

BRINGING CERTAINTY TO AIR MEASUREMENT



DIRECTOPTICS

CRDS-Based NO₂-NO_x-NO Analyzer - Patented Self-Aligned Cavities - Fast Response Time -
Low ppt to ppm Detection Limits - Intuitive Interface - Modbus Communication

DUAL-CHANNEL CRDS NO₂-NO_x-NO ANALYZER

Direct Optics Cavity Ring Down Spectroscopy (CRDS) analyzers provide precise, direct measurement of NO₂ and NO_x - helping organizations collect reliable, defensible data across demanding monitoring environments.

Our state-of-the-art analyzer is designed to directly measure the criteria pollutant nitrogen dioxide (NO₂), which is known to impact human health. Using advanced spectroscopic innovations, the Direct Optics CRDS platform delivers accurate, real-time measurement of NO₂ concentrations in ambient air with high sensitivity and precision. In addition to NO₂, the system continuously monitors nitrogen oxides (NO_x), providing deeper insight into air quality conditions and dynamics.

Get fast, accurate measurements with the Direct Optics G-60 dual-channel analyzer.

INNOVATION IN NITROGEN DIOXIDE MEASUREMENT

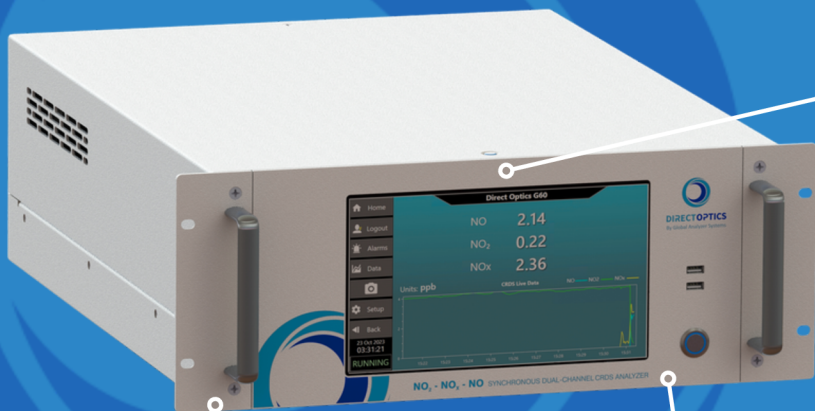
WHY CHOOSE DIRECT OPTICS?

The Direct Optics G-60 analyzer is a high-precision CRDS-based instrument with two independent channels.

Our patented self-aligned optical cavities directly & continuously measure NO₂, NO_x and then NO.

Direct Optics G-60 offers:

- Trace-level, real-time direct NO₂ measurement
- Trace-level, real-time direct NO_x measurement
- Interference-free NO₂ measurement
- High temporal resolution (1 second)
- No purge volumes/lag time
- No valve switching



- ✓ Size: 23.5"(d) x 7"(h)
- ✓ Weight: 39 lbs
- ✓ Power: 100-240 VAC (50-60 Hz), 110W
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- ✓ Output: Modbus TCP/IP

- ✓ Ranges: 0-1,000 ppb
 - Inclusive of: 0-50 ppb and 0-500 ppb
- ✓ Lower Detection Limits:
 - NO₂: <20 ppt
 - NO_x: <45 ppt
- ✓ Flow Rate: 500 cc/min
- ✓ Linearity 0.5% full scale ($r^2 = 0.999$)
- ✓ Span Drift: < 0.5% of upper range/24 hours
- ✓ Zero Noise: < 0.01% of upper range limit
- ✓ Span Noise: < 0.4% of upper range limit
- ✓ Precision: < 0.2% of upper range limit
- ✓ Response Time: < 5 seconds to 90%
- ✓ Averaging time: 1 - 300 seconds (selectable)

- ✓ Patent #US 11,674,888 B2



ABOUT US

Direct Optics is redefining how air emissions are measured. Backed by proven performance and specialized knowledge in engineering, air sciences, and environmental regulations, we deliver technologies that strive to exceed expectations. Our commitment goes further, providing long-term support that safeguards your investment and ensures lasting value. At our core, we aim to provide certainty in every measurement.