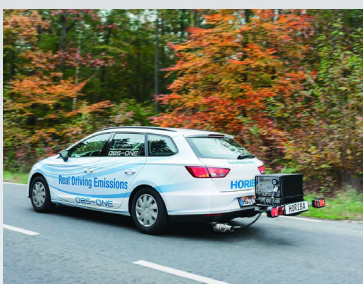


OBS-ONE IRLAM

On-board Emissions Measurement System for NH₃ / N₂O

The world's first* on-board emissions measurement system for analyzing NH₃ / N₂O in RDE

*As of July 2021. Based on our research.



- High accuracy measurement with HORIBA's innovative infrared gas measurement method "IRLAM™"
- High reliability and robustness, can withstand environmental temperature and vibration
- No utilities required, such as purge gas cylinder
- Able to connect with other equipment in the OBS-ONE series and integrate data

*IRLAM is a registered trademark or trademark of HORIBA, Ltd.

Powered by  **IRLAM**
Technology



EMISSIONS



ELECTRIFICATION



CAV



DATA

HORIBA
Automotive

OBS-ONE IRLAM

On-board Emissions Measurement System for NH₃ / N₂O

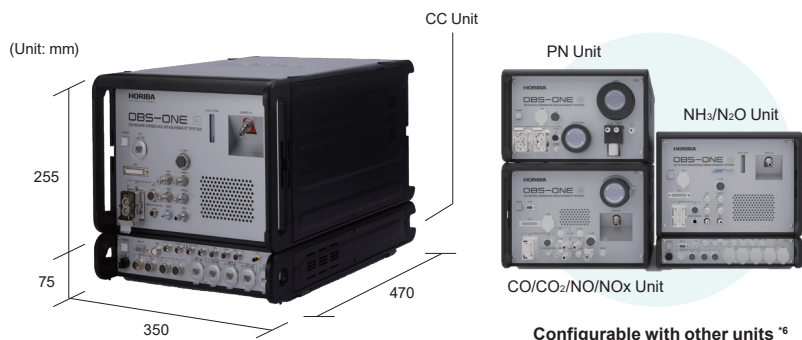
■ OBS-ONE-XL01 Specification

Measurement target	Light and heavy duty vehicle engine exhaust gas
Components and range	NH ₃ 0 - 1500 ppm N ₂ O 0 - 1000 ppm
Measurement principle	Quantum cascade laser infrared spectroscopy (QCL-IR)
Sample line temperature	113 °C
Sample gas flow rate	Approx. 3.3 L/min
Usage environment	Temperature: -10 °C to 45 °C ^{*1} Humidity: Relative humidity 80% or less Altitude: 0 to 3000 m (above sea level)
Supply voltage	DC 22 to 28V
Power Consumption (when stable) ^{*2}	Approx. 0.3 kW
Battery (Nickel hydride battery)	DC 24 V 44 Ah Continuous use time: Approx.3 hours ^{*3}
External dimensions ^{*4}	Approx. 350 (W) × 470 (D) × 255 (H) mm
Mass	Approx. 30 kg

■ Performance

Rise time from sample in t ₁₀₋₉₀ ^{*5}	NH ₃ 2.5 s or less, N ₂ O 1.5 s or less
Drift (4 hours)	[Zero] within ± 0.15 % FS [Span] within ± 1.0 % (at ambient temperature 20 °C)
Zero noise (3σ)	NH ₃ 0.2 ppm or less, N ₂ O 0.15 ppm or less (at ambient temperature 20 °C)

■ Dimensions and system configuration

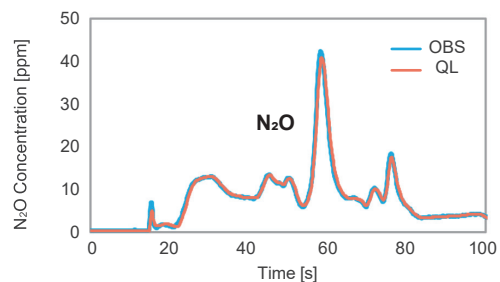
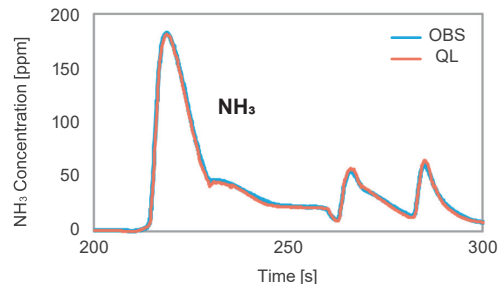


Example of NH₃ / N₂O unit single use

*1: Please contact us if temperature is below 0 °C *2: With 2.5 m heated hose at ambient temperature is 20 °C
*3: With 2.5 m heated hose at ambient temperature is 20 °C, and depend on battery status *4: Excluding protrusions *5: At 6 m heated hose
*6: Please contact us regarding details such as installation

High correlation with lab-use emission measurement system with QCL-IR (MEXA-ONE-QL)

Direct injection gasoline vehicle / WLTC-Cold / Tail pipe sampling



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



www.horiba.com/en_en/irlam/



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THE HORIBA GLOBAL NETWORK

ASIA

HORIBA, Ltd.
2 Miyano Higashi-cho
Kisshoin Minami-ku
Kyoto, 601-8510
Japan

EUROPE

HORIBA Europe GmbH
Hans-Mess-Straße 6
61440 Oberursel
Germany
info.he@horiba.com

THE AMERICAS

HORIBA Instruments Inc.
5900 Hines Drive
Ann Arbor, MI 48108
USA
sales-ats.us@horiba.com

horiba.com/automotive



The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001. We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.

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