR Systems Co Ltd.
Room 1613 – 16, Tower 2
Grand Central Plaza
138 Shatin Rural Committee
Road, N.T., Hong Kong
Tel: +852 2792 8955
Fax: +852 2792 8952
Email: flir@flir.com.hk
Web: www.FLIR.com/THG

China Head Office
Shanghai
FLIR Systems (Shanghai)
Co., Ltd
Unit 22C-D, Hua Du Mansion
828 Zhang Yang Road, Pudong
Shanghai 200122, P.R.China
Tel: +86 21 5169 7628
Fax: +86 21 5466 0289
Email: shanghai@flir.com.cn
Web: www.FLIR.com/THG

Japan Office
Tokyo
FLIR Systems Japan KK
Nishi – Gotanda Access
Bldg, 8/F
3-6-20, Nishi – Gotanda
Shinagawa-Ku, Tokyo
141-0031, Japan
Tel: +81 3 6277 5681
Fax: +81 3 6277 5682
Email: info@flir.jp
Web: www.FLIR.com/THG

FLIR Systems Korea Co., Ltd
6th Floor, GuGu Building
145-18, Samsung-Dong
Kangnam-Gu, Seoul
135-090 Korea
Tel: +82 2 541 1834
Fax: +82 2 739 1463
Email: flir@flirkorea.com
Web: www.FLIR.com/THG

Taiwan Representative Office
Rm 1101, 333 Keelung Rd.
Sec.1, Taipei, Taiwan
Tel: +886 2 2757 9662
Fax: +886 2 2757 6723
Email: flir@flir.com.hk
Web: www.FLIR.com/THG

