

NEW

HORIBA
Automotive Test Systems

MEXA-ONE
Laser Spectroscopic Motor Exhaust Gas Analyzer
IRLAM

MEXA-ONE IRLAM

Laser Spectroscopic Motor Exhaust Gas Analyzer

for 4 nitrogen compounds **NO NO₂ N₂O NH₃**



EMISSIONS



ELECTRIFICATION



CAV



DATA

Low interference, low noise, high sensitivity and wide range

- High-precision, wide-range measurement of nitrogen oxides
- For the development of engine and aftertreatment systems and the reduction of NH₃ emissions.



IRLAM
by HORIBA

HORIBA
Automotive

MEXA-ONE IRLAM Laser Spectroscopic Motor Exhaust Gas Analyzer

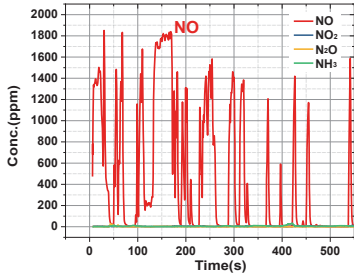
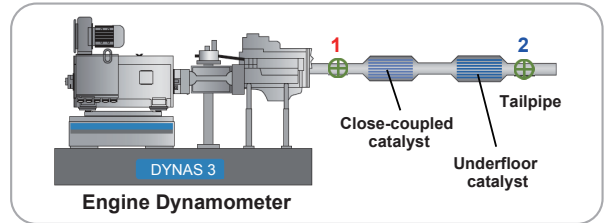
for 4 nitrogen compounds **NO NO₂ N₂O NH₃**

Applications

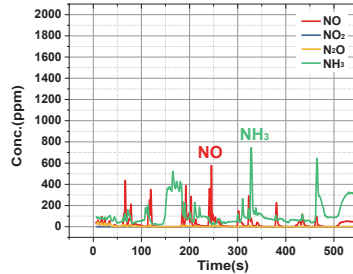
Research and development of catalysts for low-temperature/high-load operation to improve performance

Other Applications

- R&D on internal combustion of next-generation fuels (CNG, e-fuel, biofuels, NH₃ co-combustion, etc.)
- R&D of the next emission regulations EURO7/VII, China 7, etc. (N₂O, NH₃)



Sampling point 1: Pre-Catalyst



Sampling point 2: Tailpipe

MEXA-ONE XL-NX Outline

Measurement target	Exhaust gas from internal combustion engine and gas turbine (Direct/Conti-dilute)
Emissions Standard	US EPA GHG ^{*1} , GTR No.15 (NO ₂ , N ₂ O, NH ₃)
Measurement range	NO (Low) 0-200 ppm (High) 0-6000 ppm
	NO ₂ (Low) 0-100 ppm (High) 0-3000 ppm
	N ₂ O (Low) 0-200 ppm (High) 0-6000 ppm
	NH ₃ (Low) 0-100 ppm (High) 0-3000 ppm
Measurement Principle	Quantum Cascade Laser Infrared Spectroscopy; QCL-IR
Sample gas line temperature	113 °C ± 6 °C
Sample gas flow rate	8.0 L/min ± 1.0 L/min
Operating environment	Ambient temperature: 5~40 °C Ambient humidity: 80% or less as relative humidity
Power requirements	When stable: Max. 750 VA (analyzer unit only)
Dimensions	440(W)×720(D)×880(H) mm (Except for outshoots)
Mass	Approx. 110 kg

^{*1} Measurement method in accordance with CFR 1065 (N₂O). Please contact us for details.

Performance

Zero noise(2σ)	NO (Low range) 0.4 ppm or less (High range) 12 ppm or less
	NO ₂ (Low range) 0.2 ppm or less (High range) 6 ppm or less
	N ₂ O (Low range) 0.4 ppm or less (High range) 12 ppm or less
	NH ₃ (Low range) 0.2 ppm or less (High range) 6 ppm or less
Rise time (calibration gas line t ₁₀₋₉₀)	2.5 s or less N ₂ → NO 200 ppm at the time of switching
	2.5 s or less N ₂ → NO ₂ 100 ppm at the time of switching
	2.5 s or less N ₂ → N ₂ O 200 ppm at the time of switching
	3.5 s or less N ₂ → NH ₃ 100 ppm at the time of switching



N₂O Analyzer XLA-11

- Compatible with exhaust gas certification, including U.S. GHG (Greenhouse Gas) regulations
- High-precision measurement of extremely low concentrations of N₂O in diluted exhaust gases such as CVS back gas
- Compact rack-mounted analyzer enables installation in existing facilities (50% down from conventional models)



IRLAM™ (Infrared Laser Absorption Modulation) is a next-generation infrared gas analysis technology originally developed by HORIBA.

www.horiba.com/en_en/irlam/

^{*1}IRLAM is a registered trademark or trademark of HORIBA, Ltd.



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