

Part number:  
**44401-0102**

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**Legal disclaimer**

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply.

Information and equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited.

**Authorized Distributor:**



**WESAM Systems Co. Ltd**

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**General description**

Optical gas imaging of methane and other volatile organic compounds (VOCs)  
 The FLIR GF320 is an IR camera for optical gas imaging (OGI) that visualizes and pinpoints leaks of 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 GF320 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:**

- Improved efficiency: The FLIR GF320 reduces revenue loss by pinpointing even small 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 wireless connectivity of the camera allows you to connect to smart phones or tablet PCs for the wireless transfer of images or remote control of the camera. The FLIR GF320 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 inspector being exposed to invisible and potentially harmful or explosive chemicals. With a GF320 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 GF320 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

**Licensing and classification**

**License information**

Interchangeable lens version of the FLIR GF3XX series requires US Department of State License and will be subject to limitations on resale, except inside US. Allow a minimum of 90 days after application submittal for approval.

**Imaging and optical data**

IR resolution	320 x 240 pixels
Thermal sensitivity/NETD	<15 mK @ +30°C (+86°F)
Field of view (FOV) / Minimum focus distance	24° x 18° / 0.3 m (1.0 ft.)
Focal length	23 mm (0.89 in.)
F-number	1.5
Focus	Automatic (one touch) or manual (electric or on the lens)
Zoom	1-8x continuous, digital zoom
Digital image enhancement	Noise reduction filter, High Sensitivity Mode (HSM)

**Detector data**

Focal Plane Array (FPA) / Spectral range	Cooled InSb / 3.2-3.4 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
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#### 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	-40°C to +350°C (-40°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
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
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, 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 in camera and video streaming

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
Radiometric IR-video streaming	Full dynamic to PC using USB or WLAN
Non-radiometric IR-video streaming	RTP/MPEG4
Visual video streaming	MPEG-4 using WLAN (using Wi-Fi USB micro adapter) Uncompressed colorized video using USB

#### Digital camera

Built-in digital camera	3.2 Mpixel, auto focus, and two video lamps
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# FLIR GF320 24°

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#### Laser pointer

Laser Activated by dedicated button

#### Data communication interfaces

WLAN	Peer to peer (ad hoc) for iOS or infrastructure (network) for Android, using Wi-Fi USB micro adapter
USB	<ul style="list-style-type: none"> <li>USB-A: Connect external USB device</li> <li>USB Mini-B: Data transfer to and from PC</li> </ul>
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 capacity	4.4 Ah
Battery operating time	> 3 hours at 25°C (+68°F) and typical use
Charging system	In camera (AC adapter or 12 V from a vehicle) or 2-bay charger
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)
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 cycl)

EMC	<ul style="list-style-type: none"> <li>EN61000-6-4 (Emission)</li> <li>EN61000-6-2 (Immunity)</li> <li>FCC 47 CFR Part 15 class A (Emission)</li> <li>EN 61 000-4-8, L5</li> </ul>
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Encapsulation	IP 54 (IEC 60529)
Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)

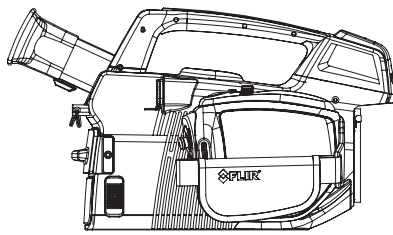
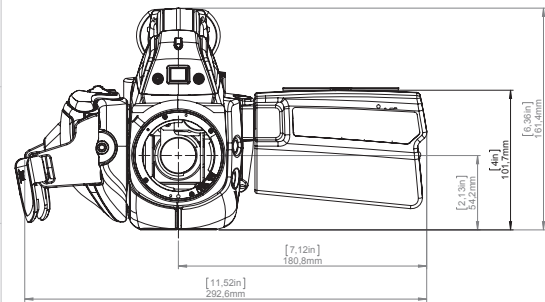
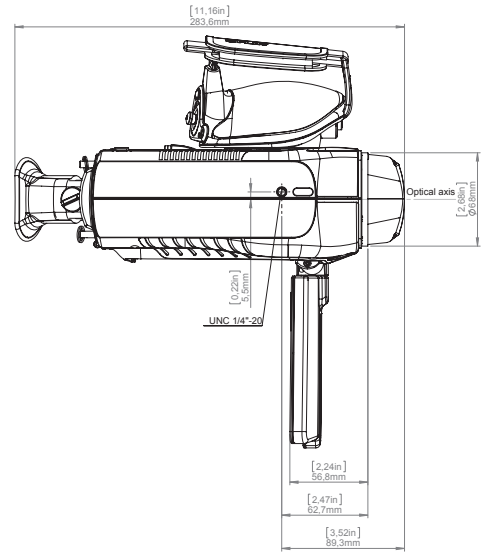
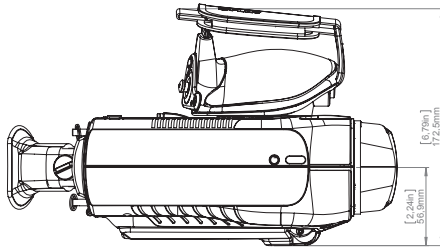
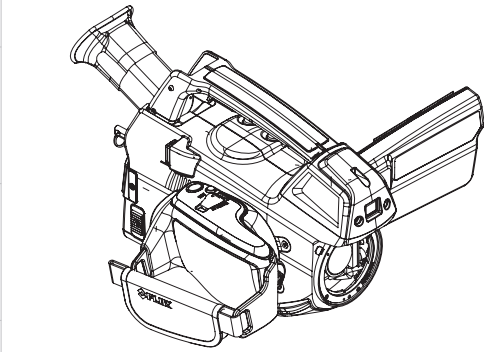
#### Physical data

Camera weight, incl. lens and battery	2.48 kg (5.47 lb.)
Cameras size, incl. lens (L x W x H)	306 x 169 x 161 mm (12.0 x 6.7 x 6.3 in.)
Tripod mounting	UNC ¼"-20

#### Shipping information

- Hard transport case
- Infrared camera with lens
- Battery charger
- Battery, 2 ea.
- Calibration certificate
- Downloads brochure
- FLIR Tools software
- FLIR VideoReport™ PC software CD-ROM
- HDMI-DVI cable
- HDMI-HDMI cable
- Lens cap (2 ea.)
- Lens cap (mounted on lens)
- Memory card
- Memory card adapter
- Power supply, incl. multi-plugs
- Printed Getting Started Guide
- Printed Important Information Guide
- Registration card
- Service & training brochure
- Shoulder strap
- USB cable
- User documentation CD-ROM
- Wi-Fi USB micro adapter (depending on CE and FCC regulations regarding wireless equipment for your country)

Camera housing



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Modified	2013-02-18	Check		Drawn by	R&D Thermography
Discontinuation					
Basic dimension FLIR GF3xx					
Size	A3	Scale	1:2	Sheet	1(5)
Drawing No.	T127603	Scale		Sheet	B