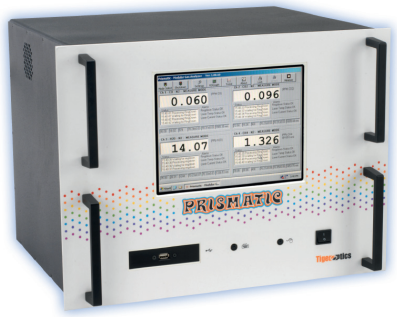
Prismatic™
Multi-Species Gas Analyzer

AUTOMOTIVE | ENERGY | ENVIRONMENTAL | GASES & CHEMICALS | LABORATORIES | LEDS | SEMICONDUCTORS

There's a Multi-Species Gas Analyzer that:

- Measures up to four species simultaneously
- Requires no consumables
- Offers linear response over four orders of magnitude
- Gives precise & accurate results
- Operates free of calibration
- Starts instantly



With the advent of the new Prismatic™ laser-based, multi-species trace gas analyzer, Tiger Optics takes a quantum leap forward. Our customers worldwide prize our instruments for their precision, stability, exceptionally low cost-of-ownership, vast dynamic range, rapid speed of response, and ease of use and installation, among other attributes. Now, all the benefits of Tiger's field-proven Continuous Wave Cavity Ring-Down Spectroscopy (CW CRDS) combine with the ability to measure from parts-per-million to parts-per-trillion of up to four molecules with a single analyzer.

The Prismatic features an electronics module connected to a single CW CRDS-based sensor module that simultaneously measures multiple analytes in a wide variety of gaseous backgrounds. You can select multiple species of interest from a sizable and growing detection list, including moisture, methane, carbon monoxide, carbon dioxide, methane, ammonia and hydrogen sulfide.

Based on the Beer Lambert Law, our technology offers absolute accuracy, with no external calibration required. It's rare to find the type of refined instrumentation used by national metrology institutes that work equally as well in industrial settings. But, Tiger's analyzers are just that versatile. By providing an affordable, yet highly sensitive means to measure multiple trace species in gases, the Prismatic emerges as the most compelling choice for all users.

Tigeroptics | 21ST CENTURY SPECTROSCOPY

Prismatic™
Multi-Species Gas Analyzer

Winner Golden Gas & Best of Show Award
Tiger Optics' Prismatic is *Gases & Instrumentation's* 2010 Golden Gas Award and Best of Show Award Winner, in recognition of its technological innovativeness, superior specifications, cost benefits and other quality considerations as determined by independent industry experts.

Performance	
Operating range	See table below
Detection Limit (LDL,	See table below
24 hr. peak-to-peak variation)	
Sensitivity (3σ)	See table below
Precision (1σ, greater of)	± 0.75 % or ⅓ of Sensitivity
Accuracy (greater of)	± 4% or ½ of LDL
Speed of response	< 3 minutes to 95%
Environmental conditions	10°C – 40°C, 30 – 80% RH (non-cond)
Storage temperature	-10°C – 50°C
Gas Handling System and Conditions	
Wetted materials	316L stainless steel
	(optional Hastelloy©)
	10 Ra surface finish
Gas connections	¼" male VCR inlet and outlet
Leak tested to	1 x 10^{-9} mbar l / sec
Inlet pressure	20 – 125 psig (2.4 – 9.6 bara)
Flow rate	< 1 slpm
Sample gases	Inert Gases, Hydrogen & Oxygen
Gas temperature	Up to 60°C

Dimensions	**H x W x D [inches (mm)]**
Electronics unit	14 x 17.64 x 15 (356 x 448 x 381)
Standard sensor	9.2 x 12.2 x 26 (234 x 310 x 660)
Weight	
Electronics unit	44 lbs (20 kg)
Standard sensor	66 lbs (30 kg)
Electrical	
Alarm indicators	User programmable setpoints
	(1 per channel), Form-C-relays
Power requirements	90-240 VAC, 50/60 Hz
Power consumption	200 Watts max.
Signal output	0-5 VDC, isolated 0-20 or 4-20 mA
	output per channel
User interface	10.4" color VGA display/Touchscreen
	PS/2 mouse and keyboard connection
	10/100/1000BaseT Ethernet
	2 USB ports, RS-232

Performance: In Nitrogen	**Range**	**LDL**	**Sensitivity**
Methane (CH_4)	0-10 ppm	1 ppb	0.75 ppb
Moisture (H_2O)	0-50 ppm	10 ppb	5 ppb
Carbon Monoxide (CO)	0-1000 ppm	150 ppb	100 ppb
Carbon Dioxide (CO_2)	0-2000 ppm	200 ppb	150 ppb

Contact us for additional analytes and matrices.

U.S. Patent # 5,973,864 • # 6,097,555 · # 6,172,823 · Other international patents pending

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