



# PUIaudio



Data Sheet

HD-EMC0803-LW20-2-R

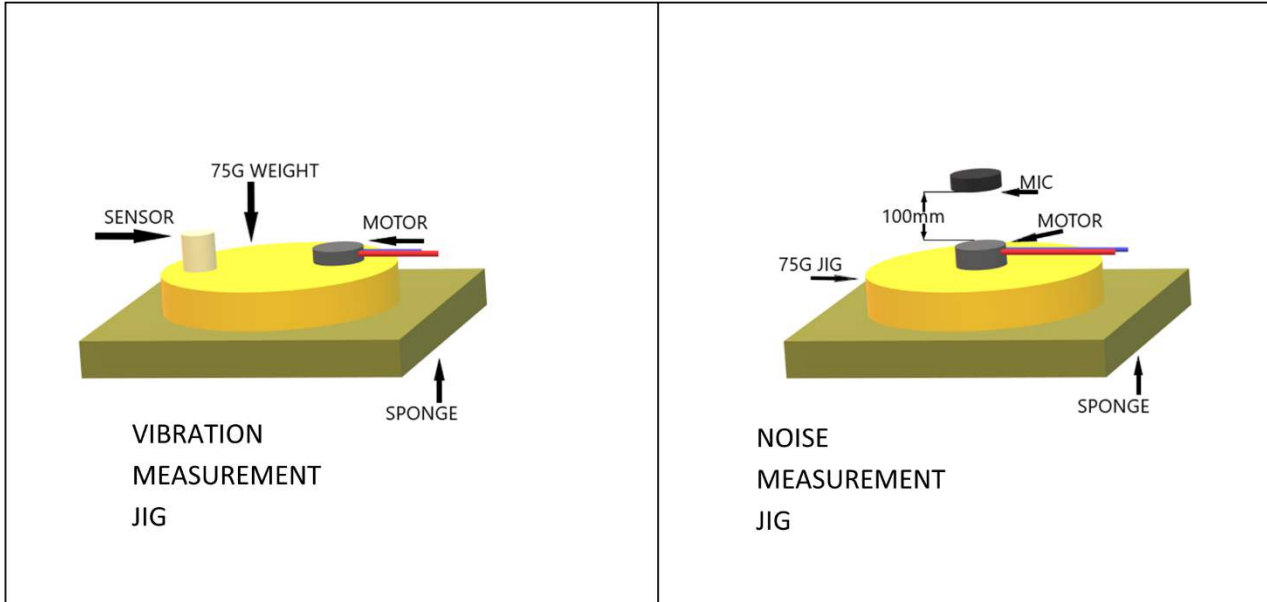
## Features:

- Designed to be driven with a 3.0V DC signal
- Convenient 20mm lead wires and double-sided adhesive for easy implementation
- Generates 12,000 rpm with less than 50dB mechanical noise

## Specifications

| Parameters                                   | Values                                 | Units           |
|--|--|-----------------|
| Input Voltage (DC)                           | 3.0                                    | V <sub>DC</sub> |
| Starting Voltage (DC)                        | 2.4                                    | V <sub>DC</sub> |
| Operating Voltage Range (DC)                 | 2.6 ~ 3.6                              | V <sub>DC</sub> |
| Direction of Rotation                        | CW/CCW                                 | -               |
| Rated Speed                                  | 12,000 ± 3,000                         | RPM             |
| Rated Current (Max at 3.6 V <sub>DC</sub> )  | 85                                     | mA              |
| Locked Current (Max at 2.4 V <sub>DC</sub> ) | 140                                    | mA              |
| Terminal Resistance                          | 1 Phase: 30 ± 20%<br>2 Phase: 60 ± 20% | Ohms            |
| Shaft Pull Strength (Min)                    | 3                                      | Kg              |
| Shaft End Play (Max)                         | 0.3                                    | mm              |
| Mechanical Noise (Max)                       | 50                                     | dBA             |
| Environmental Compliances                    | RoHS/REACH                             | -               |
| Weight                                       | (approx.) 1                            | Grams           |
| Storage Temperature                          | -40 ~ +85                              | °C              |
| Operating Temperature                        | -20 ~ +60                              | °C              |

**Measurement Methods** (Temperature: 25±2°C; RH: 45 ~ 85%; Motor Position: Horizontally locked)

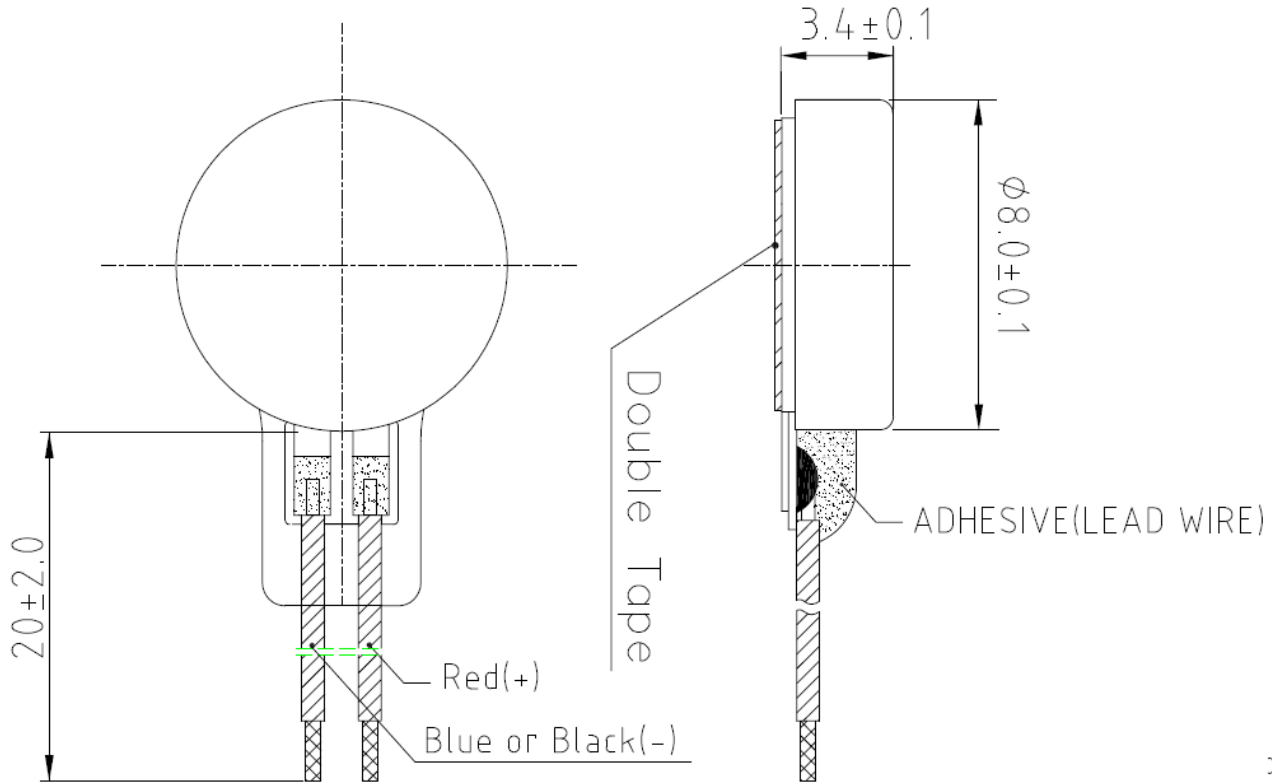


**Reliability Testing**

| Type of Test              | Test Specifications  |
|---------------------------|--|
| High Temperature Test     | Temperature: +85±2°C<br>Test Duration Time: 96 hours   |
| Low Temperature Test      | Temperature: -40±2°C<br>Test Duration Time: 96 hours   |
| Humidity Test             | Temperature: 70°C<br>Relative Humidity: 90%<br>Test Duration Time: 96 hours                                    |
| Thermal Shock Test        | Temperature Cycle: -40 to +85°C<br>Cycle Time: 1 hour<br>Test Repetition: 24 cycles (24 hours total)           |
| Temperature Cycle Testing | Drive motor for 2 seconds on, 2 seconds off at rated voltage<br>Repeat cycle shown 2 times (8 hours total)<br> |
| Vibration Test            | Vibration: 3mm, 1000cpm<br>Test Axis: XYZ<br>Test Repetition: 10 minutes per axis (30 minutes total)           |
| Drop Test                 | Drop Condition: 1.5m onto iron plate at weight 150g<br>Test Repetition: 6 times per side (36 total)            |
| Load Test                 | 60,000 operating cycles at room temperature<br>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                     | No inner box<br>1 bundle<br>215(L) x 170(W) x 60(H)<br>1,000ea | Outer box size is different one<br>by packing quantity |
| Dimension | 215(L) x 170(W) x 11(H) |  |  |
| Quantity  | 100ea                   |  |  |

### Specifications Revisions

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

#### Note:

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