

QL320 for FLIR GFx320/GF320

Quantitative Optical Gas Imaging System



Quantifies gas, such as the methane escaping this wellhead valve at 0.59 lb/hr



Rugged QL320 connects easily with FLIR GFx320/GF320 optical gas imaging cameras



Can quantify most common hydrocarbons at safe distances

The QL320 by Providence Photonics is a quantitative optical gas imaging (OGI) system designed specifically for use with the FLIR GFx320 and the FLIR GF320 OGI cameras. This system allows surveyors to measure the leak rates for methane and other hydrocarbons, eliminating the need for secondary sampling with a toxic vapor analyzer or similar tool. Unlike these traditional measurement systems, the QL320 does not require close contact with the gas in order to measure emission rates, making it a safer solution for quantifying gas leaks.

Quantifies Gas with Immediate Results

Simplifies the visualization and measurement of gas emissions

- Determine the mass leak rates (lb/h or g/h) or volumetric leak rates (cc/min or L/min) for most hydrocarbon gases
- Measure the size of fugitive emissions from safe distances, as far as 100 feet
- Highlight gas plumes with color for improved visibility

Ensures Effective Readings and Reports

The QL320 has the built-in tools needed to obtain quantifiable readings

- Validate leak survey and determine suitability of background conditions with delta temperature screening tool
- Easily synchronize to multiple optics and temperature ranges
- In-field reporting includes archiving of measurements, colorized video and raw image and raw image data for analysis and post-processing

Designed Tough for Industrial Environments

Tablet-based system is rugged enough for use in gas fields, refineries, or other industrial settings

- Included touch-screen tablet is dust- and water-tight (IP65 certified)
- Connects easily to the FLIR GFx320 and FLIR GF320 without the need for camera modifications
- Display provides high contrast for easy reading, even in bright conditions

Key Features:

- Quantifies mass or volumetric leak rates
- Designed specifically for the FLIR GFx320/GF320
- Includes plume highlighting, delta temperature screening
- Touchscreen tablet is rugged, sun-readable
- No camera modifications or added accessories needed
- Use factory calibration or calibrate unit in the field



Specifications

System	QL320
Compatible Cameras	FLIR GFx320, FLIR GF320
Gases Detected	Methane, most hydrocarbons*
Hardware	
Tablet	Panasonic Toughpad FZ-G1
Display	10.1 in, 1920 x 1200 WUXGA, LED backlighting
Touchscreen	10-point gloved multi-touch + digitizer
Input	On-screen QWERTY keyboard, electronic waterproof stylus
Measurement	
Modes	Mass leak rates (lb/h or g/h), volumetric leak rates (cc/min or L/min)
Tools	Delta temperature screening, on-screen plume color highlight, batch recording, field gas calibration
Additional Data	
Battery Type	Li-ion rechargeable battery
Durability	MIL-STD-810G certified, IP65-certified sealed all-weather design
Weight/Dimensions	3 lbs / 10.6 x 7.4 x 0.8 in
Box Contents	Tablet, software, USB 2.0 cable, charger, carrying pouch

* See [Providence Photonics](#) for list of more than 400 tested gases.

Response Factor Calculations

How well the QL320 quantifies a specific gas compound is a function of how sensitive the camera is to that gas. This can be measured relative to a reference compound, with the resulting value called Response Factor (RF).

For example, say an RF value for benzene is 0.755 in reference to propane (propane value = 1.000). This means when a FLIR GF320 camera visualizes benzene, the image is 75% as strong as an image of propane. An RF value below 1.0 would signify a potentially weaker image, while an RF value above 1.0 signifies a stronger image (e.g. an RF of 1.75 means the image is 75% stronger).

Providence Photonics provides a free RF calculator for determining how well FLIR OGI cameras can see specific gases at <http://rfcalc.providencephotonics.com>.

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