

**Data Sheet** 

AOM-5035L-HD3-LW100-R

PUI Audio's all-new **HD Series** microphones use premium-grade MOSFETs and diaphragms for high sensitivity and superior signal-to-noise ratio. The **HD3** microphones incorporate a three-pin design (drain, source and ground) to reduce self-noise.

Each microphone features GSM buzz-blocking capacitors. Upgrade the ECM microphone that you use today with a PUI Audio **HD Series** microphone.

The 6mm diameter **AOM-5035L-HD3-LW100-R** is an omni-directional microphone designed for extreme fidelity and focused recording of acoustic sources on and off-axis from the microphone.

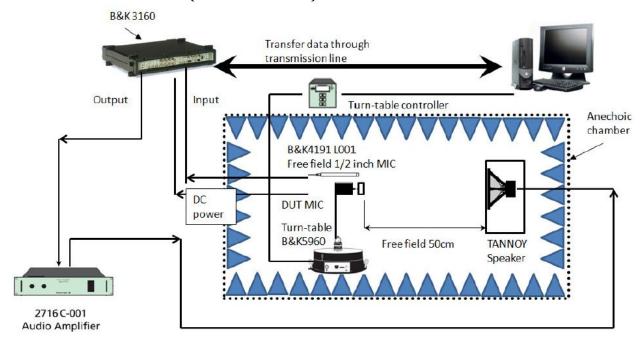
#### **Features:**

- Convenient 100mm lead wires for quick electrical connection
- -35 dB sensitivity
- 75 dB signal-to-noise ratio
- Omni-directional pickup pattern
- Exceptional 135 dB acoustic overload point (AOP)

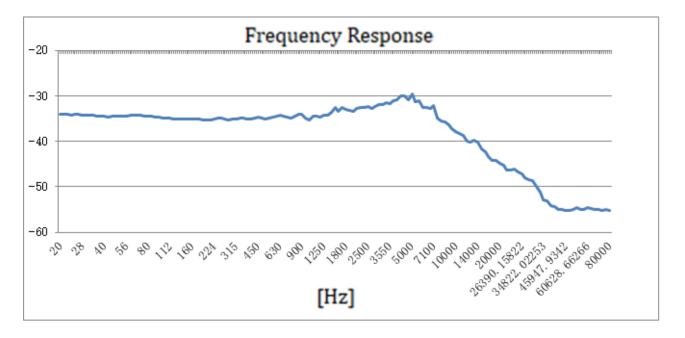
**Specifications** 

Parameters	Values	Units
Sensitivity (1 kHz @ 50cm)		
0 dB=1V/Pa	-35 ±3	dB
Rated Voltage	5V	VDC
Output Impedance (@ 1 kHz)	2.2	kΩ
Current consumption (5VS with 5.6 kΩ RL)	600	
Signal-to-Noise Ratio	000	μΑ
(1kHz, 94 dB input, A-weighted)	75	dB
Decreasing Voltage (5V to 4.5V)	-3	dB
Frequency Range	$20 \sim 20,000$	Hz
Operating Voltage Range	1 ~ 10	VDC
Maximum SPL Input (THD<3%)	135	dB
Directivity	Omni-directional	-
Operating Temperature	-30 ∼ +70	°C
Storage Temperature	-40 ∼ +85	°C
Weight	<0.5	Grams

## Measurement Method (in Anechoic Chamber)



# Typical Frequency Response (Measured at 50cm with 5V input and 94 dB source)

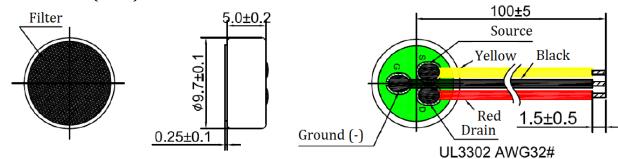


**Reliability Testing** 

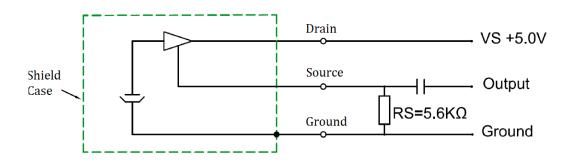
Type of Test	Test Specifications	
High Temperature Test	200 hours at +70°C ± 3°C followed by two hours in normal room temperature	
Low Temperature Test	200 hours at -25°C ± 3°C followed by two hours in normal room temperature	
Humidity Test	200 hours at +40°C ± 3°C with relative humidity at 90% to 95% followed by 2 hours in normal room temperature	
Temperature Cycle Testing	30 minutes at -25°C, 10 minutes at 20°C, 30 minutes at +70°C, 10 minutes at 20°C for five cycles, followed by 2 hours in normal room temperature	
Vibration Test	10 to 55 Hz for 1 minute with 1.52mm distance, followed by a two hour 3 axis test in packaging	
Drop Test	Drop microphones in packaging onto concrete floor from 1 meter height in each of 3 axis	
	<ol> <li>Contact discharge - Discharge 6000 VDC from capacitor into microphone output through 330Ω resistor ten times.</li> <li>Air discharge - Discharge 8000 VDC into</li> </ol>	
ESD Test (according to IEC 6100)	sound hole of the microphone ten times.	

After each test, the speaker's SPL shall be ±3 dB of the original SPL

## Dimensions (in mm)



### **Recommended Drive Circuit**



### **Microphone Handling Precautions**

High temperature and/or static electricity may damage microphones. To ensure careful handling, we suggest following these precautions:

- Ensure the power rating of the soldering iron is below 90 watts
- The temperature of the soldering iron must be limited to  $360^{\circ}\text{C} \pm 10^{\circ}\text{C} (680^{\circ}\text{F} \pm 50^{\circ}\text{F})$
- Soldering duration for each terminal shall be at or under 2 seconds
- Avoid the rear sound holes when soldering
- If practical, use a metal fixture to hold the microphone in-place and to act as a heatsink. A fixture should have appropriate diameter holes drilled through the entire fixture to prevent pressure from being placed on the diaphragm (as below)



### **Packaging**

	Drawing	Qty (pcs.)	Size(mm) L×W×H	Material
Packing	100	50	150×100	Anti-static
Inner Package	94	300 (6×50)	205×105×46	Paper
Middle Package	2882	3000 (10×300)	425×120×285	Paper
Outer Package	750 710	6000 (2×3000)	450×270×310	Paper

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**Specifications Revisions** 

Revision	Description	Date
A	Released from Engineering	6/21/2021

#### Note:

- 1. Unless otherwise specified:

  - A. All dimensions are in millimeters.
    B. Default tolerances are ±0.5mm and angles are ±3°.
- 2. Specifications subject to change or withdrawal without notice.
- 3. This part is RoHS 2015/863/EU Compliant.