



FLIR GF-Series

FLIR GF306

Detects the Expensive and Harmful SF₆ Gas

FLIR GF306 detects and visualizes SF₆ (Sulfur Hexafluoride) and 25 other harmful gases quickly, from a safe distance and without the need to interrupt your plant's production process. SF₆ is a gas used in electrical substations as at electric power plants as an insulator in circuit breakers and switchgear. The gas is also used in magnesium production and semiconductor manufacturing. SF₆ is harmful to the environment. It has a 24,000 times higher global warming potential than CO₂ emissions - more than any other greenhouse gas. Early detection and repair of leaks is a contribution of electric power plants to protect the environment.

- Find SF₆ leaks quickly and safely
- Excellent Thermal Sensitivity (<25mK)
- High performance LCD & Tilttable high resolution viewfinder delivers a bright and vivid image in poor lighting environment or under sunlight
- User-inspired Ergonomics: Rotating Handle, Direct Access Buttons
- Embedded GPS Data and Digital images allow you to identify precise locations of inspected area
- Compatible with FLIR QuickReport and FLIR Reporter software for professional inspection report

Detects SF₆

FLIR GF306 enables utilities, manufacturers, and consultants to proactively diagnose leaks of Sulfur Hexafluoride SF₆ in electrical substations and equipment. SF₆ has a significant impact on global climate change with 23,900 times the global warming potential of CO₂ and with an atmospheric lifetime of 3,200 years.

Lab tested to detect a wide range of gases

- Sulfur Hexafluoride (SF₆)
- Ammonia
- Acetyl chloride
- Allyl Bromide
- Allyl Chloride
- Allyl Fluoride
- 1,3-Butadiene
- Ethylene
- Freon® 11
- Freon® 12
- Freon® 112
- Freon® 113
- Freon® 114
- Methylsilane
- Methyl
- Vinyl Ketone
- Methyl Vinyl Ether
- Propenal
- Propene
- Vinyl Ether
- Styrene
- Trichloroethylene
- Vinyl
- Chloride



Captured SF₆ leak



Capture gas leak from production site



Gas detection from safe distance

FLIR GF306 Technical Specifications

Imaging and optical data	
Field of view (FOV)	14.5° x 10.8°
Minimum focus distance	0.5 m
Field of view (FOV) / Minimum focus distance	14.5° x 10.8° / 0.5 m
Lens identification	Automatic
F-number	1.5
Thermal sensitivity/NETD	<25 mK @ +30°C
Focus	Automatic or manual (electric or on the lens)
Digital zoom	1–8× continuous, digital zoom
Zoom	1–8× continuous, digital zoom
Digital image enhancement	Noise reduction filter, scene based NUC, High Sensitivity Mode (HSM)
Detector type	Focal Plane Array (FPA), cooled QWIP
Spectral range	10–11 µm
Focal Plane Array (FPA) / Spectral range	Cooled QWIP / 10–11 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
System specification	
Service statistics	Op hours, watchdog, error logging (internal camera storage media)
Image presentation	
Display	Built-in widescreen, 4.3 in. LCD, 800 x 480 pixels
Video output	HDMI
Viewfinder	Built-in, tiltable LCD, 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	
Object temperature range	–40 to +500°C
Temperature range	–40 to +500°C
Measurement analysis	
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
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	Standard JPEG, including measurement data, on 4 GB Memory Card (SD or SDHC).
Image storage type	Removable SD and SDHC Memory Card, two card slots
Image storage capacity	> 5000 images (JPEG) with post process capability (4 GB SD or 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	
Non radiometric IR-video recording	H.264 (60 minutes) 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
Laser classification	Class 2
Laser type	Semiconductor AlGaInP diode laser, 1 mW, 635 nm (red)
Data communication interfaces	
Interfaces	USB 2.0 High Speed, HDMI
Computer interfaces	USB 2.0 High Speed
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
USB, connector type	USB-A connector USB Mini-B connector
Video	HDMI
Power system	
Battery	FLIR propriety Li Ion, 2 hours operating time
Battery type	Rechargeable Li Ion battery
Battery voltage	7.2 V
Battery operating time	> 2 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	11 W typically
Start-up time	Stirling cool down: < 7 min. @ 25°C

Environmental data	
Operating temperature range	–20°C to +40°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	73/23EEC, 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 excl. battery	2.16 kg
Camera weight, incl. lens and battery	2.4 kg
Battery weight	0.24 kg
Camera size, excl. lens (L x W x H)	284 x 169 x 161 mm
Cameras size, incl. lens (L x W x H)	305 x 169 x 161 mm
Battery size (L x W x H)	141 x 47 x 28 mm
Battery charger size (L x W x H)	158 x 122 x 25 mm
Tripod mounting	Standard, 1/4"-20
Housing material	Aluminium, Magnesium
Grip material	TPE Thermoplastic Elastomer Plastics

Scope of delivery	
Packaging, contents	
Infrared camera	
Standard Lens, 14.5° (Ge)	
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	
Video Report 1.0 with manual on CD	
Lens Cleaning Cloth	
Video Report 1.0 with manual on CD	
System Calibration Certificate	
Warranty extension card or Registration card	



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

