

# Landtec GEM™ 5000 Portable Gas Analyzer

The GEM™ 5000 is designed specifically for use on landfills to monitor Landfill Gas (LFG) collection and control systems. The GEM™ 5000 samples and analyzes the methane, carbon dioxide and oxygen content of landfill gas with options for additional analysis.

## FEATURES

- Measures % CH<sub>4</sub>, CO<sub>2</sub> and O<sub>2</sub> Volume, static pressure and differential pressure
- Calculates balance gas, flow (SCFM) and calorific value
- High accuracy and fast response time
- Lighter and more compact
- Certified intrinsically safe for landfill use
- Calibrated to ISO/IEC 17025
- CO and H<sub>2</sub>S (on Plus models only)
- 3 year warranty
- Annual recommended factory service
- Available with GPS and additional gas detection

## BENEFITS

- Designed specifically for use on landfills to monitor landfill gas (LFG) extraction systems, flares, and migration control systems.
- No need to take more than one instrument to site
- Can be used for monitoring subsurface migration probes and for measuring gas composition, pressure and flow in gas extraction systems
- The user is able to set up comments and questions to record information at site and at each sample point
- Ensures consistent collection of data for better analysis
- Streamlined user experience reduces operational times

## APPLICATIONS

- Landfill Gas Collection & Control Systems
- Environmental Compliance
- Landfill Gas to Energy
- Subsurface Migration Probes

**CALL GEOTECH TODAY (800) 833-7958**

### Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205  
 (303) 320-4764 • FAX (303) 322-7242  
 email: sales@geotechenv.com • website: www.geotechenv.com



## GEM 5000 MODELS

Model	Meter with AC Charger – No Kit
<b>5000</b>	CH <sub>4</sub> , CO <sub>2</sub> , O <sub>2</sub> , static and differential pressure
<b>5000+</b>	Adds CO (0-2000 ppm), and H <sub>2</sub> S (0-500 ppm)
<b>5000+1</b>	Adds CO (0-2000 ppm), and H <sub>2</sub> S (0-1000 ppm)
<b>5000+5</b>	Adds CO (0-2000 ppm), and H <sub>2</sub> S (0-5000 ppm)
<b>5000+10</b>	Adds CO (0-2000 ppm), and H <sub>2</sub> S (0-10000 ppm)
<b>5000Nav</b>	Adds Built-in GPS
<b>5000Nav+</b>	Adds Built-in GPS, CO (0-2000 ppm), and H <sub>2</sub> S (0-500 ppm)
<b>5000Nav+1</b>	Adds Built-in GPS, CO (0-2000 ppm), and H <sub>2</sub> S (0-1000 ppm)
<b>5000Nav+5</b>	Adds Built-in GPS, CO (0-2000 ppm), and H <sub>2</sub> S (0-5000 ppm)
<b>5000Nav+10</b>	Adds Built-in GPS, CO (0-2000 ppm), and H <sub>2</sub> S (0-10000 ppm)

**GM5K-Kit** GEM 5000 Kit Includes:  
 Hoses, heavy duty water trap filter, soft case, electronic manual accompanies software, LANDTEC System Gas Analyzer Manager (LSGAM) software, USB download cable and hard-case.

## SPECIFICATIONS

### Gas Ranges

<b>Gases Measured</b>	CH <sub>4</sub>	By dual wavelength infrared cell with reference channel		
	CO <sub>2</sub>	By dual wavelength infrared cell with reference channel		
	O <sub>2</sub>	By internal electrochemical cell		
	CO	By internal electrochemical cell		
	H <sub>2</sub> S	By internal electrochemical cell		
<b>Ranges</b>	CH <sub>4</sub>	0-100% (vol)		
	CO <sub>2</sub>	0-100% (vol)		
	O <sub>2</sub>	0-25% (vol)		
	CO	0-2000 ppm***		
	H <sub>2</sub> S	0-500 ppm***		
<b>Gas Accuracy*</b>	CH <sub>4</sub>	0-5% ±0.3% (vol)	0-70% ±0.5% (vol)	70-100% ±1.5% FS
	CO <sub>2</sub>	0-5% ±0.3% (vol)	0-60% ±0.5% (vol)	60-100% ±1.5% FS
	O <sub>2</sub>	0-25% ±1.0% (vol)		
	CO (H <sub>2</sub> )**	0-2000 ppm ±1.0% FS		
	H <sub>2</sub> S	0-500 ppm ±2.0% FS		

\* Typical accuracy after calibration as recommended in the operations manual.

\*\* Hydrogen compensated Carbon Monoxide measurement.

\*\*\* Additional ranges available, call for more information.

### Other Parameters

	Unit	Resolution	Comments
<b>Energy</b>	BTU/hr	1000 BTU/hr	Calculated from specific parameters
<b>Static Pressure</b>	in. H <sub>2</sub> O	0.1 in. H <sub>2</sub> O	Direct Measurement
<b>Differential Pressure</b>	in. H <sub>2</sub> O	0.001 in. H <sub>2</sub> O	Direct Measurement

**Important Note:** The information in this document is correct at the time of generation. Specification may change without prior notice as a result of continuing development.

### Pump

<b>Flow</b>	Typically 550cc/min.
<b>Flow with 80 in. H<sub>2</sub>O vacuum</b>	Approximately 80cc/min.

### Environmental Conditions

<b>Operating Temperature Range</b>	14°F–122°F (-10°C–50°C)
<b>Operating Pressure</b>	-100 in. H <sub>2</sub> O, +100 in. H <sub>2</sub> O (-250 mbar, +250 mbar)
<b>Relative Humidity</b>	0-95% non-condensing
<b>Barometric Pressure</b>	±14.7 in. Hg (±500 mbar) from calibration pressure
<b>Barometric Pressure Accuracy</b>	±1% typically

### Power Supply

<b>Battery Life</b>	Typical use 8 hours from fully charged
<b>Charge Time</b>	Approximately 4 hours from complete discharge

### Certification Rating

<b>ATEX</b>	II 2G Ex ib IIA T1 Gb (Ta= -10°C to +50°C)
<b>ISO17025</b>	ISO/IEC17025:2005 Accreditation #66916
<b>CSA</b>	Ex ib IIA T1 (Ta= -10°C to +50°C) (Canada), AEx ib IIA T1 (Ta= -10°C to +50°C) USA

**CALL GEOTECH TODAY (800) 833-7958**

### Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205  
 (303) 320-4764 • FAX (303) 322-7242  
 email: sales@geotechenv.com • website: www.geotechenv.com