



PUIaudio



Data Sheet

HD-EM0602-LW15-R

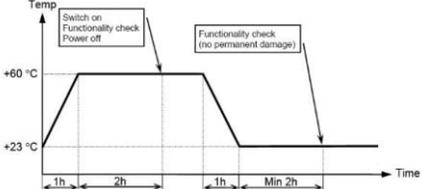
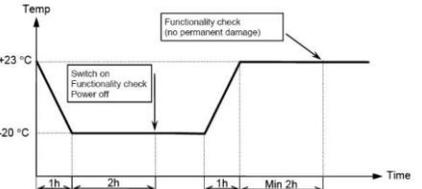
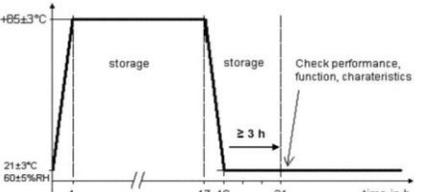
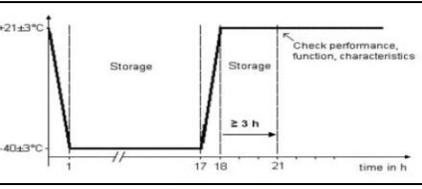
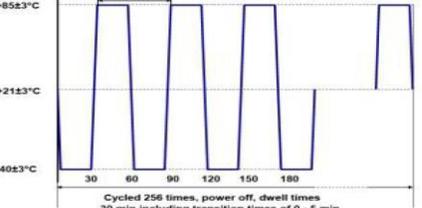
Features:

- Designed to be driven with 3 VDC
- Brushless smallest motor with a built-in IC driver
- High Reliability
- Lead wire motor attached for easy assembly
- Generates 15,000 RPMs with no more than 50 dBA acoustic noise

Specifications

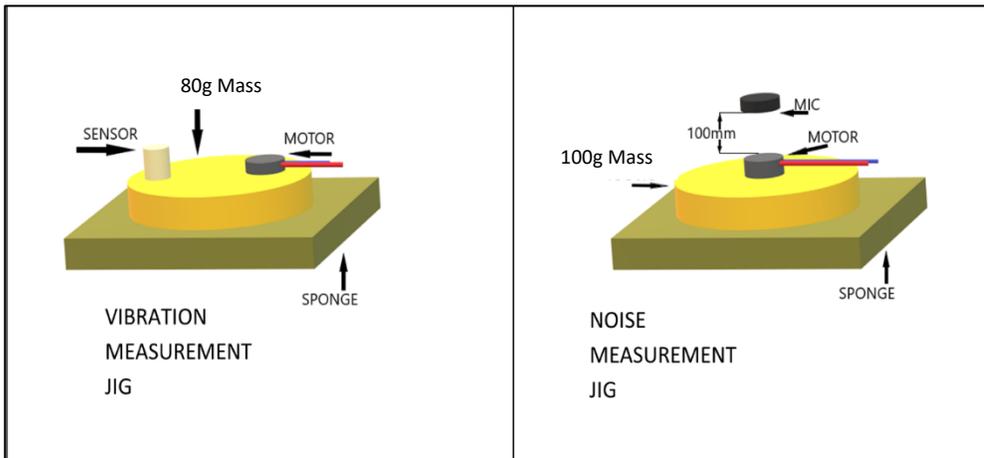
Parameters	Values	Units
Rated Voltage	3.0	V _{DC}
Starting Voltage	≤ 2.5	V _{DC}
Operating Voltage Range	2.7 ~ 3.3	V _{DC}
Vibration Strength	0.4	G
Insulation Resistance	> 10M	Ohms
Rated Speed	15,000 ± 3,000	RPM (@ 3 V _{DC})
Rated Current (Max)	80	mA (@ 3 V _{DC})
Starting Current (Max)	175	mA (@ 3 V _{DC})
Mechanical Noise (Max)	50	dBA
Environmental Compliances	RoHS/REACH	-
Actuator Mass	0.33	Grams
Storage Temperature	-30 ~ +85	°C
Operating Temperature	-20 ~ +60	°C

Reliability Testing

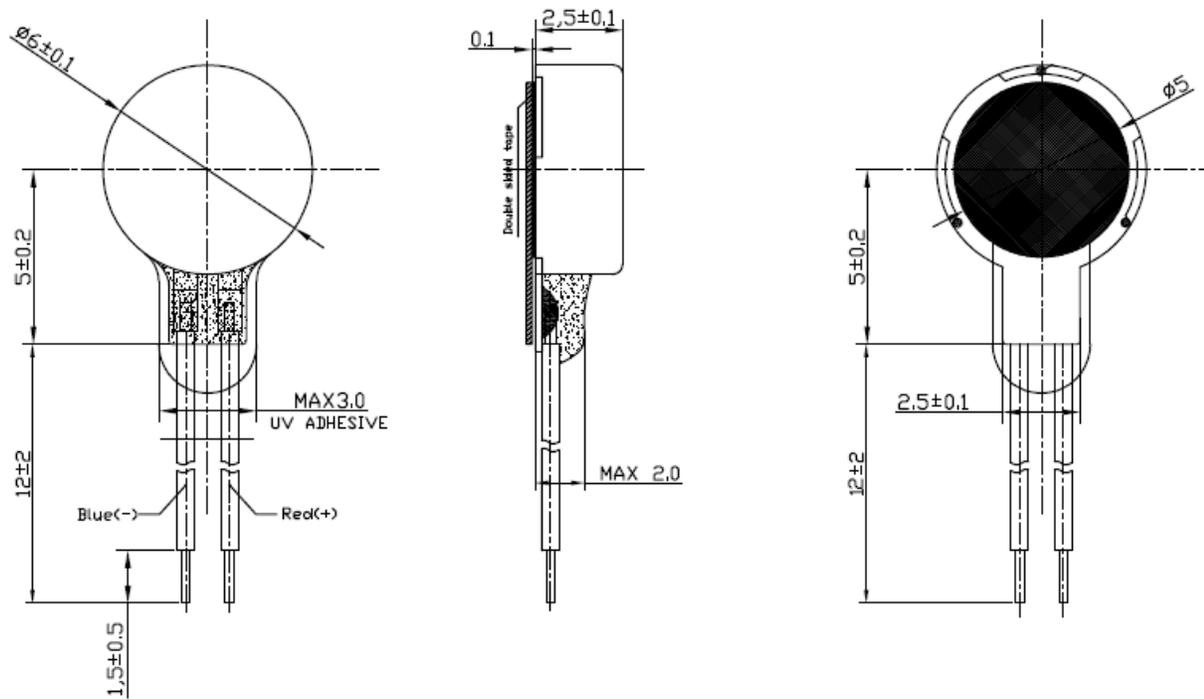
Type of Test	Test Specifications	Pass/Fail Criteria
High Temperature		<p>After each test, motors rest for 4 hours at room temperature. After rest, the motor shall meet the following initial values:</p> <ol style="list-style-type: none"> 1) Rated Speed: -30%/+50% initial 2) Rated Current: $\pm 30\%$ initial 3) Starting Voltage: 2.5 V_{DC} 4) Insulation Resistance: $\geq 10M\Omega$
Low Temperature		
High Temperature Storage		
Low Temperature Storage		
Thermal Shock		
Free Drop	<p>Drop from listed drop height: Jig Mass: 100 grams (including motor) Drop Height: 1.53 meters Test Cycles: 6 Faces, 8 Corners, 12 edges (3x each)</p>	
Vibration	<p>Frequency: 10 ~ 125 Hz Cycle Time: 5 min log sweep Test Orientation: X, Y, Z Test Duration: 2 hour XY, 4 hour Z</p>	
Lifetime	<p>Test Cycles: 500,000 (@ 3V_{DC}) Test Time: ~ 6 days ("on" duration) Cycle: 0.5s on, 0.5s off = 1 cycle (1s)</p>	

After testing, each motor must achieve the listed Pass/Fail Criteria for the appropriate test.

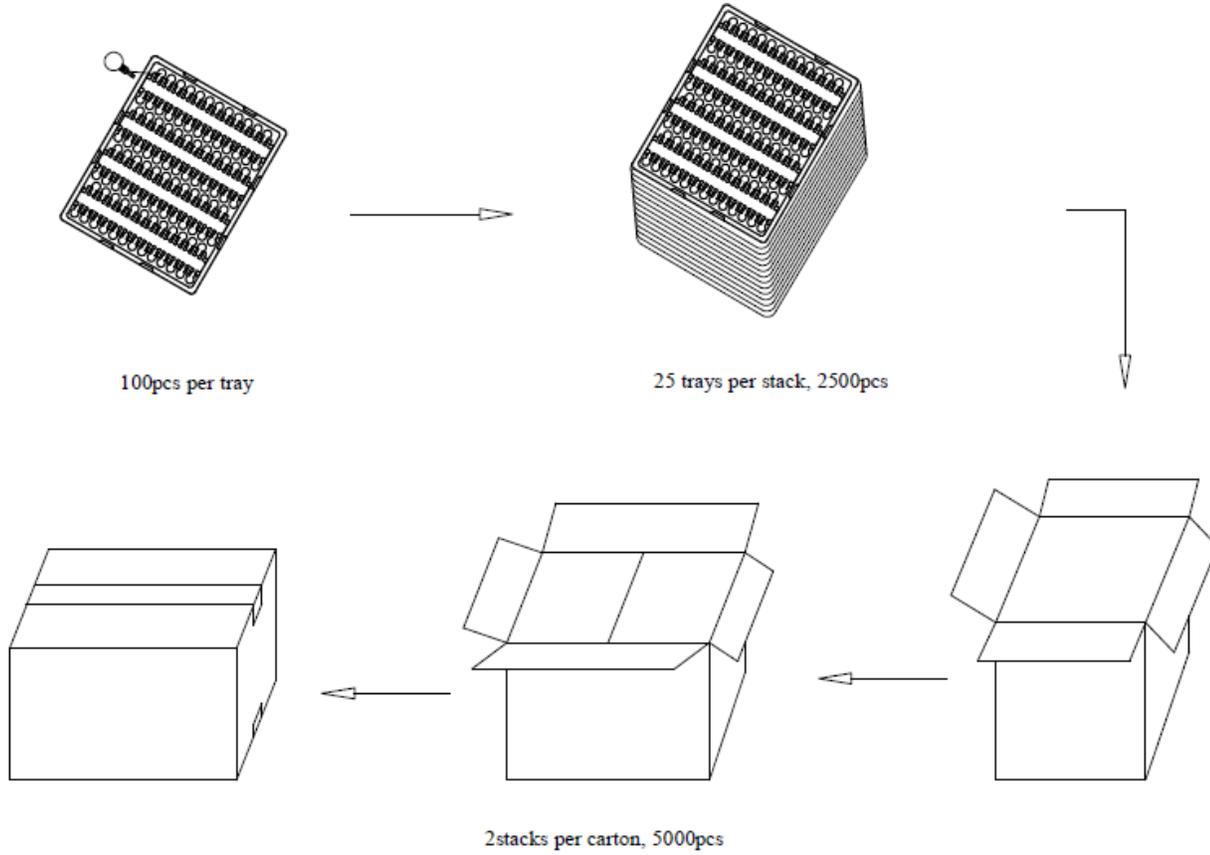
Measurement Methods



Dimensions



Packaging



Specifications Revisions

Revision	Description	Date
A	RELEASED FROM ENGINEERING	2/24/2023

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.