

# Find gas leaks now

- ppb sensitivity
- battery powered
- 10-Hz data rate
- small size



## Microportable Gas Analyzer (CH<sub>4</sub>, CO<sub>2</sub>, H<sub>2</sub>O)

### Features and Benefits

- 12 pounds (w/ 2-hr battery)
- Continuous measurements
- CH<sub>4</sub> reported at 10 Hz with ppb sensitivity
- Ideal for natural gas leak detection while walking; also, for chamber flux and soil studies, emissions monitoring
- Extremely wide range: ppb to %
- Extended Range option allows CH<sub>4</sub> measurements up to 1%
- Species specific - no cross interferences
- Operates directly on DC power
- Extremely fast time response (1 Hz with internal pump)

LGR's new Microportable Gas Analyzer ( $\mu$ GA) reports measurements of methane, carbon dioxide and water vapor simultaneously in a package that is compact, crushproof and travels anywhere. Small enough to be hand carried (even on-board aircraft) and requiring less than 35 watts, the  $\mu$ GA offers opportunities to measure GHG and natural gas leaks anywhere. As with all LGR instruments, the  $\mu$ GA is simple to use which makes it ideal for natural gas leak detection and other field studies, compliance monitoring, air quality studies and soil flux studies, and wherever measurements of methane, carbon dioxide and water vapor are needed quickly and sensitively.

In addition, the  $\mu$ GA reports and stores all measured absorption spectra which allows the instrument to accurately correct for water vapor dilution and absorption line broadening effects and thus to report CH<sub>4</sub> and CO<sub>2</sub> on a dry mole fraction basis without drying or post processing. Furthermore, LGR's "Extended

Range" option provides accurate methane measurements at levels up to 1% (without dilution) without reducing precision and sensitivity at typical ambient levels - a unique capability to LGR. Moreover, only LGR's analyzers provide reliable guaranteed measurements at concentrations greater than 10,000 times ambient levels.

LGR's patented technology, a fourth-generation cavity enhanced absorption technique, has many advantages (simpler, easier to build, rugged) over older, conventional and delicate cavity ringdown spectroscopy (CRDS) and direct absorption techniques. As a result, LGR Analyzers provide higher performance at lower cost.

LGR Analyzers have an internal computer (Linux OS) that can store data practically indefinitely on a hard disk drive and send real time data to a iPhone, iPad, Android Tablet, or other WiFi device.

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## Performance Specifications

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Precision (1σ, 0.1 sec / 1 sec / 10 sec):

CH<sub>4</sub>: 9 ppb / 3 ppb / 1 ppb  
CO<sub>2</sub>: 6 ppm / 2 ppm / 1 ppm

Measurement Rates:

0.01 – 10 Hz (user selectable)

Measurement Ranges (meets all specifications):

CH<sub>4</sub>: 0.01 – 1000 ppm (standard range)  
CH<sub>4</sub>: 0.01 – 10,000 ppm (extended range)  
CO<sub>2</sub>: 100 ppm – 10%

Operational Range

(external calibration may be required):

CH<sub>4</sub>: 0 – 4%  
CO<sub>2</sub>: 0 – 10%  
H<sub>2</sub>O: 0 – 70000 ppm (0 – 98% relative humidity)

Sampling Conditions:

Sample Temperature: -40 – 50 °C  
Operating Temperature: 0 – 50 °C  
Ambient Humidity: 0 - 98% RH non-condensing

Flow time response:

1 second (1/e)

Data Outputs:

WiFi

Power Requirements:

35 watts (10-30 VDC)

Dimensions:

13.4"× 11.6"× 6"

Weight:

12 pounds (5.4 kg) with internal 2-hour battery



## Ordering Information

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Model: 909-0050 (Analyzer includes control and analysis software)

## Accessories (optional)

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Gas sampling wand  
Shoulder strap  
Tablet - Android Nexus or Apple iPad  
Tablet harness (for hands-free operation)  
Larger internal battery - for 4 hour operation  
Smart external battery charger  
Shoulder strap  
Mirror Cleaning Kit