West Virginia Purchasing Division

2019 Washington Street, East
Charleston, WV 25305
Telephone: 304-558-2306
General Fax: 304-558-6026
Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Jump to: PRCUID  Go | Home | Personalize | Accessibility | App Help | About

Procurement | Budgeting | Accounts Receivable | Accounts Payable

Welcome, Christopher W Seckman

Solicitation Response(SR)  Dept: 0313  ID: ESR10202500000002669  Ver.: 1  Function: New  Phase: Final  ▼  Modified by batch , 10/21/2025

**Header** 📎 4

List View

**General Information** | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 1785082
Procurement Type: Central Purchase Order
Vendor ID: VS0000050361
Legal Name: Addglobe, LLC
Alias/DBA: Addglobe, LLC
Total Bid: $92,000.00
Response Date: 10/20/2025
Response Time: 22:44
Responded By User ID: milt.heath3
First Name: Milton
Last Name: Heath
Email: milton@addglobe.com
Phone: 7132036202

SO Doc Code: CRFQ
SO Dept: 0313
SO Doc ID: DEP2600000009
Published Date: 10/2/25
Close Date: 10/21/25
Close Time: 13:30
Status: Closed
Solicitation Description: Hydrocarbon Gas Imaging Infrared Camera
Total of Header Attachments: 4
Total of All Attachments: 4

| | |
|---|---|
| **Proc Folder:** | 1785082 |
| **Solicitation Description:** | Hydrocarbon Gas Imaging Infrared Camera |
| **Proc Type:** | Central Purchase Order |

| Solicitation Closes | Solicitation Response | Version |
|---|---|---|
| 2025-10-21 13:30 | SR 0313 ESR10202500000002669 | 1 |

| **VENDOR** |
|---|
| VS0000050361 |
| Addglobe, LLC |

| | | | | |
|---|---|---|---|---|
| **Solicitation Number:** | CRFQ 0313 DEP2600000009 | | | |
| **Total Bid:** | 92000 | **Response Date:** 2025-10-20 | **Response Time:** | 22:44:22 |
| **Comments:** | | | | |

**FOR INFORMATION CONTACT THE BUYER**
Joseph (Josh) E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

**Vendor**
**Signature X**          **FEIN#**          **DATE**
**All offers subject to all terms and conditions contained in this solicitation**

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|--------------|-----|-----------|-----------|----------------------------|
| 1 | Hydrocarbon Gas Imaging Infrared System Camera | 1.00000 | EA | 90000.000000 | 90000.00 |

| Comm Code | Manufacturer | Specification | Model # |
|-----------|--------------|---------------|---------|
| 45121522 | | | |

**Commodity Line Comments:** This is for the Opgal EyeCgas Multi Optical Gas Imaging System. A cryogenically cooled OGI camera with best sensitivity of any camera in the world at 0.35 grams/hour. Sees over 400 compounds. The most versatile OGI camera and the easiest to operate. Guaranteed to be the field technicians best and most reliable tool for seeing gas leaks visually. Modes include visible, normal infrared, enhanced high sensitivity mode with 10 adjustible settings, full thermograpy camera. Built in GPS, video/JPG recording and voice over capability. Video streaming to any device to live stream from the field. 64 Gigabyte memory. The easiest camera to train on. Military grade to operate in rain, snow or the worst of conditions with the best reliability. Built in Leak Quantification Software, the best as confirmed by GERG European testing compared to Konica and Flir. EyeCgas Multi comes with a 4 YEAR Warrantee. 2 rechargeable LiPo batteries (4.5 hours run time on each), Charger, Shoulder strap, best in class glare shield, USB/Micro usb communications cable, cleaning kit and compact carrying case.

**Extended Description:**

Hydrocarbon Gas Imaging Infrared System Camera

| Line | Comm Ln Desc | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|------|--------------|-----|-----------|-----------|----------------------------|
| 2 | On site 8 hour training class | | | | 2000.00 |

| Comm Code | Manufacturer | Specification | Model # |
|-----------|--------------|---------------|---------|
| 86101810 | | | |

**Commodity Line Comments:** Our training is typically 1 day but if more time is needed, like an additional half day, it is included. We have an agenda to cover all operational aspects of the camera in a hands on environment in the office for the first 4 hours and then proceed to the field to do the same but in a real world environment where we coach each operator in how to adjust settings to maximize the brillience of the leak to record video, voice over and photo the leak. We also will train on how to quantify a leak using the built in leak quantification software.
Senior Trainer, Milton Heath has 16 years of experience and expertise with Opgal training and selling cameras. Milton is based out of Houston, Texas. A certificate will accompany the completion of training for each operator who successfully completes the assigned tasks and demonstrates competence by filming a leak to the standards trained during the session.

**Extended Description:**

On site 8 hour training class

# EyeCGas® Multi

Hand-Held Optical Gas Imaging Camera for Gas Leak Detection and Quantification

NOW WITH A
**4 YEAR WARRANTY***

ANSI · element · MET · ATEX · IECEx

Opgal's EyeCGas Multi is a ruggedized, intrinsically safe and the world's most sensitive OGI camera. Built to withstand harsh industry conditions while ensuring safety, this OGI camera quickly detects Methane, $CO_2$ and over 400 Volatile Organic Compounds (VOC's). Making it your ideal leak detection solution.

EyeCGas Multi enables detection and quantification (built in or via EyeCSIte QOGI dedicated software). It is the only OGI camera with a patent multi Spectral interchangeable filters for improved detection. Especially in humid and long range conditions.

Stream your inspection in real time, or share your results using the dedicated EyeCGas App.

Receive free software upgrades, which are based on customer feedback, and rest assure that your investment is guaranteed with our exclusive 4-year warranty.

## STREAMING
Real-time video streaming and wireless images/videos sharing with the official EyeCGas App.

## KEY FEATURES

- **Gas Leak Detection**
  Quick detection of methane, $CO_2$ and over 400 VOC's.

- **Thermographic Imaging**
  Temperature measurements capabilities and color pallets for better versatility.

- **Wireless Connectivity**
  Built-in Wi-Fi, GPS, hotspot and Bluetooth capabilities.

- **Meets Regulatory Compliance**
  Complies with the EPA's OOOO'a/b/c regulations. With the broadest Appendix K envelope of performance.

- **Gas Quantification**
  Built-in quantification or remotely operated quantification via EyeCSite software and other 3rd party devices.

- **LDAR-Ready Capabilities**
  Integrates with various softwares and analyzers.

- **Free Firmware Upgrades**
  Receive camera upgardes and improvements free of charge.

- **Intrinsically Safe**
  IECEX intrinsically safe Zone II, ANSI, CSA Class I & Class II div.2.

- **Rugged & Sealed**
  Especially designed for detecting gas leaks in the harsh conditions of the oil and gas industry.

- **Multi Spectral OGI**
  The only OGI camera with replaceable filters enabling improved Methane/VOC & $CO_2$ detection with the same camera.

# SPECIFICATIONS

| | |
|---|---|
| IR Resolution | 320 x 240 pixels |
| Focus | Manual Focus |
| Detector Pitch | 30 μm |
| Gas Sensitivity | **NECL @ delta T =10C:**<br>Methane- 9 ppm m<br>Propane- 2.8 ppm m<br>Butane- 2.3 ppm m<br><br>**Minimum Leak Rate @ delta T =10C:**<br>Methane- 0.07 g/h<br>Propane- 0.05 g/h<br>Butane- 0.05 g/h<br><br>**Minimum Laboratory Leak Rate:**<br>Methane- 0.35 g/h<br>Propane- 0.26 g/h<br>Butane- 0.29 g/h |
| Thermal Sensitivity/ NETD | <10 mK at 30°C (86°F) |
| Hazardous Location Compliance | CSA C22.2 No. 213-M1987, Non-Incentive Electrical Equipment for Use in Class I, Division 2, ANSI/ ISA-12.12.01 – Class I and II, Division 2, and Class III, ATEX.<br>Intrinsically safe for Zone 2 ratings as: Ex II 3 GD; Ex ic nA nC IIC T6 Gc; Ex ic tc IIIC T85°C DC |
| Gas leak detection capabilities | WITH SPECTRAL FILTER OF 3.2μM TO 3.4μM FOR VOCs GASES<br>DETECTION: 400+ compounds such as: Methane, Acetic acid, Benzene, Butadiene, Butene, Butane, Dimethyl-Benzene, Ethane, Ethylene, Ethyl benzene, Ethylene oxide, Hexane, Heptane, Isobutylene, Isopropyl alcohol, Isoprene, Methanol, MEK Methyl Ethyl Ketone, Octane, Pentene, Propane, Propanal. |

## Detector and Optical Data

| | |
|---|---|
| Detector Type | Focal plane array (FPA), cooled MCT |
| Spectral Range | 3.1 μm to 4.4 μm |
| Optical filters | Std. 3.2-3.5 μm; Long range 3.3-3.6 μm; $CO_2$ 4.1-4.4 μm |
| Sensor Cooling | Stirling Microcooler |
| Digital Image Enhancement | High sensitivity mode (HSM), noise reduction filter |
| Available Lenses | 18° (30 mm); 7.5° (75 mm) |
| F-Number | 1.1 |

## Image Presentation

| | |
|---|---|
| Display | 3.5" (10'equivlent using glare shield), 640 × 480 pixel, LCD |
| Image Presentation Modes | IR image, visual image, Normal, Enhanced & Thermography |
| Color Palettes | 6 color palettes (Rainbow, Iron, ISO red, ISO green, Grey Scale and Vivid) |
| Zoom | x2, x4, x8 and x16 (only for visible camera) |

## Measurement & Analysis

| | |
|---|---|
| Measurement Temperature Range | -20°C to 350°C (-4°F to 662°F) |
| Accuracy | At Least ± 1 °C (0 – 100 °C), ± 2% (> 100 °C), ± 2°C (-20 – 0 °C) |
| Gas emission Quantification | Built-in real-time and offline Image processing VOC gas quantification for desktop or handheld application (offline/online operation) |

## Accessories & Apps

| | |
|---|---|
| Head up display | Seamless integration including voice commands with Realware® head up display |
| Mobile APP | Android 10 /IOS 14 and up |

## Communication interface & Data Storage

| | |
|---|---|
| GPS | Included, can be added to any still or video recording |
| Storage Media | Up to 20 hours and more of video storage over a 64GB solid state memory |
| Image File Formats | JPG Format (on available modes) |
| Communication Interfaces | USB: Data transfer, video streaming and video images file transfer<br>Wi-Fi: 2.4 GHz for video streaming and file transfer<br>Bluetooth: Bluetooth 4.2 with other devices: RMLD, TVA2020<br>,LDAR software etc... GPS: Built in or external |
| Video Out | Digital video recorder build-in generates a .ts format video on all modes. |

## Video Recording and Streaming

| | |
|---|---|
| IR or Visual Video | Digital video recorder build-in generates a .ts format video on all |
| Radiometric IR Video Streaming | Over Wifi |

## Environmental & Certifications

| | |
|---|---|
| Operating Temperature Range | -20°C to 50°C (-4°F to 122°F) |
| Storage Temperature Range | -40°C to 70°C (-40°F to 158°F) |
| Encapsulation | IP65 (Intrinsically safe) |
| Drop | ASTM-D 4169-06 Schedule A |
| Vibration | ASTM-D 4169-08 Schedule F Test method D999 |
| HALT | Max temp: 55°C, Min temp: -20°C |
| Safety | EN60950-1:2006 |

## Additional Information

| | |
|---|---|
| Battery Type | Rechargeable Li-ion battery; 7.4 V, charger included |
| Battery Operating Time | >4.5 hours continuous operation |
| Battery Charging Time | 3 hours to 95% capacity, charging status indicated by LEDs |
| Camera Size | 9" x 4.3" x 5.1" (230 x 110 x 130) mm |
| Camera Weight | 2.6 kg (5.9 lb) |
| Mounting Interfaces | UNC ¼"-20 |
| Warranty | 4 years (Detector & cooler – 2 years; Batteries 1 year) |

## Box Contents

| | |
|---|---|
| Packaging | Infrared camera with lens, Batteries (2), Battery Charger, USB Cable, Neck strap, Glare Shield, Carrying Case, Cleaning Kit. |

# EyeCGas® Multi
## Monitoring System

The gold standard in OGI

# OPGAL CORPORATE PROFILE

## INTRODUCTION

Opgal is a global leader in environmental solutions based on cutting – edge optical gas imaging technology. Since the development of the first EyeCGas OGI camera over 15 years ago, our product catalog has increased to exceed the market requirements.

## MARKETING AND SALES

Opgal is renowned for its foresight in anticipating market needs & developing the necessary technologies, products, & services to meet them. The company strategically positions itself in the global market through a highly professional network of partners and distributors.

## R&D / ENGINEERING

Opgal uniqueness and strength is based on the synergy it has developed between technologies and disciplines to create a total corporate capability dedicated to offer the market unique and cutting edge solutions.

## PRODUCTION & QUALITY ASSURANCE

OPGAL main development laboratory & production base facility includes a fully equipped, modern manufacturing plant employing a highly skilled & motivated work force dedicated to fast, on time delivery of quality high-tech systems.
Opgal holds relevant certifications and maintains the most stringent production and R&D standards.

Sales and support of Opgal's OGI solutions are conducted through a network of over 40 partners and distributors worldwide.

# OPTICAL GAS IMAGING (OGI) TECHNOLOGY

The Optical Gas Imaging (OGI) technology is based on a mid-wave infrared (MWIR), cryogenically cooled MCT detector for imaging Volatile Organic Compounds (VOCs). A standard 3.3 µm ± 0.13 µm, bandpass hot filter is installed in the OGI camera between the lens and the detector (for long range detection, optional 3.4 µm ± 0.13 µm, bandpass hot filter). This filter transmits radiation only in the spectral region where VOCs absorbs or emits thermal radiation. The thermal energy that reached the detector is than transformed into an image.

Thermal energy that passes through a gas plum is changed, causing contrast differences in the generated image. This contrast difference makes the gas plume visible in the image.



Gas Plume

IR Radiation

Radiation passes/ emitted
from gas cloud
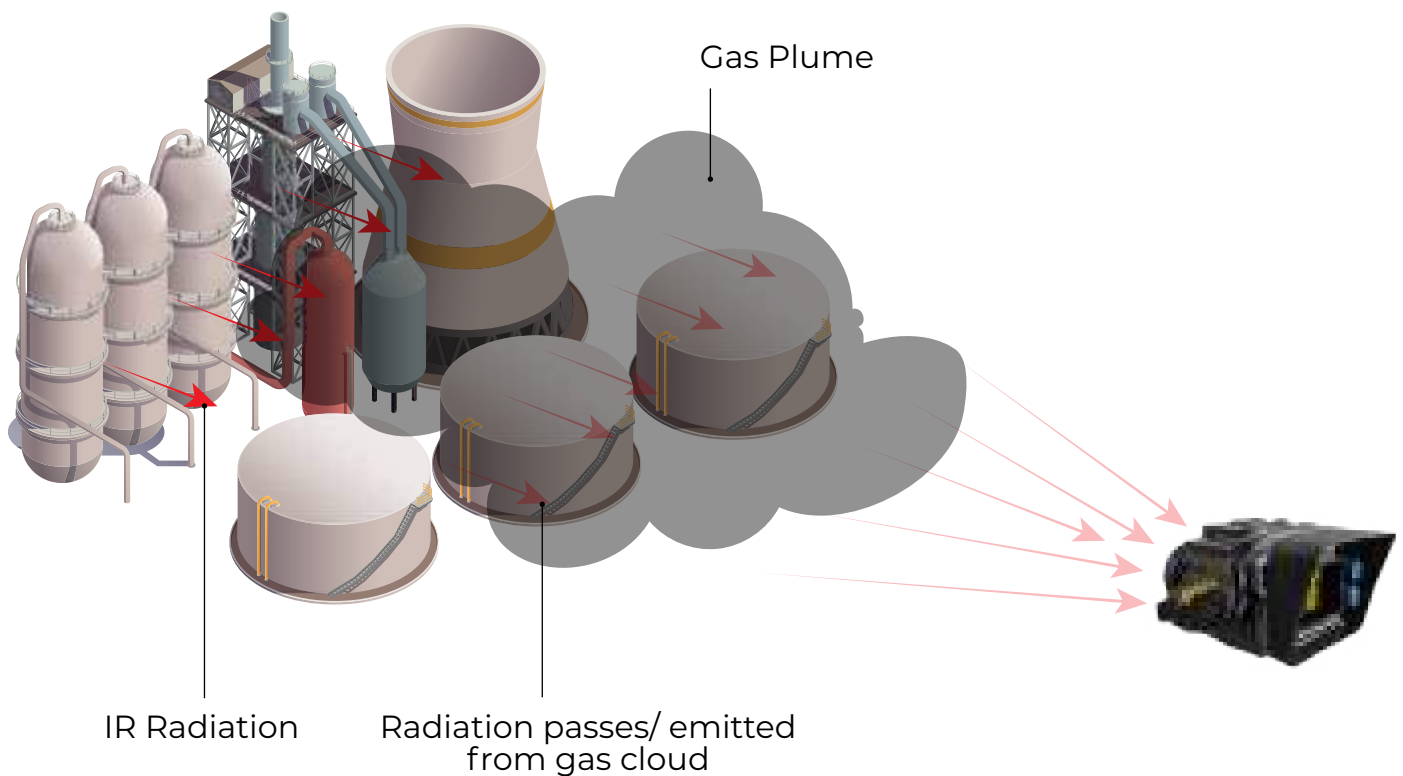
# EyeCGas® Multi

Opgal's EyeCGas® Multi is a ruggedized, intrinsically safe and the world's most sensitive OGI camera. Built to withstand harsh industry conditions while ensuring safety, this OGI camera quickly detects Methane, $CO_2$ and over 400 Volatile Organic Compounds (VOC's). Making it your ideal leak detection solution.

EyeCGas Multi enables detection and quantification (built in or via EyeCSIte QOGI dedicated software). It is the only OGI camera with a patent multi Spectral interchangeable filters for improved detection. Especially in humid and long range conditions. Stream your inspection in real time, or share your results using the dedicated EyeCGas App.

Receive free software upgrades, which are based on customer feedback, and rest assure that your investment is guaranteed with our exclusive 4-year warranty.

ANSI · element · MET · ATEX · IECEx

## STREAMING
Real-time video streaming and wireless images/videos sharing with the official EyeCGas App.

## Key Features

- **Gas Leak Detection**
  Quick detection of methane, $CO_2$ and over 400 VOC's.

- **Thermographic Imaging**
  Temperature measurements capabilities and color pallets for better versatility.

- **Wireless Connectivity**
  Built-in Wi-Fi, GPS, hotspot and Bluetooth capabilities.

- **Meets Regulatory Compliance**
  Complies with the EPA's OOOO'a/b/c regulations. With the broadest Appendix K envelope of performance.

- **Gas Quantification**
  Built-in quantification or remotely operated quantification via EyeCSite software and other 3rd party devices.

- **LDAR-Ready Capabilities**
  Integrates with various softwares and analyzers.

- **Free Firmware Upgrades**
  Receive camera upgardes and improvements free of charge.

- **Intrinsically Safe**
  IECEX intrinsically safe Zone II, ANSI, CSA Class I & Class II div.2.

- **Rugged & Sealed**
  Especially designed for detecting gas leaks in the harsh conditions of the oil and gas industry.

- **Multi Spectral OGI**
  The only OGI camera with replaceable filters enabling improved Methane/VOC & $CO_2$ detection with the same camera.

# Target Audience

EyeCGas Multi® OGI Solutions is ideal for stakeholders within the Oil & Gas industry, including

Operations Managers seeking to enhance safety protocols

Environmental Compliance Officers aiming to meet regulatory standards
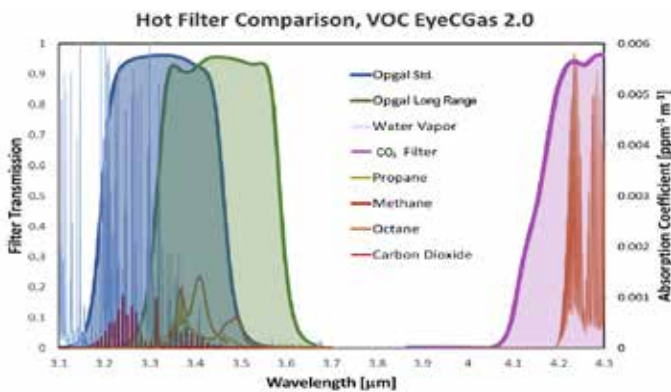
Maintenance Teams requiring efficient monitoring tools

Executives focuses on maximizing operational efficiency and cost savings

## The only OGI camera with replaceable hot filters enabling improved Methane/VOC & CO2 detection all with the same camera.



Hot Filter Comparison, VOC EyeCGas 2.0

The EyeCGas Multi camera features replaceable filters that enhance its flexibility and performance for detecting various gases The camera comes with three key filters: a **Standard VOC filter**, a **Heavy alkanes & long-range VOC detection filter**, and a **CO₂ filter**. These filters allow users to monitor a broad spectrum of gases with a single device, making the camera highly adaptable across different industrial applications. Operators can easily switch between filters depending on the target

gas, whether it's volatile organic compounds, heavier alkanes, or carbon dioxide.

This modular system reduces the need for multiple cameras, minimizes downtime, and ensures continuous operation with optimal performance.

The EyeCGas Multi camera is a versatile and cost-effective solution for industries like oil and gas, petrochemicals, and environmental monitoring, offering comprehensive gas detection capabilities in a variety of conditions.

# EyeCGas Multi QOGI Quantification Capabilities & Performance
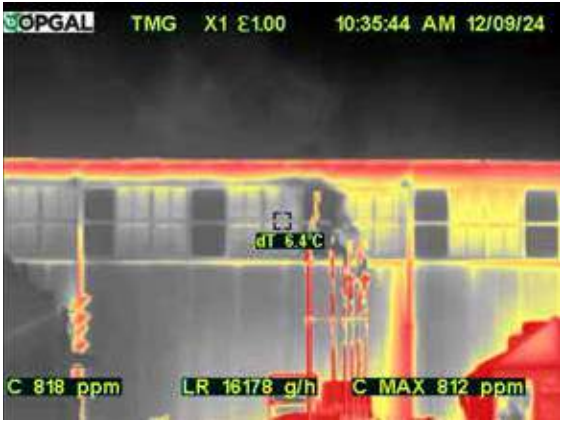




✅ **Advanced Optical Gas Imaging (OGI) Technology**
Combines qualitative gas leak detection with advanced algorithms for quantitative analysis, offering a dual advantage in one camera system

✅ **Real-Time Gas Quantification**
EyeCGas cameras enable accurate, real-time quantification of hydrocarbon gases, providing precise leak rate estimations (measured in g/h or ppm-m)

✅ **Remote & Long-Distance Quantification**
Equipped with telephoto lens options, EyeCGas cameras enable accurate gas quantification from long distances, enhancing safety and allowing monitoring of hard-to-reach areas

✅ **Broad Hydrocarbon Gas Detection Range**
Capable of detecting and quantifying a wide range of gases, including methane (CH4), volatile organic compounds (VOCs), and other hydrocarbons

✅ **Non-Intrusive and Remote Sensing**
Quantification of gas emissions without the need for physical contact, ensuring safe, remote monitoring of hazardous areas

✅ **Comprehensive Leak Detection and Repair (LDAR) Programs**
Integrates with LDAR programs to not only identify leaks but also quantify their severity, aiding in prioritization for repairs

✅ **Optimized for Industrial Applications**
Suitable for oil and gas, petrochemical, and chemical industries, EyeCGas QOGI cameras ensure efficient leak detection and management to reduce emissions

✅ **Accuracy & Reliability**
Delivers accurate and reliable gas concentration data under various environmental conditions, contributing to better decision-making in leak management

✅ **Compliance with Regulatory Standards**
Helps industries comply with environmental regulations (US, EU and others) by providing measurable gas emission data for reporting and verification

✅ **High Sensitivity**
Low level emissions are captured and quantified for effective mitigation

# EyeCSite® QOGI

EyeCSite is the industry-leading quantification software, offering a wide range of functionalities that detects, and quantifies emissions (in real time or post analysis) in a very simplified and user-friendly interface, without the need for a close contact analyzer.
The EyeCSite kit combined with the EyeCGas Multi camera offers a competitive solution for the OGI based LDAR application



**QUANTIFICATION**
Calibrated accurately to quantify emissions from a safe distance - in leak rate (e.g. gr/hr) and max concentration (e.g. ppm) values

**REAL TIME & POST ANALYSIS**
Quantify emissions in real time on site or later on by uploading the videos from the EyeCGas 2.0

**COLORIZATION**
Real time colorization of the gas plume enables easy detection

**MULTIPLE COMPOUNDS**
Select from a list of multiple compounds for more accurate quantification reading

**LOGS & REPORTING**
Easily create a report at the end of each inspection with a built-in reporting template

**USER FRIENDLY INTERFACE**
Easy to operate software adapted to the inspection workflow

**WIRELESS CONNECTION**
Wirelessly connects to the EyeCGas 2.0 - enabling quick on the field operation

**SAFE & RUGGED TABLET**
Strong, portable, powerful and fully certified for hazardous locations

# Specifications

| | |
|---|---|
| IR Resolution | 320 x 240 pixels |
| Focus | Manual Focus |
| Detector Pitch | 30 µm |
| Gas Sensitivity | **NECL @ delta T =10C:**<br>Methane- 9 ppm m<br>Propane- 2.8 ppm m<br>Butane- 2.3 ppm m<br><br>**Minimum Leak Rate @ delta T =10C:**<br>Methane- 0.07 g/h<br>Propane- 0.05 g/h<br>Butane- 0.05 g/h<br><br>**Minimum Laboratory Leak Rate:**<br>Methane- 0.35 g/h<br>Propane- 0.26 g/h<br>Butane- 0.29 g/h |
| Thermal Sensitivity/ NETD | <10 mK at 30°C (86°F) |
| Hazardous Location Compliance | CSA C22.2 No. 213-M1987, Non-Incentive Electrical Equipment for Use in Class I, Division 2, ANSI/ ISA-12.12.01 – Class I and II, Division 2, and Class III, ATEX.<br>Intrinsically safe for Zone 2 ratings as: Ex II 3 GD; Ex ic nA nC IIC T6 Gc; Ex ic tc IIIC T85°C DC |
| Gas leak detection capabilities | WITH SPECTRAL FILTER OF 3.2µM TO 3.4µM FOR VOCs GASES<br>DETECTION: 400+ compounds such as: Methane, Acetic acid, Benzene, Butadiene, Butene, Butane, Dimethyl-Benzene, Ethane, Ethylene, Ethyl benzene, Ethylene oxide, Hexane, Heptane, Isobutylene, Isopropyl alcohol, Isoprene, Methanol, MEK Methyl Ethyl Ketone, Octane, Pentene, Propane, Propanal. |

| Detector and Optical Data | |
|---|---|
| Detector Type | Focal plane array (FPA), cooled MCT |
| Spectral Range | 3.1 µm to 4.4 µm |
| Optical filters | Std. 3.2-3.5 µm; Long range 3.3-3.6 µm; $CO_2$ 4.1-4.4 µm |
| Sensor Cooling | Stirling Microcooler |
| Digital Image Enhancement | High sensitivity mode (HSM), noise reduction filter |
| Available Lenses | 18° (30 mm); 7.5° (75 mm) |
| F-Number | 1.1 |

| Image Presentation | |
|---|---|
| Display | 3.5" (10'equivlent using glare shield), 640 × 480 pixel, LCD |
| Image Presentation Modes | IR image, visual image, Normal, Enhanced & Thermography |
| Color Palettes | 6 color palettes (Rainbow, Iron, ISO red, ISO green, Grey Scale and Vivid) |
| Zoom | x2, x4, x8 and x16 (only for visible camera) |

| Measurement & Analysis | |
|---|---|
| Measurement Temperature Range | -20°C to 350°C (-4°F to 662°F) |
| Accuracy | At Least ± 1 °C (0 – 100 °C), ± 2% (> 100 °C), ± 2°C (-20 – 0 °C) |
| Gas emission Quantification | Built-in real-time and offline Image processing VOC gas quantification for desktop or handheld application (offline/online operation) |

| Accessories & Apps | |
|---|---|
| Head up display | Seamless integration including voice commands with Realware® head up display |
| Mobile APP | Android 10 /IOS 14 and up |

| Communication interface & Data Storage | |
|---|---|
| GPS | Included, can be added to any still or video recording |
| Storage Media | Up to 20 hours and more of video storage over a 64GB solid state memory |
| Image File Formats | JPG Format (on available modes) |
| Communication Interfaces | USB: Data transfer, video streaming and video images file transfer<br>Wi-Fi: 2.4 GHz for video streaming and file transfer<br>Bluetooth: Bluetooth 4.2 with other devices: RMLD, TVA2020<br>LDAR software etc... GPS: Built in or external |
| Video Out | Digital video recorder build-in generates a .ts format video on all modes. |

| Video Recording and Streaming | |
|---|---|
| IR or Visual Video | Digital video recorder build-in generates a .ts format video on all |
| Radiometric IR Video Streaming | Over Wifi |

| Environmental & Certifications | |
|---|---|
| Operating Temperature Range | -20°C to 50°C (-4°F to 122°F) |
| Storage Temperature Range | -40°C to 70°C (-40°F to 158°F) |
| Encapsulation | IP65 (Intrinsically safe) |
| Drop | ASTM-D 4169-06 Schedule A |
| Vibration | ASTM-D 4169-08 Schedule F Test method D999 |
| HALT | Max temp: 55°C, Min temp: -20°C |
| Safety | EN60950-1:2006 |

| Additional Information | |
|---|---|
| Battery Type | Rechargeable Li-ion battery; 7.4 V, charger included |
| Battery Operating Time | >4.5 hours continuous operation |
| Battery Charging Time | 3 hours to 95% capacity, charging status indicated by LEDs |
| Camera Size | 9" x 4.3" x 5.1" (230 x 110 x 130) mm |
| Camera Weight | 2.6 kg (5.9 lb) |
| Mounting Interfaces | UNC ¼"-20 |
| Warranty | 4 years (Detector & cooler – 2 years; Batteries 1 year) |

| Box Contents | |
|---|---|
| Packaging | Infrared camera with lens, Batteries (2), Battery Charger, USB Cable, Neck strap, Glare Shield, Carrying Case, Cleaning Kit. |

* Batteries – 1 year warranty

** IR Detector & Cooler – 2 years warranty

**OPGAL**

Opgal Optronic Industries.
www.opgal.com  |  info@opgal.com

Specifications are subject to change without notice

gr/hr

ppm

ppm.m

# OPGAL

# EyeCGas® 2.0
# BUILT-IN
# Quantification

### ✓ EMISSION QUANTIFICATION
Use your EyeCGas 2.0 OGI camera to measure concentration as well as mass flow of various VOC emissions

### ✓ BUILT-IN REAL TIME MEASUREMENTS
Quantify emissions in real time with values displayed on the screen

### ✓ MULTIPLE COMPOUNDS
Easy selection from predefined gases to ensure quick and accurate readings

### ✓ USER FRIENDLY INTERFACE
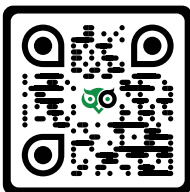Intuitive interface to setup and perform the inspection

### ✓ REPORTING
Recording your videos with values embedded allows for easy tracking of the leak source

### ✓ WIRELESS CONNECTION
Easly share your inspection results using the EyeCGas App

YOUR CHALLENGE
**Our Innovation**
SCAN FOR MORE INFO

ANSI · element · MET · ATEX Ex · IECEx

Opgal Optronic Industries Ltd. | +1 332 236 7048
info@opgal.com | **www.opgal.com**

# EyeCgas 2.0 Optical Gas Imaging Camera Training and Certification Agenda
## West Virginia Department of Environmental Protection

## Day 1 – Classroom Training Session. 08:00 – 11:30 Morning Session

**KEY OBJECTIVES**

- Identify the components in an EyeCGas Camera Package
- Locate the controls on your camera.
- See how all the major functions of the camera work.
- Learn about your camera accessories.
- Preparing the camera for operation
- Video Streaming to any wireless device
- Introduction to QOGI (quantification)
- Field testing and applications
- Uploading Files to your computer through USB or Wirelessly
- Basic knowledge of IR technology
- Hit the ground running with your job upon completion of training.

# EyeCGas Camera Training

**Training Introduction-** 15 minutes
Participant and instructor introductions Review training introduction and objectives

**Module 1: Get Ready to Use the EyeCGas Infrared Camera -** 20 minutes.
OBJECTIVES

- Safety Overview
- Camera Certification
- Be able to identify all components in the EyeCGas Carrying Case
- Understand the correct usage for the glare shield, neck strap and head set.
- Explain the proper charging of the EyeCGas batteries.
- Identify the step-by-step process for the initial camera set up.

**Module 2: Get Familiar with the EyeCGas Infrared Camera Controls -** 30 minutes
OBJECTIVES

- Identify each camera component, system layout.
- Understand proper battery charging and first-time use.
- Be familiar with proper camera set up for operation.
- Differentiate between proper usage of Normal Mode vs. Enhanced Mode, Visible Mode and Thermography Mode.
- Learn the procedures for audio and video recording.

**Module 3: Get Familiar with the EyeCGas Infrared Camera Operations -** 60 minutes.
OBJECTIVES

- Camera Settings, Viewing Modes
- Identify common thermal imaging applications.
- Differentiate between background noise and input noise.
- Understand the maximum allowable distance from target.
- Understand infrared camera image storage methods.
- Powering Off
- Replacing the Battery
- Replacing the Lens

**BREAK**: 15 minutes

**Module 4: Get Connected with the EyeCGas Utility -** 60 minutes.
OBJECTIVES

- Learn how to import images from your camera to your computer.
- Connect camera to other devices (Android, iPhone, Laptop Computer)


**Module 5: Trouble Shooting, Maintenance, and Warranties -** 30 minutes.
OBJECTIVES

- Reinforce Addglobe & Opgal's commitment to customer service and satisfaction.
- Understand the proper maintenance for the camera lens, camera body and batteries.
- Cleaning the Lens
- Cleaning the LCD Screen and Camera Body
- Learn how to contact Milton Heath for technical support.
- Understand the process for repairs and returns.
- Understand the EyeCGas Camera Warranty and Addglobe's/Opgal's obligation under this warranty.

## Lunch

## Afternoon Hands On Session: 1:00 – 4:30 pm

**Module 6: Field Application in a gas plant environment**
OBJECTIVES

- Understand through hands on use the scope of a thermal imager for gas leak detection.
- Define palette, range, and span for infrared cameras.
- Evaluate how pixel size affects infrared resolution.
- Differentiate between background noise and input noise.
- Describe the pixel array needed to measure a target.
- Understand the maximum allowable distance from target.
- How to adjust the enhanced sensitivity parameters
- Video Streaming in a field environment
- QOGI Demonstration (if conditions allow)

## Hands on Training continued

- Observation / Instructor Guidance
- Quality Assurance
- Taking a JPEG Photo and Recording a Video of a leak in the Visible and Infrared Mode.
- Best Practice method for recording leaks.
- Practice File Transfer of Videos/Pictures to Computer
- Review trainee OGI videos and provide feedback.
- Complete written test