FLIR GFx320 14.5° fixed lens

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http://www.flir.com

Customer support

http://support.flir.com

Disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.

General description
The FLIR GFx320 is an infrared camera for optical gas imaging (OGI) in explosive atmospheres that visualizes and pinpoints leaks of methane and other volatile organic compounds (VOCs), without the need to shut down the operation. The portable camera also greatly improves operator safety, by detecting emissions at a safe distance, and helps to protect the environment by tracing leaks of environmentally harmful gases. The FLIR GFx320 is used in industrial settings such as oil refineries, natural gas processing plants, offshore platforms, chemical/petrochemical industries, and biogas and power generation plants.
Benefits:
• Certified for use in an explosive atmosphere. • Improved efficiency: The FLIR GFx320 reduces revenue loss by pinpointing gas leaks quickly and efficiently, and from a distance. It also reduces the inspection time by allowing a broad area to be scanned rapidly and without the need to interrupt the industrial process. The FLIR GFx320 is also used for temperature measurement, which makes it even more useful for predictive maintenance. • Increased worker safety: OGI allows gas leaks to be detected in a non-contact mode and from a safe distance. This reduces the risk of the user being exposed to invisible and potentially harmful or explosive chemicals. With a FLIR GFx320 gas imaging camera it is easy to scan areas of interest that are difficult to reach with conventional methods. The camera is ergonomically designed, with a bright LCD and tiltable viewfinder, which facilitates its use over a full working day. • Protecting the environment: Several VOCs are dangerous to human health or cause harm to the environment, and are usually governed by regulations. Even small leaks can be detected and documented using the FLIR GFx320 camera.
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.

Imaging and optical data	
IR resolution	320 × 240 pixels
Thermal sensitivity/NETD	<15 mK @ +30°C (+86°F)
Field of view (FOV)	14.5° × 10.8°
Minimum focus distance	0.5 m (1.64 ft.)
Focal length	38 mm (1.49 in.)
F-number	1.5
Focus	Manual focus
Zoom	1–8× continuous, digital zoom
Digital image enhancement	Noise reduction filter, high sensitivity mode (HSM)

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Detector data	
Detector type	Focal plane array (FPA), cooled InSb
Spectral range	3.2–3.4 µm
Detector pitch	30 µm
Sensor cooling	Stirling Microcooler (FLIR MC-3)
Detects following gases	Benzene, Ethanol, Ethylbenzene, Heptane, Hexane, Isoprene, Methanol, MEK, MIBK, Octane, Pentane, 1-Pentene, Toluene, Xylene, Butane, Ethane, Methane, Propane, Ethylene, Propylene

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 presentation modes	
Image modes	IR image, visual image, high sensitivity mode (HSM)

Measurement	
Temperature range	–20°C to +350°C (–4°F to +662°F)
Accuracy	±1°C (±1.8°F) for temperature range (0°C, to +100°C, +32°F to +212°F) or ±2% of reading for temperature range (>+100°C, >+212°F)

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
Reflected apparent temperature correction	Automatic, based on input of reflected temperature
Measurement corrections	Reflected temperature, distance, atmospheric transmission, humidity, external optics

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Set-up	
Menu commands	• Level, span • Auto adjust continuous/manual/semi-automatic • Zoom • Palette • Start/stop recording • Store image • Playback/recall image
Color palettes	• Iron • Gray • Rainbow • Arctic • Lava • Rainbow HC
Set-up commands	1 programmable button, overlay recording mode, local adaptation of units, language, date and time formats

Storage of images	
Storage media	Removable SD or SDHC memory card
Image storage capacity	2000 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

Geographic Information System	
GPS	Location data automatically added to every image from built-in GPS

Video recording in camera	
Radiometric IR video recording	*.seq video clips to memory card (7.5 and 15 Hz).
Non-radiometric IR video recording	• MPEG4 (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 (25 minutes/clip) to memory card

Video streaming	
Radiometric IR video streaming	Full dynamic to PC using USB cable. PC software capable of displaying the video stream include the following: • FLIR IR Camera Player • FLIR ResearchIR • FLIR Tools
Non-radiometric IR video streaming	RTP/MPEG4

Digital camera	
Built-in digital camera	3.2 Mpixels, auto focus, and two video lamps

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Laser pointer	
Laser	Activated by dedicated button
Laser classification	Class 2
Laser type	Semiconductor AlGaInP diode laser, 1 mW, 635 nm (red)

USB	
USB	USB Mini-B: Data transfer to and from PC
USB, standard	USB Mini-B: 2.0 high speed

Composite video	
Video out	Digital video output (image)

Power system	
Battery type	Rechargeable Li ion battery
Battery voltage	7.2 V
Battery capacity	4.4 Ah
Battery operating time	> 3 hours at 25°C (+68°F) and typical use
Battery charging	2–bay charger or AC adapter 90–260 VAC, 50/60 Hz or 12 V from a vehicle (cable with standard plug, optional)
Charging time	2.5 h to 95% capacity, charging status indicated by LED's
Charging temperature	0°C to +45°C (+32°F to +113°F), except for the Korean market: +10°C to +45°C (+50°F to +113° F)
DC operation	8 to 15.3 V DC, polarity protected (proprietary protected)
Power	8.5 W typically
Start-up time	Typically 7 min. @ 25°C (+77°F)

Environmental data	
Operating temperature range	–20°C to +50°C (–4°F to +122°F)
Ambient temperature range (certification range for explosive atmospheres)	–20°C to +40°C (–4°F to +104°F)
Storage temperature range	–30°C to +60°C (–22°F to +140°F)
Humidity (operating and storage)	IEC 68-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F) (2 cycles)
Explosive (hazardous) environment	• IEC 60079-0:2011 • IEC 60079-11:2011 • IEC 60079-15:2010 (partial) • IEC 60079-28:2015 • BS EN 60079-0:2012 • BS EN 60079-11:2012 • BS EN 60079-15:2010 • BS EN 60079-28:2015 • ANSI/ISA-12.12.01-2013 • CSA 22.2 No. 213 • ATEX directive 2014/34/EU
Low voltage	73/23/EEC
RoHS	2011/65/EU
WEEE	2012/19/EU

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Environmental data	
EMC	• The Electromagnetic Compatibility (EMC) Directive 2014/30/EU • 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)
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Safety	EN/UL/IEC 60950-1

Physical data	
Camera weight, incl. battery	2.80 kg (6.18 lbs.)
Camera weight, excl. battery	2.59 kg (5.71 lbs.)
Battery weight	0.21 kg (0.47 lbs.)
Camera size (L × W × H)	245 × 166 × 164 mm (9.6 × 6.5 × 6.4 in.)
Battery size (L × W × H)	141 × 43 × 28 mm (5.5 × 1.7 × 1.1 in.)
Battery charger size (L × W × H)	158 × 122 × 25 mm (6.2 × 4.8 × 1.0 in.)
Tripod mounting	UNC ¼"-20
Housing material	Aluminum, magnesium, silicone

Certifications	
Compliance	• ATEX/IECEx, Ex ic nC op is IIC T4 Gc II 3 G • ANSI/ISA-12.12.01-2013, Class I Division 2 • CSA 22.2 No. 213, Class I Division 2

Shipping information	
Packaging, type	Cardboard box
List of contents	• Battery charger • Battery, 2 ea. • Hand strap • Hard transport case • HDMI-DVI cable • HDMI-HDMI cable • Infrared camera with lens • Lens cap (mounted on lens) • Lens cap strap • Memory card • Neck strap • Power supply, incl. multi-plugs • Printed documentation • Screwdriver TX20 • USB cable
EAN-13	7332558012574
UPC-12	845188013721

- T911881ACC; Camera bag and harness, GF series
- T197692; Battery charger, incl. power supply with multi plugs
- T910814; Power supply, incl. multi plugs
- T199183ACC; Battery Li-ion 7.2 V, 4.4 Ah, 32 Wh
- T911650ACC; Memory card SD Card 8 GB
- 1910423; USB cable Std A <-> Mini-B
- T198509; Cigarette lighter adapter kit, 12 VDC, 1.2 m/3.9 ft.
- T910815ACC; HDMI to HDMI cable 1.5 m

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- T910816ACC; HDMI to DVI cable 1.5 m
- T199466ACC; Hard transport case for FLIR GFx3xx and GF6xx series
- QL320-FIELD-KIT; FLIR QL320 Accessory Field Kit
- 4224488; FLIR QL320 Quantitative OGI Tablet
- 4224489; FLIR QL320 Quantitative OGI Tablet (Regulatory pricing)
- T129728ACC; Hand strap
- T129739ACC; Lens cap
- T129867ACC; Lens cap strap
- T129729ACC; Neck strap
- 4214231; FLIR QL320, Pouch
- 4225679; FLIR QL320, Extended high capacity battery (7.8 Ah)
- 4214168; FLIR QL320, Standard Battery (3.95 Ah)
- 4226768; FLIR QL320, X Strap
- T911309ACC; Screwdriver TX20
- T130007; Extended Calibration Certificate
- INST-EW-0230; Extended Warranty 1 Year for GF3xx, GFX320, G300pt, GF620, SC670X
- INST-EWGM-0210; Premium Service Package for A6604, GF3xx-series, GFX320, G300pt, GF620, GasFindIR HSX, GasFindIR LW, SC4000
- INST-GM-0180; General Maintenance Package for G300pt, GFX320, GF620