# **\$FLIR**



### GAS FIND IR SERIES

## FLIR GF77™

The FLIR GF77 is a groundbreaking uncooled optical gas imaging camera with interchangeable lens options that detect methane ( $\mathrm{CH_4}$ ), sulfur hexafluoride ( $\mathrm{SF_6}$ ), ethylene ( $\mathrm{C_2H_4}$ ), ammonia ( $\mathrm{NH_3}$ ), and other gas emissions. Capable of both gas detection and radiometric temperature measurement, the GF77 is an ideal inspection tool for electric power utilities, oil and natural gas operations, chemical/manufacturing facilities, the food and agriculture industry, and first responders. This camera offers unmatched versatility as well as improved visualization of gas emissions and thermal inspections. Based on the award-winning design of the FLIR T-Series platform, the GF77 offers a vibrant, 4-inch touchscreen LCD, 180° rotating optical block, and eyepiece for convenience in direct sunlight. This affordable solution offers the benefit of built-in thermographic calibrations and the flexibility to detect a wide range of gases by simply changing lenses.

www.flir.com/GF77



#### MAXIMIZE EFFICIENCY

Locate gas leaks and perform thermal inspections with one camera

- Visualize CH<sub>4</sub>, SF<sub>6</sub>, NH<sub>3</sub>, and C<sub>2</sub>H<sub>4</sub> in different wavelengths with a versatile lens solution, and inspect critical components using the built-in thermal imager
- Scan for emissions from a safe distance and track them to the source to begin repairs immediately
- Take accurate temperature measurements in all environments from -20°C to 500°C with ±3°C or 3% temperature accuracy
- Switch to viewfinder in bright, sunlit conditions to ensure optimal viewing



## AFFORDABLE OPTICAL GAS IMAGING

Provide every site with one or more GF77 cameras with industry-leading features

- Improve gas-detection contrast with 1-Touch Level/Span auto-adjustment feature
- Increase leak detectability by activating FLIR patented High Sensitivity Mode (HSM)
- Precisely resolve target area with laser-assisted autofocus
- Use data from the built-in area measurement tool to calculate tank level and volume



## STREAMLINE INSPECTIONS AND REPORTING

Work easier with the ergonomic design, rapid-reporting features, and tools to organize findings in the field

- Define routes and improve inspection flow with the optional add-on of FLIR Thermal Studio Pro and FLIR Route Creator\*
- Automatically tag each image file with GPS geolocation data for easy identification
- Connect instantly over Wi-Fi to mobile devices for data transfer and reporting
- \* Please see compatible software section on back for full details

#### **SPECIFICATIONS**

	Low-Range (LR) Lens	High-Range (HR) Lens	Image adjustment
Image and Optical Data			<del> </del>
Primary gases detected	Methane, nitrous oxide, propane, sulfur dioxide,	Sulfur hexafluoride, ammonia, ethylene	Image annotations
	R-134a and R-152a		Image Storage
Lens spectral range	7 to 8.5 μm	9.5 to 12 μm	Storage media
Gas sensitivity (NECL)	CH <sub>4</sub> : <100 ppm × m N <sub>2</sub> O: <75 ppm × m C <sub>3</sub> H <sub>8</sub> : <400 ppm × m SO <sub>2</sub> : <30 ppm × m R-134a: <20 ppm × m R-152a: <100 ppm × m (ΔT = 10°C, Distance = 1 m)	$SF_6$ : <1 ppm × m $C_2H_4$ : <20 ppm × m $NH_3$ : <20 ppm × m ( $\Delta T = 10^{\circ}C$ , Distance = 1 m)	Image file format
			Time lapse (Infrared
			Remote control ope
			Video Recording
			Radiometric IR video recording
Infrared resolution	320 × 240 (76,800 pixels)		Non-radiometric IR
Thermal sensitivity (NETD)	25° lens: <25 mK at 30°C (86°F) 6° lens: <40 mK at 30°C (86°F)		rideo Radiometric IR video
UltraMax® (super-resolution)	Yes		
Field of view (FOV)	25° lens: 25° × 19° 6° lens: 6.4° × 4.9°		Non-radiometric IR streaming
Focal length	25° lens: 18 mm (0.71 in)		Communication inte
	6° lens: 74 mm (2.9 in)		Additional Spec
f/number	25° lens: 1.04		Battery
	6° lens: 1.35		Operating temperat
Focus modes	Continuous LDM, One-shot LDM, One-shot contrast, Manual		Storage temperatur
Minimum focus distance	25° lens: 0.3 m (0.98 ft) 6° lens: 5 m (16.4 ft)		Shock/Vibration/ Encapsulation
Minimum focus distance with MSX®	25° lens: 0.65 m (2.1 ft) 6° lens: N/A		Camera weight with (including battery)
Spatial resolution (IFOV)	25° lens: 1.4 mrad/pixel 6° lens: 0.36 mrad/pixel		Camera size (L × W
Lens identification	Automatic		
Digital zoom	1–6× continuous		
Detector type and pitch	Uncooled microbolometer, 25 µm		
Measurement and Analy	/sis	sis	
Temperature ranges and accuracy	Range -20 to 70°C (-4 to 158°F): ±3°C (±5.4°F)  Range 0 to 250°C (32 to 482°F):  • 0 to 100°C (32 to 212°F): ±3°C (±5.4°F)  • 100 to 250°C (212 to 482°F): ±3%  Range 100 to 500°C (212 to 932°F): ±3%		Infrared camera wit documentation, SD
			adapter, USB Type-( neck strap, small ey front and rear (only
			Optional Compa
	For ambient temperature 15 to	35°C (59 to 95°F)	FLIR Thermal Studio
Spotmeter and area	3 each in live mode		
Measurement presets	No measurement, Center spot, Hot spot, Cold spot, User preset 1, and User preset 2		FLIR Route Creator*
Image Presentation and Frame Rate			FLIR Inspection Rou
Image frequency	30 Hz		
Display	4", 640 × 480 pixels (VGA) touchscreen LCD with auto-rotation		
Digital camera	5 MP with built-in LED photo/video lamp		
Color palettes	Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC		
Image modes	Infrared, visual, MSX, picture-in-picture, gallery		*Need to purchase FLIR

Image adjustment	Automatic, Automatic maximum, Automatic minimum, High Sensitivity Mode (HSM), Manual, 1-Touch Level/Span
Image annotations	Voice, Text, Image sketch (IR only), Sketch (from touchscreen), GPS Automatic image tagging
Image Storage	
Storage media	Removable SD card
Image file format	Standard JPEG, measurement data included. Infrared-only mode
Time lapse (Infrared)	10 seconds to 24 hours (infrared)
Remote control operation	Via USB or over Wi-Fi connected to FLIR Thermal Studio
Video Recording and Stre	eaming
Radiometric IR video recording	Real-time radiometric recording (.csq)
Non-radiometric IR or visual video	H.264 to memory card
Radiometric IR video streaming	Compressed, over UVC
Non-radiometric IR video streaming	H.264, MPEG-4 over Wi-Fi; MJPEG over UVC or Wi-Fi
Communication interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
Additional Specifications	1
Battery	Rechargeable Li-ion battery, >4 hours at 25°C (68°F) with typical use
Operating temperature range	-15°C to 50°C (5°F to 122°F)
Storage temperature range	-40°C to 70°C (-40 to 158°F)
Shock/Vibration/ Encapsulation	25 g (IEC 60068-2-27) / 2 g (IEC 60068-2-6) / IP54
Camera weight with lens (including battery)	1.54 kg (3.4 lb) w/ 25° lens 1.77 kg (3.9 lb) w/ 6° lens
Camera size (L × W × H)	Camera with 25° lens:  • Lens vertical: $150.5 \times 201.3 \times 84.1 \text{ mm} (5.9 \times 7.9 \times 3.3 \text{ in})$ • Lens horizontal: $150.5 \times 201.3 \times 167.3 \text{ mm} (5.9 \times 7.9 \times 6.6 \text{ in})$ Camera with 6° lens:  • Lens vertical: $204.6 \times 201.3 \times 84.1 \text{ mm} (8.1 \times 7.9 \times 3.3 \text{ in})$ • Lens horizontal: $150.5 \times 201.3 \times 167.3 \text{ mm} (5.9 \times 7.9 \times 6.6 \text{ in})$
Package Contents	

Infrared camera with lens, power supply for battery charger, power supply 15 W/3 A, printed documentation, SD card (8 GB), USB 2.0 A to USB Type-C cable, USB Type-C to HDMI and PD adapter, USB Type-C to USB Type-C cable (USB 2.0 standard), lens cap strap, lens cleaning cloth, neck strap, small eyecup, battery (2x), battery charger, hard transport case, lens cap front, lens cap front and rear (only for extra lenses)

Optional Compatible Soft	ware
FLIR Thermal Studio Pro	Advanced analysis and reporting software—12-Month Subscription
FLIR Route Creator*	The FLIR Route Creator Plugin for FLIR Thermal Studio Pro allows you to create and export inspection routes - 12-Month Subscription
FLIR Inspection Route	Required to generate inspections routes into FLIR Thermal Studio Pro - One time purchase
	The FLIR Inspection Route can also be used independently to generate routes in .xml file format for upload into users existing routing software.

<sup>\*</sup>Need to purchase FLIR Thermal Studio Pro and FLIR Inspection Route



Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

