



## FAU-TDL Laser Technology now available to accurately measure beyond your expectations

The FAU-TDL uses Tunable Diode Laser Technology to enable accurate and reliable measurements with no drift over time or cross gas sensitivity. The FAU-TDL was designed specifically for use in monitoring landfill gas (LFG) extraction systems, flares, and biogas digesters. This analyzer is the most reliable and cost effective solution for Carbon Credit verification and Green House Gas (GHG) reporting in the landfill gas industry.

### Features:

- Tunable Diode Laser Technology
- Measures % CH<sub>4</sub>, CO<sub>2</sub> & O<sub>2</sub>
- Each laser is tuned to a specific absorption wavelength (CH<sub>4</sub> & CO<sub>2</sub>)
- Accuracy of 1.0% full scale (CH<sub>4</sub>, CO<sub>2</sub> & O<sub>2</sub>)
- No drift overtime (CH<sub>4</sub> & CO<sub>2</sub>)
- Optically isolated analog outputs - 4-20mA
- Operates over a wide range of flow & temperature
- Options: Rack mounted or NEMA 4x enclosure
- Optional: Gas Conditioning unit-with efficiency of 99.97% removal of (0.3-06 micron particles)
- Optional: Temperature Probe

### Benefits:

- Accurate & reliable measurements
- No cross gas contamination
- Fixed position continuous analyzer
- Continuous readings with rapid response
- Integrates to AEMS or existing SCADA Systems
- Low cost of ownership



### Applications:

- Green House Gas/Carbon Credit Projects
  - (CDM, CAR, CCX, REGGI, GSV2, VCS)
- Gas to energy projects
- Environmental compliance projects
- Anaerobic digesters projects
- Aerobic-Bioreactor projects
- Closed site monitoring

The FAU-TDL eliminate problems with drift, calibration, and cross gas contamination typically associated with other instruments...Maintenance is virtually eliminated thereby reducing cost of ownership.

## Gas Analyzer (FAU-TDL)

Gases Measured CH<sub>4</sub> & CO<sub>2</sub> by Tunable Diode Laser, O<sub>2</sub> by internal electrochemical cell

### Range

CH <sub>4</sub>	1-100%	O <sub>2</sub>	0-25%
CO <sub>2</sub>	1-100%		

Typical Accuracy	±1.0%	±1.0%	±1.0%
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### Other Parameters

Flow Rate	200-1000 ml / min
Vacuum / Pressure	-120" W.C. Max / +4 PSI Max
Power Requirements	90-240 VAC, 50-60 Hz 1.4A
Response Time, T90	<15 SECONDS @ 90% flow
Ambient Temperature Range	-20°C to +70°C
Relative Humidity	0-95% non-condensing
Optically Isolated Analog Output	4-20mA (CH <sub>4</sub> , CO <sub>2</sub> , O <sub>2</sub> & temp w/optional temp probe)
Dimensions and Weight:	
19" Rack Mount	7"H x 19"W x 18"D (178mm x 483mm x 457mm) - 31 lbs (14kg)
NEMA 4X enclosure	25.4"H x 17.1"W x 9.8"D (645mm x 434mm x 249mm)
Gas conditioning:	
Particle removal	Particles > 20 microns
Liquid removal	Can sample on wet or dry basis: gas must be non-condensing

### Optional Accessories

Conditioning Unit (FAUCU)	Coalescing filter and membrane separator with 0.3-0.6 micron particle removal
	Efficiency of 99.97%
Temperature Probe	±1°C of reading -30°C to +130°C

*The development of LANDTEC's FAU-TDL is the culmination of research by NASA's Jet Propulsion Laboratory for use on Mars. The optical system uses a laser to produce a specific wavelength of light tuned to an absorption line, the known light frequency of the target gas. This technique produces an analyzer with a fast response speed, where the laser light stimulates vibrations and rotation in the molecule, resulting in energy absorption and enabling the sensing of gas.*



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