# ALOHA+ $H_2O$
## Gas Analyzer for Trace Moisture in Ammonia

GASES & CHEMICALS | CEMS | ENERGY | SEMI & HB LED | ATMOSPHERIC | LAB & LIFE SCIENCE

**Designed for trace level moisture analysis in ammonia, the ALOHA+ $H_2O$ offers:**

- 3 parts-per-billion (ppb) detection capability in ammonia ($NH_3$) and sub-ppb in inert matrices
- Rapid response time
- Wide dynamic range
- Absolute and calibration-free measurement technology
- Extremely low cost of ownership
- User-friendly touchscreen and remote communication

### The superior analytical solution for your High-Brightness LED needs

The ALOHA+ $H_2O$ advances moisture detection in ammonia ($NH_3$) to unprecedented levels. The analyzer provides specialty gas and High-Brightness LED makers with the exceptional detection limits, accuracy, reliability, speed of response and ease of operation that Tiger Optics customers have come to expect. LED manufacturers rely on Tiger Optics' family of proven Cavity Ring-Down Spectroscopy-based moisture sensors to ensure the ammonia process gas is of the high quality necessary to produce High Brightness LEDs.

The cost effective analyzer is quick to install, easy to use and effortless to maintain. There are no off-line periodic sensor maintenance procedures, no span calibrations, no purifier replacement and no pump rebuilds required. The ALOHA+ $H_2O$ analyzer is fully self-calibrating and the "bright" choice for your detection needs!

Tiger Optics
A Process Insights Company

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## Gas Analyzer for Trace Moisture in Ammonia


| Performance | |
|---|---|
| Operating range | See table below |
| Detection limit (LDL, 3σ/8h) | See table below |
| Precision (1σ, greater of) | ± 1% or 1/3 of LDL |
| Accuracy (greater of) | ± 4% or LDL |
| Speed of response | < 5 minutes to 95% |
| Environmental conditions | 10°C to 40°C |
| | 30% to 80% RH (non-condensing) |
| Storage temperature | -10°C to 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 |
| Leak tested to | 1 x $10^{-9}$ mbar l / sec |
| Inlet pressure | 10 – 125 psig (1.7 – 9.6 bara) |
| Outlet pressure | <2 Torr (2.7 mbar) |
| Flow rate | up to 1.8 slpm (gas dependent) |
| Sample gases | Ammonia ($NH_3$) & inert matrices |
| Gas temperature | Up to 60°C |

| Dimensions | H x W x D [in (mm)] |
|---|---|
| Standard sensor | 8.73 x 8.57 x 26.4 (222 x 218 x 670) |
| (incl. shutoff valves) | |
| Sensor rack | 8.73 x 19.0 x 26.4 (222 x 483 x 670) |
| (fits up to two sensors) | |

| Weight | |
|---|---|
| Standard sensor | 34 lbs (15.4 kg) |

| Electrical | |
|---|---|
| Platform | Max series analyzer |
| Alarm indicators | 2 user programmable |
| | 1 system fault |
| | Form C relays |
| Power requirements | 90 – 240 VAC, 50/60 Hz |
| Power consumption | 40 Watts max. |
| | (excluding vacuum pump) |
| Signal output | Isolated 4–20 mA |
| User interfaces | 5.7" LCD touchscreen |
| | 10/100 Base-T Ethernet |
| | USB, RS-232, RS-485 |
| Data storage | Internal or external flash drive |
| Certification | CE Mark |

| Performance, $H_2O$: | Range | LDL (3σ) | Precision (1σ) @ zero |
|---|---|---|---|
| In Ammonia | 0 – 20 ppm | 3 ppb | 1 ppb |
| In Nitrogen | 0 – 6 ppm | 0.5 ppb | 0.2 ppb |
| In Helium | 0 – 3 ppm | 0.3 ppb | 0.1 ppb |
| In Argon | 0 – 4 ppm | 0.4 ppb | 0.15 ppb |

*Vacuum source required
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**Tiger Optics, LLC**
275 Gibraltar Road, Horsham, PA 19044
Phone: +1 (215) 656 4000 · Fax: +1 (215) 343 7168
sales@tigeroptics.com · www.tigeroptics.com

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A Process Insights Company

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