SENSIT Technologies

Innovative Detection Solutions

Northeast GAS ASSOCIATION

Our Mission:

To Protect Life, Property, and the Environment from hazardous gases.

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www.gasleaksensors.com

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Company Profile

SENSIT Main Office
Valparaiso, IN

Design, manufacture, service and sell from Valparaiso IN USA

Family business incorporated in 1980

Acquired by

Halma, plc

February 2020

100+ Employees

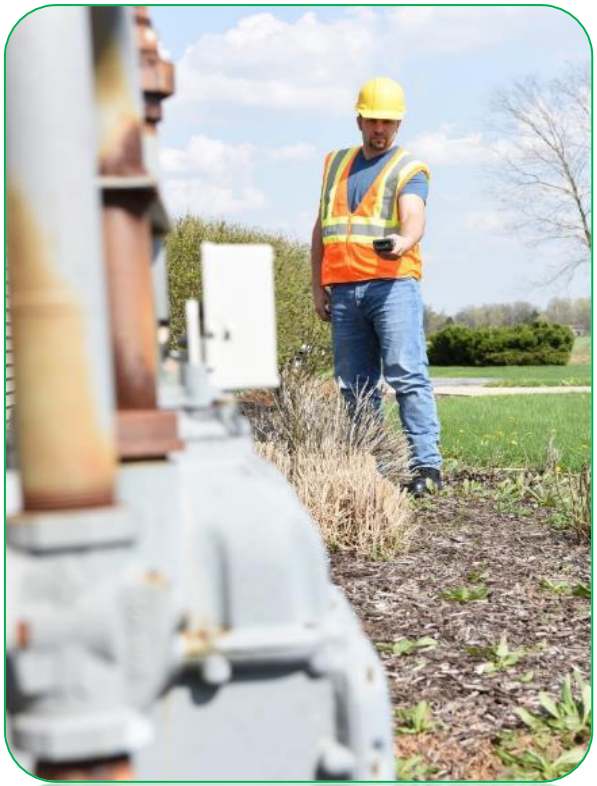
Brands:

SENSIT, Trak-It
Gas-Trac
Smart-Cal

Global reach to ~60 countries

GAS•TRAC® LZ

Hand-Held Remote Gas Leak Detector



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Gas-Trac LZ30

Protects employees and the public

Eliminates the need to directly access the gas plume

- First Response
- Leak Investigation
- Bridge Spans
- “Can’t Get In” situations
- Other inaccessible areas

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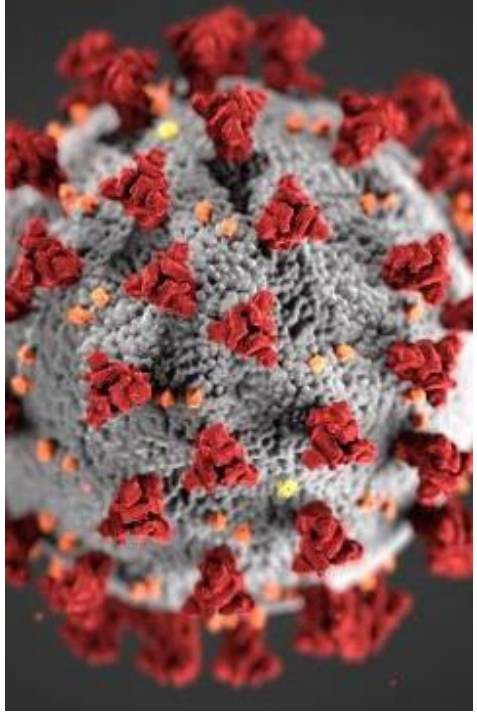

User Comments:

- “We are trying to limit the amount of time that we are inside homes and businesses while not compromising public and customer safety, especially during Covid.”
- “The size of the LZ30 is a plus”

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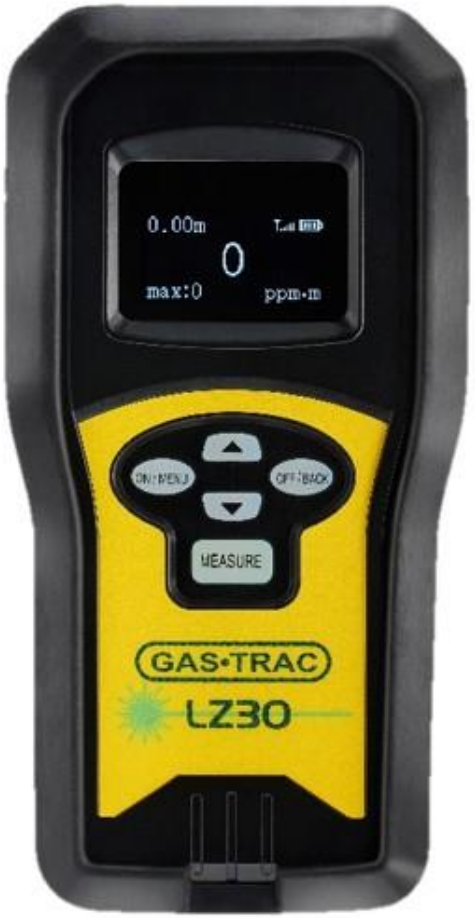
User Comments

- “On outside leaks, it keeps our Techs out of the gas cloud.”
- “As part of our procedures, we use it to investigate under crawl spaces, storm drains, piping that is out of reach etc. ”

Gas-Trac LZ30

Product Category Features

- TDLAS technology
  tunable diode laser absorption spectroscopy
  - Fast, accurate, methane specific
  - IR – Green and Red Laser, Class 3R
- Methane Specific
- Includes distance measurement
- Continuous detection
- Low/High Signal indicator
- All weather enclosure
  - IP54
  - Operating Temperature -4 to 122°F
- Rechargeable battery
- Calibration cell included in case



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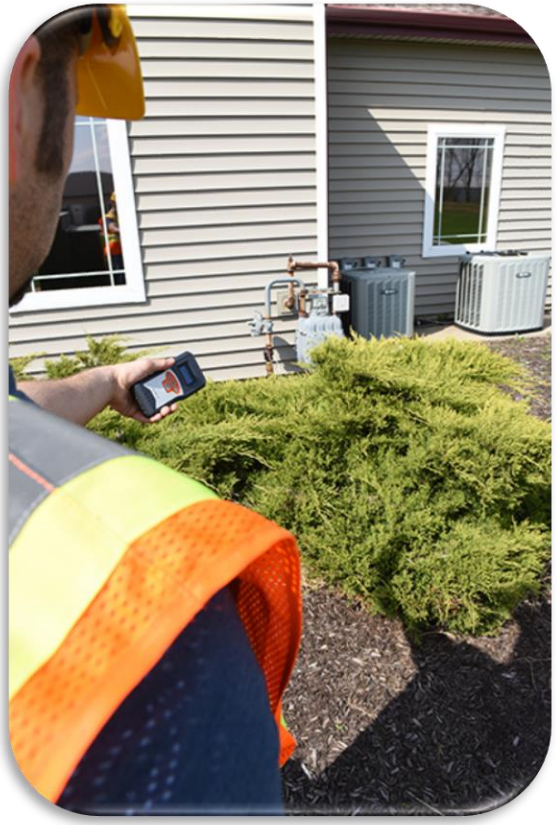
Gas-Trac LZ30

Lightweight – Compact - Powerful



- 100’ (30m) detection range
- Adjustable alarms
  - tactile, visual, audible
- Low sensitivity
  - 100 ppm-m alarm threshold (default)
- Weighs less than a pound and fits in a pocket

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Lasers versus CGIs

Gas Trac LZ30

- **Purpose – *improve worker and public safety***
- Methane specific
- **Not** for grading leaks or quantification. Qualitative only.
- **Not** intended to be the primary tool for leak survey compliance
- Improves speed of response to methane leaks
- Flashlight for methane

Combustible Gas Indicator

- **Purpose – *grade, quantify, and pinpoint gas leaks***
- Broad sensor response to combustibles
- Readings determine hazard level, grade

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Eye Safety

Class 3		Class 4
Class 3R	Class 3B	Class 4
Class IIIa (definition is different but results are similar)	Class IIIb	Class IV
For visible light, emits beam between 1 and 4.99 milliwatts.	For visible light, emits beam between Class 3R limit (e.g. 5 milliwatts) and 499.9 milliwatts	For visible light, emits beam of 500 milliwatts (1/2 Watt) or more
CAUTION	WARNING	DANGER
AVOID DIRECT EYE EXPOSURE	AVOID EXPOSURE TO BEAM	AVOID EYE OR SKIN EXPOSURE TO DIRECT OR

- Lasers in LZ30 and LZ50 are low powered and classified as Class 3R
- Considered safe when handled properly

http://www.laserpointersafety.com/laserclasses.html

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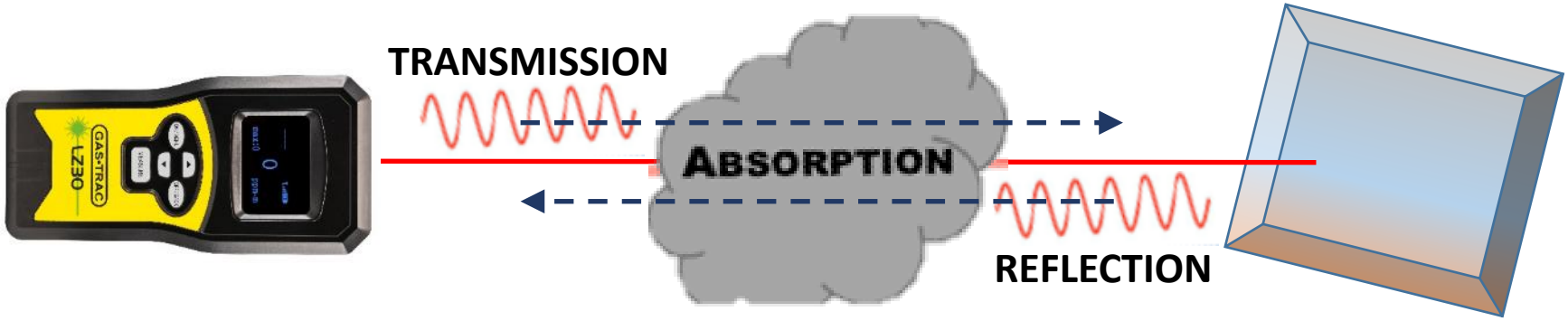
TDLAS – how it works



Methane (or any gas) absorbs a specific wavelength of light

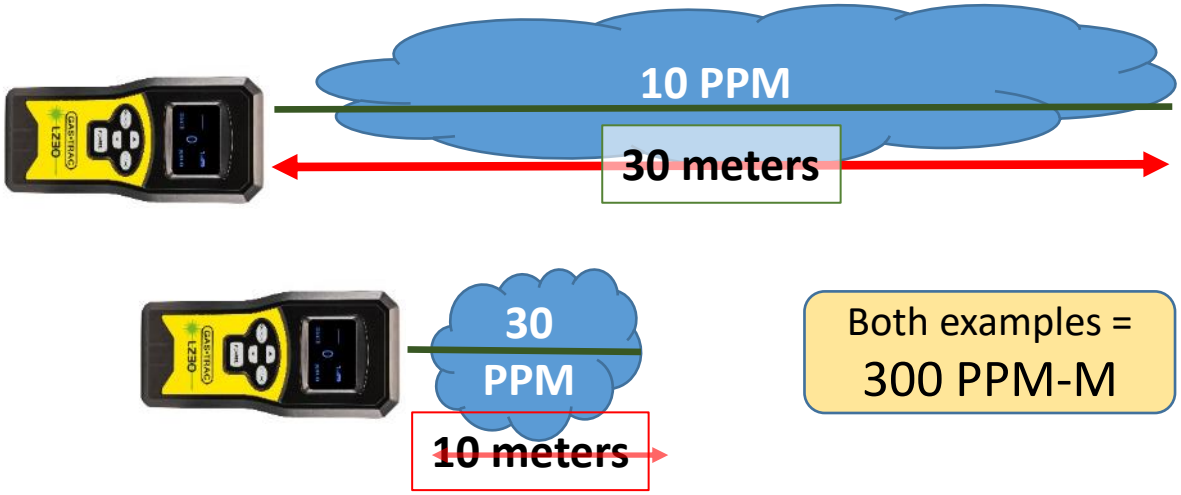
The LZ30's laser emits the wavelength that is absorbed by methane

The amount of laser light absorbed is proportional to the amount of methane in the path of the beam

The gas concentration is expressed as PPM-M – parts per million meter

Concentration x plume width

Open Path Laser Methane Detection
- displayed in PPM-M



PPM-M = Concentration x Path Length

- A uniform background of 10 ppm over 30 meters gives a reading of 300 ppm-m.

- A concentrated plume of 30 ppm (10 meters wide) in an otherwise clean background also gives a reading of 300 ppm-m.

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Gas-Trac LZ30 - Basic Operation

Distance

Current Methane Reading

Peak Methane Reading

Backlit OLED Display

Fuel Gauge

Measurement unit/scale

Protective Rubber Boot

Durable, flame retardant polycarbonate housing

Function Buttons:

- ✓ On – Menu
- ✓ Off – Back
- ✓ Scroll arrows
- ✓ Measure

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- RED laser measures the distance to the target
- GREEN laser identifies the laser's target
- The actual sensing is invisible

The Gas-Trac LZ30 is the only hand-held laser detector that provides both audible and tactile feedback when detecting methane, allowing first responders to keep there eyes on the target

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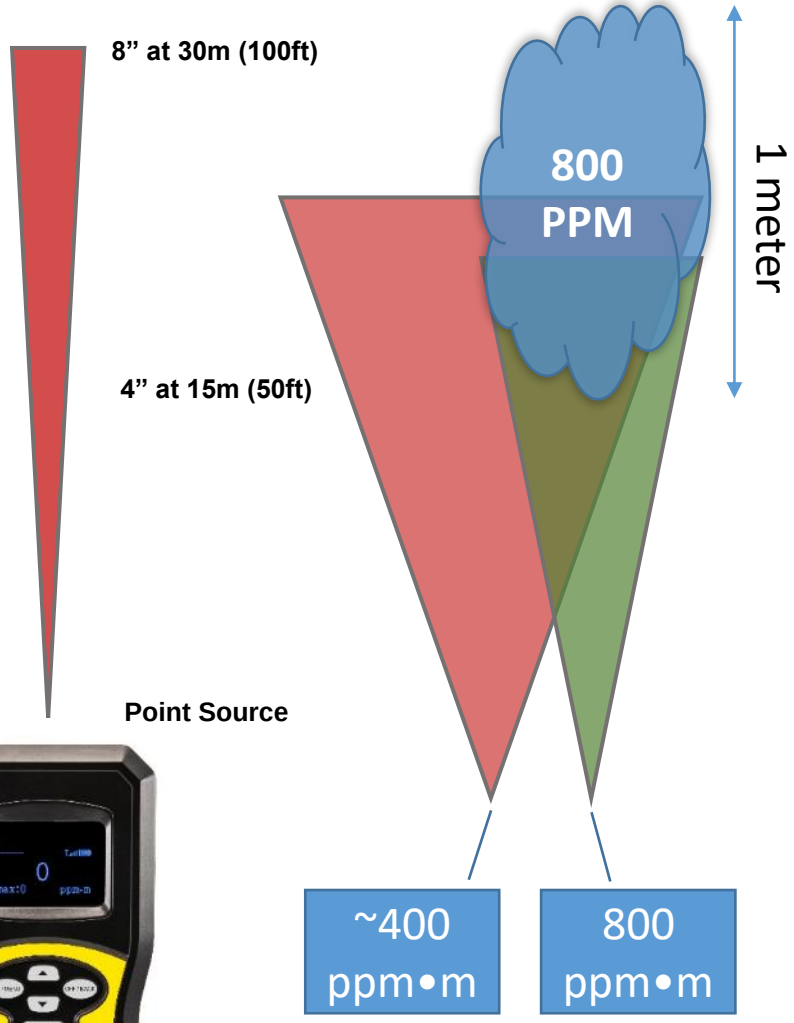
Beam Size

- The detection laser is cone shaped
  - Beam is 8” diameter at 30m (~100ft)
- A wider beam is not necessarily better
- Things to consider:
  - Detection area (can affect sensitivity)
  - Sweep speed
  - Reflection surface size
  - Beam Skip



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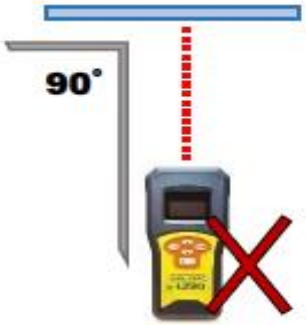

Detecting through Windows

- Keep target angle between 45 and 75°
  - Specular Reflection
- Watch for change in the distance measurement, comparing the distance to a solid outer wall to the distance when pointing the laser through n adjacent window.

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Battery Charging

Rechargeable LiOn Battery

- Unmatched ***2-YEAR WARRANTY***
- Not user replaceable
- 3 to 4 hours to recharge
- 6 hour run-time after full charge
- Charging status indicators

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Sealed Gas Cell – Included

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Other Tips and Cautions

- What part of the plume is the laser hitting?
- Laser needs to reflect
- Not for quantifying leaks
- Does not respond to other combustibles
- Sweep slowly and steadily
- Do not make drastic changes in distance
- Aim beam through window at between 45 and 75° degrees.
- Aiming at 90° can create specular reflection (mirror effect)
- Green tinted safety glasses can help see laser at a distance

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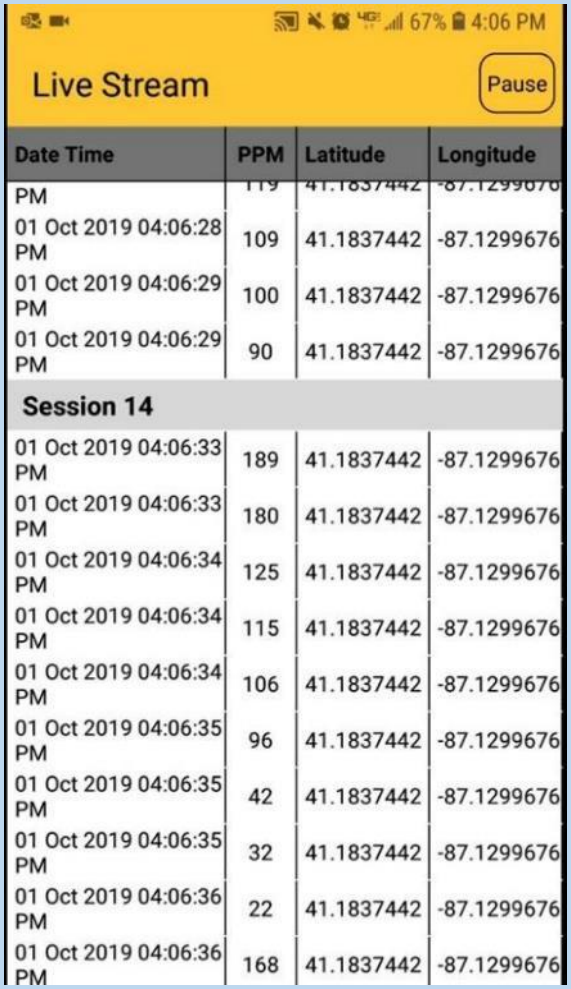
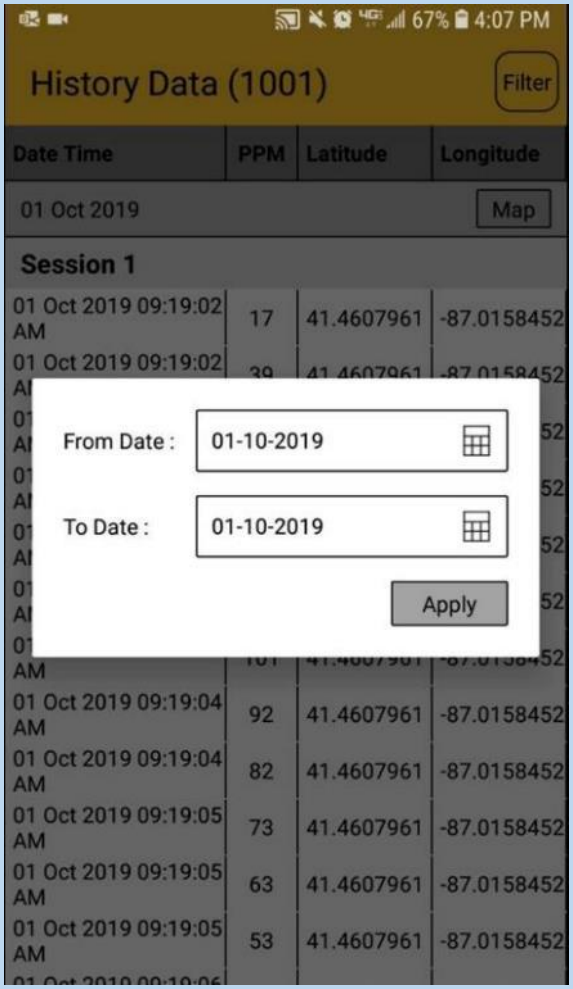
Gas-Trac LZ30 Data and Mapping App





Gas-Trac LZ50

- 50 meter (150 ft) range
- Precise GPS coordinates (with magnetometer + accelerometer)
- Photo and video capable
- Event logs
- GIS 360 compatible
- 8 hour runtime
- WiFi enabled
- SMART-CAL 360 and GLT compatible
- Target release by end of 2020

Gas-Trac LZ30
Wrap Up

- Protects employees and the public
- Fast, easy to use
- Compact, Ergonomic
- Long range, Powerful
- Perfect for:
  - First Response (Is there gas?)
  - Leak Investigations (Where's the gas?)
  - Hard to access locations

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Innovative Detection Solutions

Utility – Industrial – HVAC - Fire

Q&A
and
Discussion

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