FLIR G300 a 14.5° fixed lens

P/N: 71502-0101

Website

http://www.flir.com

Customer support

http://support.flir.com

General description

The FLIR G300 a is a bare infrared camera unit for optical gas imaging (OGI) that visualizes and pinpoints leaks of volatile organic compounds (VOCs), without the need to shut down the operation. The FLIR G300 a is used in industrial settings such as oil refineries, natural gas processing plants, offshore platforms, chemical/petrochemical industries, and biogas and power generation plants.

The camera unit is delivered as a bare unit, and is intended for integration in OEM systems.

Benefits

- Improved efficiency: The FLIR G300 a 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.
- 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 G300 a gas imaging camera unit it is easy to scan areas of interest that are difficult to reach with conventional methods.
- 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 G300 a.

Detects the following gases: benzene, ethanol, ethylbenzene, heptane, hexane, isoprene, methanol, methyl ethyl ketone, MIBK, octane, pentane, 1-pentene, toluene, *m*-xylene, ethane, butane, 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	Automatic using FLIR SDK, or manual
Zoom	1–8× continuous, digital zoom
Digital image enhancement	Noise reduction filter, high sensitivity mode (HSM)

Detector data

Detector type	Focal plane array (FPA), cooled InSb
Spectral range	3.2–3.4 µm
Sensor cooling	Stirling Microcooler (FLIR MC-3)

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Detector data	
MTBF	2 years or 15,000 hours (whichever is greatest), for a camera running 24/7 @ +20°C (+68°F)
Detects following gases	Benzene, ethanol, ethylbenzene, heptane, hexane, isoprene, methanol, methyl ethyl ketone, MIBK, octane, pentane, 1-pentene, toluene, m-xylene, ethane, butane, methane, propane, ethylene, propylene

Electronics and data rate	
Full frame rate	60 Hz

Image presentation	
Automatic image adjustment	Continuous/manual; linear or histogram based
Manual image adjustment	Level/span

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

Temperature ranges	
Temperature range	–20°C to +350°C (–4°F to +662°F)

Video streaming	
Non-radiometric IR video streaming	RTP/MPEG4

Data communication interfaces	
Interfaces	• HDMI • Ethernet

USB	
USB	Control and image
USB, standard	2.0 High Speed
USB, connector type	USB micro
USB, communication	TCP/IP socket-based, Microsoft RNDIS or/and USB video class
USB, video streaming	640 × 480 pixels at 30 Hz (using USB video class)
USB, image streaming	16-bit 320 × 240 at 30 Hz (using USB video class)
USB, protocols	TCP, UDP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, DHCP

Ethernet	
Ethernet	Control, result and image
Ethernet, type	100 Mbps
Ethernet, standard	IEEE 802.3
Ethernet, connector type	RJ-45
Ethernet, communication	TCP/IP socket-based FLIR proprietary
Ethernet, video streaming	640 × 480 pixels at up to 15 Hz MPEG-4, ISO/IEC 14496-1 MPEG-4 ASP@L5
Ethernet, image streaming	16-bit 320 × 240 pixels at up to 10 Hz
Ethernet, protocols	TCP, UDP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, DHCP, MDNS (Bonjour), SMB/CIFS

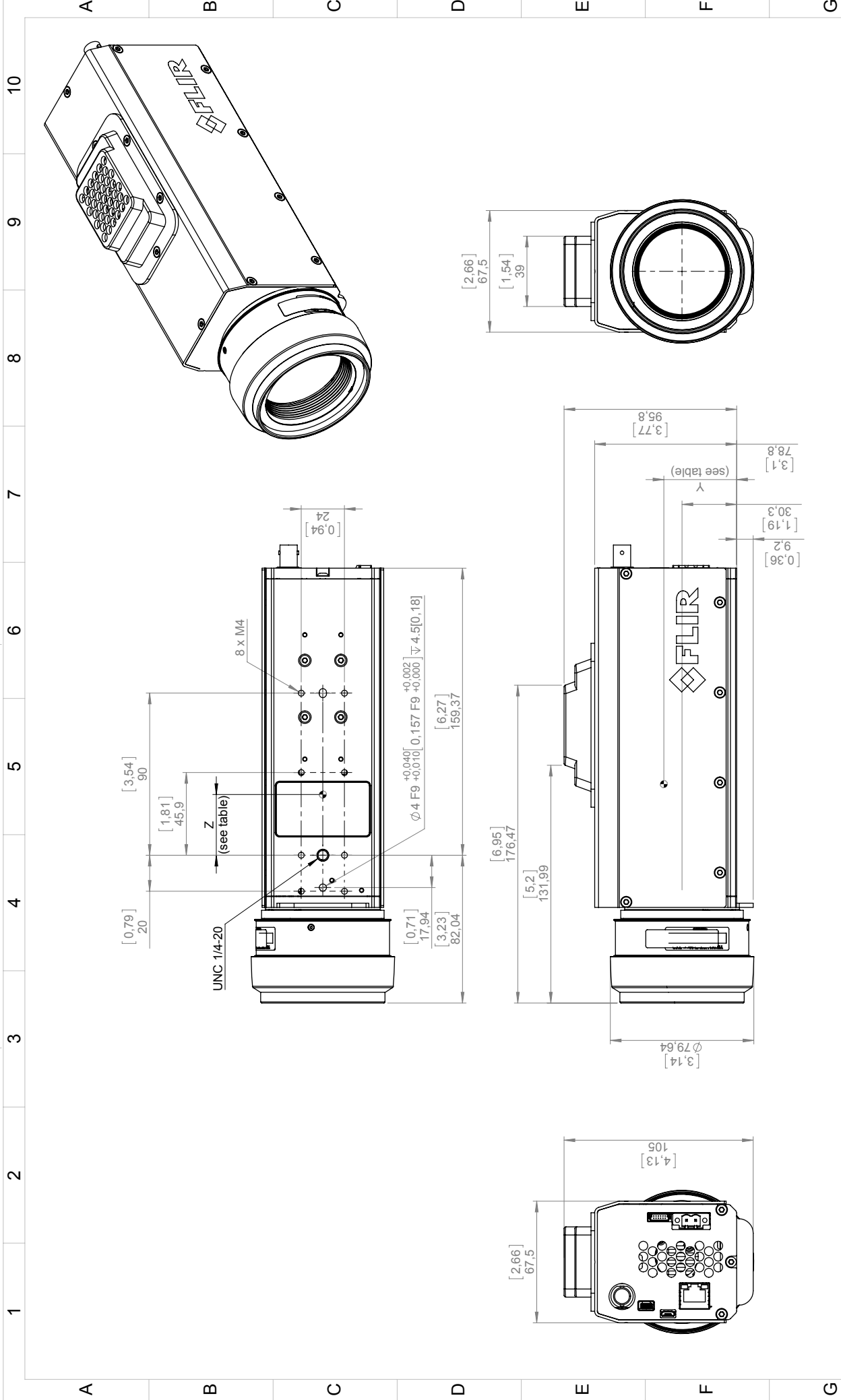www.flir.com

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Composite video	
Video out	Digital video output (image)

Power system	
DC operation	10–28 V DC, polarity protected
Power	• Max. power cooling down @12 V: 13 W • Steady state @12 V: 9 W
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 cycles)
Directives	• Low voltage directive: 2006/95/EC • EMC: 2004/108/EC • RoHS: 2002/95/EC • WEEE: 2002/96/EC
EMC	• EN61000-6-4 (Emission) • EN61000-6-2 (Immunity) • FCC 47 CFR Part 15 class A (Emission) • EN 61 000-4-8, L5
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)

Physical data	
Weight	1.4 kg (3.1 lb.), incl. 14.5° lens
Cameras size, incl. lens (L × W × H)	242 × 80 × 105 mm (9.5 × 3.1 × 4.1 in.), incl. 14.5° lens
Housing material	Aluminum

Shipping information	
Packaging, type	Cardboard box
List of contents	• Infrared camera • Ethernet cable • FLIR ThermoVision SDK (license only) • FLIR VideoReport CD-ROM • Lens cap • Power supply • Printed documentation • USB cable • Video cable
Packaging, weight	
Packaging, size	
EAN-13	7332558008409
UPC-12	845188008758
Country of origin	Sweden

Supplies & accessories:

- T199233; FLIR Atlas SDK for .NET
- T199234; FLIR Atlas SDK for MATLAB
- INST-EW-0220; Extended Warranty 1 Year for G300a & A6604
- INST-EWGM-0200; Premium Service Package for A67xxsc, G300a
- INST-GM-0175; General Maintenance Package for G300a, GF3xx

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All dimensions are valid for FOV 14,5° and 24°

Center of gravity	X	Y	Z
6 deg	0	N/A	N/A
14,5 deg	0	36,5	44,66
24 deg	0	N/A	N/A

Dimensions:
- [2,66] 67,5
- [1,54] 39
- 24 [0,94]
- 8 x M4
- [6,27] 159,37
- [3,54] 90
- [1,81] 45,9
- Z (see table)
- Ø 4 F9 +0.040/+0.010 [0,157 F9 +0.002/+0.000] ⌵ 4.5[0,18]
- [0,79] 20
- UNC 1/4-20
- [0,71] 17,94
- [3,23] 82,04
- [6,95] 176,47
- [5,2] 131,99
- [3,14] Ø79,64
- [3,77] 95,8
- [3,1] 78,8
- Y (see table)
- [1,19] 30,3
- [0,36] 9,2
- [4,13] 105
- [2,66] 67,5

CE Declaration of Conformity

This is to certify that the System listed below have been designed and manufactured to meet the requirements, as applicable, of the following EU-Directives and corresponding harmonising standards. The systems consequently meet the requirements for the CE-mark.

Directives:

Directive 2004/108/EC;   **Electromagnetic Compatibility**

Standards:

Emission: **EN 61000-6-4;**   **Electro magnetic Compatibility**
                                          Generic standards - Emission

Immunity: **EN 61000-6-2;**   **Electro magnetic Compatibility;**
                                          Generic standards - Immunity

System: **FLIR G300a series**

FLIR Systems AB
Quality Assurance

Björn Svensson
Director