

GIT

GAS IMAGING TECHNOLOGY, LLC



Sherlock[®]VOC

***Remote Gas Leak
Imaging & Quantification***

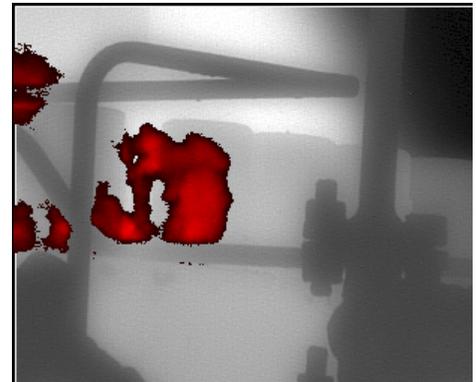


Sherlock VOC is an infrared optical imaging instrument for video imaging of gas leaks. The Sherlock VOC is man portable, battery operated and goes far beyond just imaging gas leaks; it has the ability to measure the concentration as well. Sherlock is based on patented IMSS spectral imaging¹ technology that has been proven by the US Department of Defense for related applications. Now this technology is available to the commercial market and has been developed for gas imaging, analysis and quantification. The Sherlock VOC has been field tested at numerous petrochemical, refining and processing plants demonstrating the sensitivity to see gas leaking at flow rates as low as 1 gram per hour.

The Sherlock VOC has been approved by the American Environmental Protection Agency to be used for the Alternative Work Practice for Method 21 which is the procedure for fugitive gas leak detection in petral and chemical plants. It can also be used for safety and risk mitigation for all types of industries such as oil, gas, chemical, power generation, mining, pulp & paper, just to name a few.

The Sherlock has a single f/2.5, 75 mm focal length lens that is embedded in the body of the instrument. There is no need to change lenses during application. The horizontal field of view is approximately 7 degrees. The Sherlock can easily be carried by an operator using the EasyRig or a tri-pod which enables pointing and scanning while looking at the LCD display. This design leaves the operator with both eyes free to watch for safety hazards in the cluttered environment of a processing plant.

In addition to displaying the infrared image to the operator on a hooded LCD display the Sherlock can store both 14 bit digital video clips on an embedded frame grabber or to an external 8 bit digital video recorder. When using the internal storage a file name, date and time can be attached to the video clip thus reducing the laborious time in post editing a stream of video stored to an external video recorder. The high resolution of the 14 bit data for the internal recording mode and the elimination of the need to carry extra equipment for ground operations is among one of the many reasons that GIT recommends this over the external storage option.



Sherlock VOC detects gas leaks and measures the concentration as shown in this colored digital image.

¹ U. S. Patent numbers: 5,479,258; 5,867,264; 6,680,778

Gas Imaging Technology

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Specifications

Sherlock VOC Mechanical Characteristics

Weight	15 pounds without battery 19 pounds with battery
Size	12(L) x 7(W) x 8(H) inches
Power	12 volt batter or AC

Sherlock VOC Optical Characteristics

Spectral Range	Tuned for hydrocarbon gases
F number	f/2.5 at 3 microns
Focal Length	75 mm at 3 microns
Instantaneous Field of View	0.4 mrad
Field of View	7.3° x 5.5°
Spatial Resolution	340 x 240 pixels
Minimum leak rate	1 gram/hr (propane @ 1.5 m)

Basic Sherlock VOC Includes

1. Embedded software
2. Electrical Interfaces - Ethernet, RS232, NTSC, S-Video, USB
3. User Interface - Push button allowing one hand operation
4. Small LCD Video Display (640 x 480 pixel display)
5. Sun Shield
6. Embedded Digital Video Clip Recording
7. Standard 12 volt battery
8. Battery Charger/AC supply
9. Shipping Pelican Case
10. All Necessary Cables
11. HyPAT software for post processing and gas quantification
12. Two day training at manufacturer's facility

Accessories

1. Tripod ¼-20 Threaded Mount
2. Easy Rig pneumatic harness for easy caring when using in the field
3. Extra Batteries
4. Dual Battery charger
5. Small Portable VCR

Specifications can change without notice

Partial list of gases that can be detected with the Sherlock VOC as fugitive emission

*Methane
Ethane
Propane
Butane
Acetone
1,3 Butadiene
Ethylene
Butene
Propene
Propylene
Mixed Xylenes
Pentene
Isoprene
Acetylene
Formaldehyde
Hexane
Heptane
Octane
Benzene
Toluene
Ethyl-benzene
Methyl-chloride
MeOH
MEK*

For a more complete list of gases that can be detected visualized and analyzed please see our web site or e-mail a request.

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