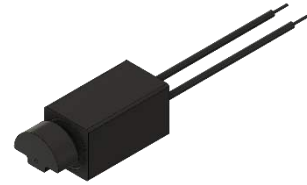




# PUIaudio



Data Sheet

HD-EMB1104-LW15-R

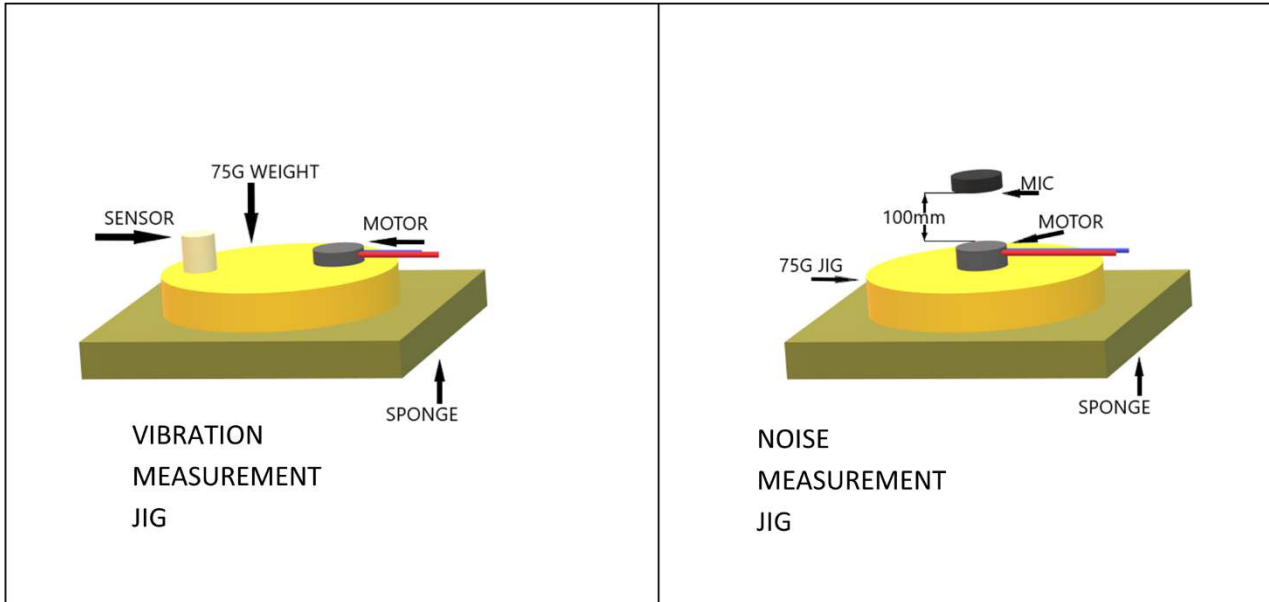
## Features:

- Designed to be driven with a 3V DC signal
- Convenient 15mm lead wires for easy implementation
- Generates 12,000 rpm with less than 50dB mechanical noise

## Specifications

Parameters	Values	Units
Input Voltage (DC)	3	V <sub>DC</sub>
Starting Voltage (DC)	2.4	V <sub>DC</sub>
Operating Voltage Range	2.4 ~ 3.6	V <sub>DC</sub>
Direction of Rotation	CW/CCW	-
Rated Speed	12,000 ± 3,000	RPM
Rated Current (Max at 3.0 V <sub>DC</sub> )	90	mA
Starting Current (Max at 2.4 V <sub>DC</sub> )	120	mA
Terminal Resistance	30 ± 20%	Ohms
Shaft Pull Strength (Min)	3	Kg
Shaft End Play (Max)	0.3	mm
Mechanical Noise (Max)	50	dBA
Housing Material	SPC	-
Environmental Compliances	RoHS/REACH	-
Weight	1	Grams
Storage Temperature	-40 ~ +85	°C
Operating Temperature	-20 ~ +60	°C

## Measurement Methods

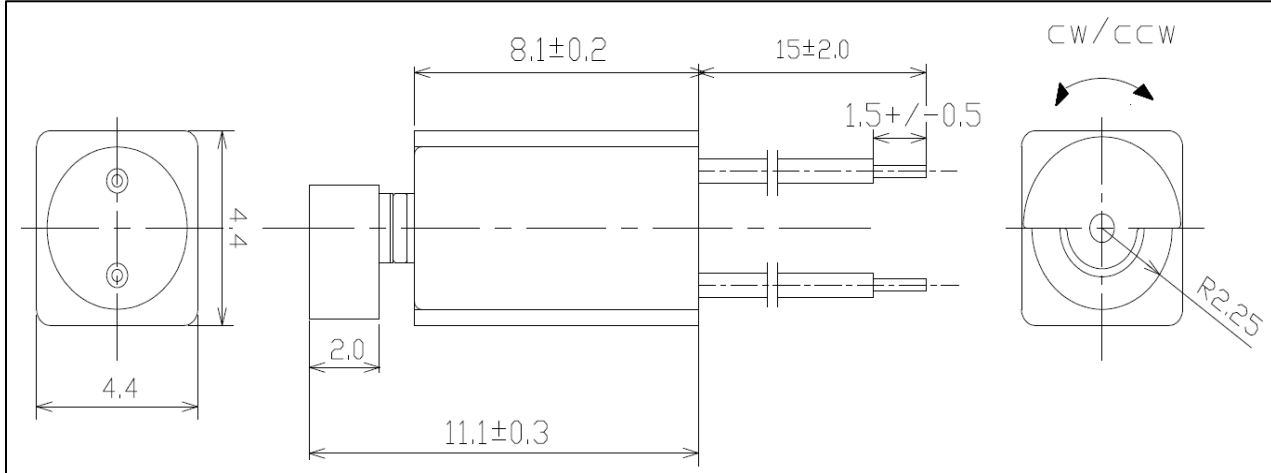


## Reliability Testing

Type of Test	Test Specifications
High Temperature Test	Temperature: $+85\pm 2^{\circ}\text{C}$ Test Duration Time: 96 hours
Low Temperature Test	Temperature: $-40\pm 2^{\circ}\text{C}$ Test Duration Time: 96 hours
Humidity Test	Temperature: $70^{\circ}\text{C}$ Relative Humidity: 90% Test Duration Time: 96 hours
Temperature Cycle Testing	Drive motor for 2 seconds on, 2 seconds off Repeat cycle shown 2 times (8 hours total) 
Vibration Test	Vibration: 3mm, 1000cpm Test Axis: XYZ Test Repetition: 10 minutes per axis (30 minutes total)
Drop Test	Drop Condition: 1.5m onto iron plate at weight 150g Test Repetition: 6 times per side (36 total)
Load Test	60,000 operating cycles at room temperature Test Cycle: 2 seconds on, 2 seconds off

**Rated current, speed, starting voltage, and mechanical noise must meet specifications after allowing the device to rest for 12 hours after test.**

## Dimensions



## Packaging

Item	Tray	Inner Box	Outer Box
DIV.	PET	Carton box	Carton box
Dimension	141(L) x 150(W) x 11(H)	150(L) x 160(W) x 115(H)	330(L) x 330(W) x 270(H)
Quantity	50ea	1,000ea	8,000ea

### Specifications Revisions

Revision	Description	Date
A	RELEASED FROM ENGINEERING	04/08/2022

#### Note:

- Unless otherwise specified:
  - All dimensions are in millimeters.
  - Default tolerances are  $\pm 0.5\text{mm}$  and angles are  $\pm 3^\circ$ .
- Specifications subject to change or withdrawal without notice.