Tiger-i 2000 CH$_4$ and CO$_2$
Compact Monitors for Greenhouse Gases

GASES & CHEMICALS	CEMS	ENERGY	ATMOSPHERIC	SEMI & HB LED	SYNGAS	LAB & LIFE SCIENCE

A compact and user-friendly solution for monitoring ambient levels and emissions of methane and carbon dioxide, the Tiger-i 2000 offers:

- Accuracy traceable to the world's major national reference labs
- Specificity—no moisture or other interference
- High precision at ambient or even higher levels
- Freedom from the need for span calibrations
- No periodic sensor replacement/maintenance
- Wide dynamic range and no drift
- Compact and rugged design

Combat global warming at the source

The Tiger-i 2000 greenhouse gas analyzers for methane and carbon dioxide are designed for versatile use. They can measure ambient levels of CH$_4$ and CO$_2$ with high precision over a wide range of temperatures with excellent reliability, and they can monitor emissions of greenhouse gases from various sources such as landfills, gas and oil exploration sites, refineries, and agricultural facilities. The Tiger-i 2000 helps users to easily and accurately assess their greenhouse gas emissions andimplement measures to reduce global warming.

Using Tiger Optics' Tiger-i 2000 analyzers, you can measure ambient levels of methane and carbon dioxide with parts-per-billion accuracy, drift-free stability, and fast response. You'll find our systems fast to install, exceptionally easy to use, extremely reliable, and effortless to maintain due to their built-in calibration verification. The robust design—free of moving parts—results in an analyzer that has a high mean time between failure (MTBF) and a very low cost of ownership (CoO).

Tiger Optics | **21ST** *CENTURY SPECTROSCOPY*

Tiger-i 2000 CH_4 and CO_2
Compact Monitors for Greenhouse Gases

Performance	
Operating range	See table below
Detection limit (LDL, 24 h peak-to-peak variation)	See table below
Sensitivity (3σ)	See table below
Precision (1σ, greater of)	± 0.75% or 1/3 of Sensitivity
Accuracy (greater of)	± 4% or LDL
Speed of response	See table below
Environmental conditions	10°C to 40°C
	30% to 80% RH (non-condensing)
Storage temperature	-10°C to 50°C

Gas Handling System and Conditions*	
Wetted materials	316L stainless steel
	10 Ra surface finish
Gas connections	1/4" male VCR inlet and outlet
Leak tested to	1×10^{-9} mbar l / sec
Inlet pressure	0 – 15 psig (1 – 2 bara)
Outlet pressure	Vacuum (<10 Torr)
Flow rate	~1 slpm
Sample gases	Ambient air, dry air (CDA) and N_2
Gas temperature	Up to 60°C

Dimensions	H x W x D [in (mm)]
Standard sensor	8.73 x 8.57 x 23.6 (222 x 218 x 599)
Sensor rack (fits up to two sensors)	8.73 x 19.0 x 23.6 (222 x 483 x 599)

Weight	
Standard sensor	33 lbs (15 kg)

Electrical	
Alarm indicators	2 user programmable
	1 system fault
	Form C relays
Power requirements	90 – 240 VAC, 50/60 Hz
Power consumption	40 Watts max.
Signal output	Isolated 4–20 mA per sensor
User interfaces	5.7" LCD touchscreen
	10/100 Base-T Ethernet
	802.11g Wireless (optional)
	RS-232
	Modbus TCP (optional)

Performance in dry air or N_2:	Range	LDL	Sensitivity	Speed of Response
Tiger-i 2000 CH_4 (low range)	0 – 20 ppm	2 ppb	1.5 ppb	3 min to 95%
Tiger-i 2000 CH_4 (high range)	0 – 100 ppm†	10 ppb	7.5 ppb	3 min to 95%
Tiger-i 2000 CO_2	0 – 3000 ppm	200 ppb	150 ppb	3 min to 95%

Performance in ambient air:	Range	Precision (1σ) at typical ambient levels	Accuracy at typical ambient levels
Tiger-i 2000 CH_4 (low range)	0 – 25 ppm	<15 ppb over 24 hours	<80 ppb
Tiger-i 2000 CH_4 (high range)	0 – 100 ppm†	<15 ppb over 24 hours	<80 ppb
Tiger-i 2000 CO_2	0 – 1500 ppm	<3 ppm over 24 hours	<16 ppm

* Vacuum source with >2 slpm @ 10 Torr required
† Upper range available as high as 1000 ppm on request.
U.S. Patent # 7,277,177

Tigeroptics | *21ST CENTURY SPECTROSCOPY*