



Spark CH₄: Trace Level Methane Analyzer

At last, measurements made easy!

GASES & CHEMICALS

CEMS

ENERGY

ATMOSPHERIC

SEMI & HB LED

SYNGAS

LABORATORY

Designed for trace methane analysis, the new, affordable Spark CH₄ offers:

- Powerful, proven Cavity Ring-Down Spectroscopy (CRDS) technology
- Drift-free measurement
- Increased laboratory safety without the need for fuel gas
- Self-tuning and auto-calibration
- Extremely low Cost of Ownership
- Ethernet, 4-20 mA and RS-232 connectivity
- Fast response with low gas consumption
- CH₄ analysis over a vast range: 7 ppb to 50 ppm (in O₂)

With the Spark CH₄, powerful advanced spectroscopy is available at a popular price for a host of applications, from process control to quality and safety assurance in Air Separation Plants. Other applications include monitoring of cylinder filling, bulk delivery and distribution transfer points, as well as welding, medical, industrial and high-purity gas production, and more. Sensitivity as low as 6 ppb with full range measurement as high as 80 ppm CH₄ makes the Spark an ideal solution for these applications.

Put a little Spark in your life!

Say goodbye to cumbersome, complex, costly and labor-intensive mid-20th century technology. Gone is the need for calibration, spare parts, limited measurement ranges, and worries about drift and downtime usually associated with NDIRs. And without the need for H₂ fuel gas and with plug-and-play installation within minutes, the Spark CH₄ is a faster and safer alternative to FIDs. Plus, it's a joy to start up and to operate.

Tigeroptics

21ST CENTURY SPECTROSCOPY

Spark CH₄ Trace Level Methane Analyzer



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 the LDL
Speed of response	< 1 minutes to 90%
Environmental conditions	10°C – 40°C 30% – 80% RH (non-condensing)
Storage temperature	-10°C – 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
Inlet pressure	10 – 125 psig (1.7 – 9.6 bara)
Flow rate	Up to 1.8 slpm (gas dependent)
Sample gases	Most inert, toxic, and passive matrices
Gas temperature	Up to 60°C

Dimensions	H x W x D [in (mm)]
Standard sensor	8.75 x 8.5 x 23.6 (222 x 216 x 599)
Sensor rack (fits up to two sensors)	8.75 x 19 x 23.6 (222 x 483 x 599)
Weight	
Standard sensor	32 lbs (14.5 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

Performance, CH ₄ :	Range	LDL	Sensitivity
In Nitrogen	0 – 80 ppm	10 ppb	7.5 ppb
In Oxygen	0 – 50 ppm	7 ppb	6 ppb
In Argon	0 – 70 ppm	9 ppb	6.5 ppb
In Helium	0 – 50 ppm	7 ppb	6 ppb
In Hydrogen	0 – 80 ppm	10 ppb	7.5 ppb
In Clean Dry Air (CDA)	0 – 80 ppm	10 ppb	7.5 ppb

Contact us for additional analytes and matrices.
U.S. Patent # 7,277,177

Tiger Optics, LLC
250 Titus Avenue, Warrington, PA 18976
Phone: +1 (215) 343 6600 • Fax: +1 (215) 343 4194
sales@tigeroptics.com • www.tigeroptics.com

Tigeroptics

21ST CENTURY SPECTROSCOPY