

Spark™ | Real-Time Cavity Ring-Down Spectroscopy Analyzers

Advantages of

Cavity Ring-Down Spectroscopy

- ✓ Extremely fast measurement
- ✓ Very easy to operate
- ✓ No field calibration required
- ✓ No moving parts or consumables
- ✓ Optical, non-contact measurement
- ✓ Little background Interference
- ✓ Internal memory & CSV export
- ✓ Low cost of ownership

Common Issues with Other Methods

- ✗ Chemical reaction with background gas
- ✗ Background interference
- ✗ Material incompatibility
- ✗ Slow measurement times
- ✗ Frequent calibrations required
- ✗ Consumables & calibration standards needed
- ✗ Labor-intensive and costly to operate

ANALYZE WITH EASE™

Our **TIGER OPTICS™ Spark™** is fast, easy to start up and operate.

No need for calibration, spare parts, or worries about drift and downtime!

For the first time, powerful advanced spectroscopy is available at a popular price for a host of applications, from quality assurance to cylinder filling, as well as welding, medical, industrial and high-purity gas production, bulk delivery and distribution transfer points, and more.



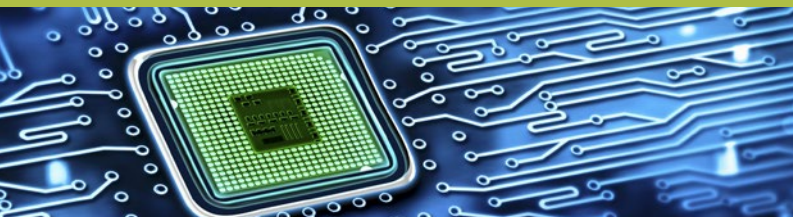
Scan QR Code to learn more about
our CRDS Technology and Solutions



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From pure argon for welding applications to xenon blends used to etch silicon microprocessors, the blends of high-quality gases are important raw materials and process gases for many industries. It is of utmost importance to processes that compressed gases meet high purity standards. For example, medical gases, which are considered a drug by the U.S. Pharmacopeia National Formula (USP-NF) have national standards for contaminants within a gas blend. Gases used in the semiconductor industry generally require ultra-high purity, whether it is silane

or germane for epitaxy, fluorine compounds for etching processes, or cleaning gases. Process Insights offers ultra-sensitive, highly accurate, and easy to use analytical instruments from its TIGER OPTICS™ brand, which are based on renowned Cavity Ring-Down Spectroscopy (CRDS) for a large variety of specialty gases and applications.



Semiconductor/Electronic

- Solder reflow ovens
- Electronic specialty gas



Environmental

- EPA protocol gas
- Calibration gas production



Food and Beverage

- N₂ for chips and cookie packaging
- CO₂ for beer and beverage



Metal Fabrication/Working

- Ar shielding gas for welding
- Specialty metal shielding gas blends



Pharmaceuticals and Life Science

- FDA medical high purity and blends
- CO₂ for marijuana and vertical farming



Research

- Xe for dark matter detection
- 6.0N and 5.0N H₂

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Detection Specifications

Spark Series Analyzers | Lowest Detection Limit (LDL, 3σ/24h) in parts per billion (ppb)

Analyzer Name	Spark H ₂ O	Spark H ₂ O in CO ₂	Spark CH ₄	Spark CO ₂	Spark+ CO	Spark C ₂ H ₂
Detection	H ₂ O	H ₂ O	CH ₄	CO ₂	CO	C ₂ H ₂
Matrix						
N ₂	12	7.5	7.5	250	120	8
O ₂	6	7.5	6	220	110	7
CDA (Clean Dry Air)	10	7.5	7.5	250	120	8
Ar	4.5	6	6.5	220	100	
He	3	4	6	220	110	
H ₂	7.5	6	7.5	400	150	
Ne	30					
Kr	5.5					
Xe	7.5					
CF ₄	9					
NF ₃	9					
SF ₆	15					
CO	15	7				
CO ₂		550				

No Calibration: Process Insights' CRDS analyzers are a first principal physic method requiring no field calibration. No calibration, no calibration gases and no HP calibration gas delivery system. Maximize uptime with less down time compared to other technologies. Ask us about laser lock and how CRDS requires no regular calibration.

Ease of Use: Our CRDS analyzers were designed to be very easiest to install and operate. Simply connect the gas line, power on the analyzer, press a couple of buttons and you're up and running in minutes. There is no need for a warm-up period, and no in-depth user training is required. The interface is intuitive to navigate, so much so that the most novice technicians can operate our CRDS analyzers with ease.

Please check out our installation video:  [YouTube Spark Analyzer - Easy Setup Video](#)

Cost of Ownership: No periodic calibration means no calibration gases require and no calibration system installed. Additionally, there are no moving parts or consumables that may need to be replaced, leading to even further long-term cost savings with our CRDS analyzers. You won't find a lower Cost of Ownership using any other technology!

GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights manufactures and delivers premium sensors, monitors, detectors, analyzers, instrumentation, and software that are mission-critical to keep your operations, personnel, and the environment safe – every day across the globe.

Get the most reliable, precision analytical technologies available on the market today. We will work to match your needs and budget, and provide the optimal, and most stable process analysis solution for your application.

CENTERS OF EXCELLENCE | PROVIDING PROVEN SOLUTIONS

Process Insights is committed to solving our customers' most complex analytical, process, and measurement challenges everyday.

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For a complete range of products, applications, systems, and service options, please contact us at: info@process-insights.com

For a complete list of sales & manufacturing sites, please visit: <https://www.process-insights.com/about-us/locations/>

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REVOLUTIONIZING MEASUREMENT

EVERYWHERE