



# 产品规格书

PRODUCT SPECIFICATION

客户名称Buyer Name	
客户料号Buyer Part No.	
客户承认签章 Buyers Approval & Signatures	

文件编号Spec No.		版本	A/0
品名描述 Product Description	线性振动马达 LINEAR VIBRATION MOTOR		
型号Part No.	VLV101080L		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
2026.05.08	2026.05.08	2026.05.08	

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**1. 適用範圍/Scope of Application**

本规格书适用于振动马达 VLV101080L。

This specification sheet is applied for vibration motor VLV101080L

型号名称标准/Standard of model name:

VLV 1010

尺寸规格/SIZE SPEC.: 宽度/Width: 10mm, 长度/length: 10mm

Linear vibration Motor

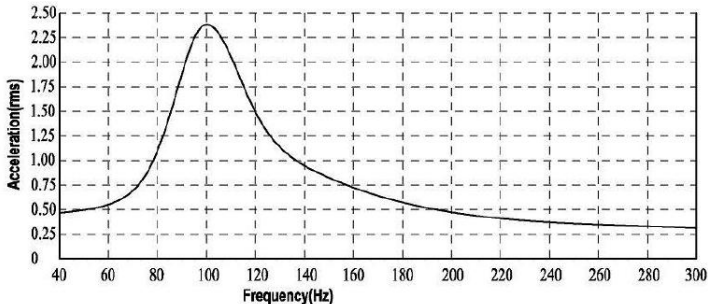
**2. 使用条件/Standard operating condition**

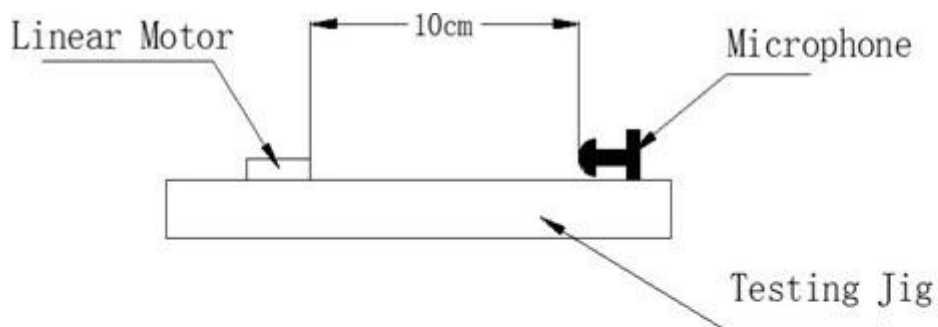
NO.	项目/Item	规格/Specifications
2-1	额定电压 Rated voltage	2.0Vrms AC, Sine wave
2-2	使用电压范围 Operating voltage range	0.1~2.20Vrms AC
2-3	振动方向 Direction of vibration	Z axis
2-4	额定工作频率 Rated operating Frequency	240Hz
2-5	使用温度范围 Operating temperature range	-20°C~70°C, Ordinary Humidity:5~95%RH
2-6	保存环境范围 Storage temperature range	-30°C~85°C, Ordinary Humidity:5~95%RH

**3. 标准的测试条件/Standard Testing condition**

NO.	项目/Item	规格/Specifications
3-1	温度 Temperature	20°C ± 5
3-2	湿度 Humidity	65 ± 20%RH
3-3	电源电压 Power supply, voltage source	2.0 ± 0.05Vrms AC, Sine
3-4	工作频率 Operational Frequency	100 ± 10 Hz

**4. 特性/Electrical characteristics**

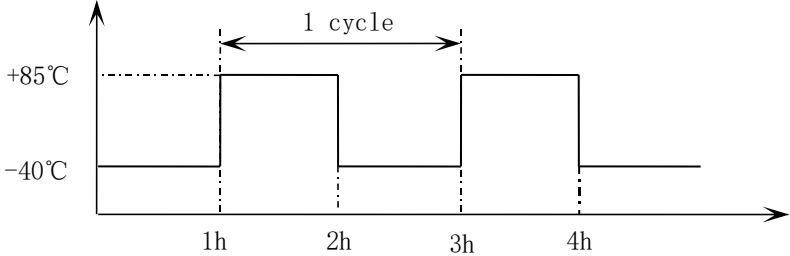
NO.	项目/Item	规格/SPEC.	条件/Condition
4-1	额定电流/ Rated Current	MAX. 100mArms	Standard Testing condition
4-2	F0 点的振动量/ Acceleration	2.4Grms Min	Standard Testing condition, 100g dummy JIG
4-3	阻抗/ Resistance	29 ± 10% Ω	Standard Testing condition
4-4	上升时间/ Rise time	Max 50msec	Standard Testing condition 0-50% normal Acceleration
4-5	下降时间/ Falling time	Max 80msec	Standard Testing condition 100%-50% normal Acceleration
4-6	重量/ Weight	4.5 ± 0.3 Gram	Standard Testing condition
4-7	马达声音/ Mechanical Noise	Max. 50dB(A) Refer to Figure1 (参考图形1)	10cm distance from microphone, Standard Testing condition
4-8	绝缘电阻/ Insulation Resistance	Min. 10 MΩ	100V DC input, between Case and Lead Wire or PCB
4-9	频率特性/ Frequency Characteristics	 <p style="text-align: center;">@ Rated voltage , 100g dummy jig</p>	



1. 马达被固定 / Motor:be fixed
2. 背景噪音: 38dB MAX.  
Back ground noise:38dB MAX.
3. 拾音器沿轴向正对电机平面  
Microphone faces the plane of motor along the shaft

Figure 1: Noise measurement condition

**5. 可靠性试验/Reliability Test**

NO	项目/Item	条件/Condition
5-1	低温贮存试验 Low temperature Storage test	在-30℃的环境下放置168小时，然后在常温常湿下恢复2小时后测试。 Exposed at -30℃ for 168hours, then return to normal temperature and humidity for 2 hours before test.
5-2	高温贮存试验 High temperature Storage test	在+70℃的环境下放置168小时，然后在常温常湿下恢复2小时后测试。 Exposed at +70℃ for 168hours, then return to normal temperature and humidity for 2 hours before test.
5-3	高湿贮存试验 High humidity Storage test	在+55℃, 95%RH的环境下放置120小时，然后在常温常湿下恢复2h后测试。 Exposed at +55℃ 95%RH for 120hours, then return to normal temperature and humidity for 2 hours before test.
5-4	温冲试验 Thermal shock test	马达按照以下试验条件放置 15 个周期，然后在常温常湿下放置 2 小时后测试。 Confirmed to operating of motor during 15 cycles as following test condition, then return to normal temperature and humidity for 2 hours before test. 试验条件/Test condition:  <p style="text-align: center;">1 cycle</p> <p style="text-align: center;">+85℃</p> <p style="text-align: center;">-40℃</p> <p style="text-align: center;">1h 2h 3h 4h</p> 高低温转换时间: ≤5分钟 Transfer time between high temperature and low temperature: ≤5min
5-5	跌落 Drop test	将马达固定在30g的塑料夹具上，从1.5米的高度跌落到水泥地面上，六个面的每个面都跌落3次。 The motor that is attached to a 100g jig (plastic housing) and drop it onto the concrete floor from 1.3m height. Drop twice in each of the six planes.

5-6	<p style="text-align: center;">振动试验 Vibration test</p>	<p>将马达固定在150g的塑料夹具上，按以下要求进行试验：</p> <ol style="list-style-type: none"> <li>1) 扫频范围:10-55Hz</li> <li>2) 全振幅:1.5mm</li> <li>3) 扫频变化: 10-55-10 约10分钟</li> <li>4) 振动方向:三个垂直方向</li> <li>5) 持续时间:每个方向10分钟（共30分钟）</li> </ol> <p>The motor that is attached to a 150g jig (plastic housing) and test according following condition:</p> <ol style="list-style-type: none"> <li>1) Vibration frequency range: 10~55Hz</li> <li>2) Total amplitude: 1.5mm</li> <li>3) Sweep ratio: 10~55~10Hz approximate 10min</li> <li>4) Direction of vibration: x-y-z</li> <li>5) Duration: 1h/Each Axis</li> </ol>
5-7	<p style="text-align: center;">寿命 Lifetime test</p>	<ol style="list-style-type: none"> <li>1. 试验循环/Test cycle:500,000 cycle (cycle:2sec on/1sec off)</li> <li>2. 测试设备/Test equipment:寿命试验机/ Life time test machine</li> <li>3. 输入电压 (2.0VrmsAC, Sine wave) , 输入频率, fo Input Source 100Hz, 2.0Vrms AC, Sine wave, fo</li> </ol>

▶ 判定标准/Judgment standard

试验后，测试数据必须符合以下规格：

1. 加速度、电阻、电流变化率：不得超过初始值的±30%
2. 噪音：50dB Max
3. 外形，结构方面无异常发生

After test, following specifications must be satisfied

1. The fluctuation of Acceleration, Resistance, Rated Current: initial Value±30%
2. Noise:50dB Max
3. There should be no abnormalities to happen in structure

## 6. 注意事项/CAUTION

(1) Please use vibrator in the specification of this specification. Otherwise, the service life and performance of the vibrator will be affected. 请在本规格书规范内使用振动器，否则会影响振动器的使用寿命和性能。

(2) Make arrangement to limit the storage period to 3 years or less. 请在3年内使用

(3) Please do not push the load of 15N or more on the surface of the vibrator, when exceeding 15N, it causes the trouble. 振动器表面承载压力不得超过15 牛顿，否则可能会导致功能故障。time, it may cause a decline in performance.

(4) Vibrators should be firmly fixed in the direction of vibration (Recommended Installation Force 5-8N), Otherwise it will be prone to noise. 振动器应牢牢固定在振动方向上(推荐安装力5-8N)，否则容易产生噪声。

(5) Please lay the vibrators carefully in transportation to avoid any serious damage to the vibrator body or its electric function because of collision. 在运输过程中应小心轻放，避免振动器碰撞受损

(6) When soldering FPCB, the soldering iron temperature does not exceed 350-degree and the soldering time per spot does not exceed 3 seconds. 焊接FPCB 时，电烙铁温度不超过350℃，每个点焊接时间不超过3 秒。

(7) Vibrators can't be used in high temperature, High humidity, and corrosive gas environment. 振动器不能在高温、高湿度和有腐蚀性气体环境中使用。

(8) The vibrator has a strong magnet, so please be aware that it has a magnetic force on the surface of the bracket. 振动器有一个强的磁铁，因此请注意，它的支架表面有磁力。

(9) Under the conditions of meeting this specification, our company can change the material, size, and shape of parts to improve quality, performance or production efficiency. 在满足本规范的条件，我司可以改变零件材料、尺寸及形状来改善品质、性能或生产效率。

(10) If there is any argument on vibrator performance and/or life, judgment is to be made based on this specification only. 如对振动器的性能和(或)寿命有任何争议，仅基于此规格书作出判断。

## 7. 环保要求/Environmental protection Requirements

本产品所有零部件符合欧盟RoHS指令（2011/65/EU,(EU)2015/863）/无卤/REACH指令要求，具体环境有害物质管控限制如下/

This product conforms to the EU ROHS（2011/65/EU,(EU)2015/863）， Halogen-Free and REACH certification, Specific content as follows:

铅及其化合物最大允许含量为1000ppm/Lead and Lead compounds $\leq$ 1000ppm

镉及其化合物最大允许含量为100ppm/Cadmium and cadmium compounds $\leq$ 100ppm

汞及其化合物最大允许含量为1000ppm/Mercury and Mercury compounds $\leq$ 1000ppm

六价铬化物最大允许含量为1000ppm/Hexavalent chromium compounds $\leq$ 1000ppm

多溴联苯(PBB)最大允许含量为1000ppm/Polybrominated biphenylethers $\leq$ 1000ppm

多溴联苯醚(PBDE)最大允许含量为1000ppm/Polybrominated diphenylethers $\leq$ 1000ppm

邻苯二甲酸二异丁酯（DIBP）最大允许含量为1000ppm /DIBP $\leq$ 1000ppm

邻苯二甲酸二丁酯(DBP)最大允许含量为1000ppm /DBP $\leq$ 1000ppm

邻苯二甲酸苄基酯(BBP)最大允许含量为1000ppm/BBP $\leq$ 1000ppm

邻苯二甲酸二（2-乙基己基）酯(DEHP)最大允许含量为1000ppm/DEHP $\leq$ 1000ppm

六溴环十二烷(HBCDD)最大允许含量为1000ppm/HBCDD $\leq$ 1000ppm

溴Br最大允许含量为900ppm/Br $\leq$ 900ppm

氯Cl最大允许含量为900ppm/Cl $\leq$ 900ppm

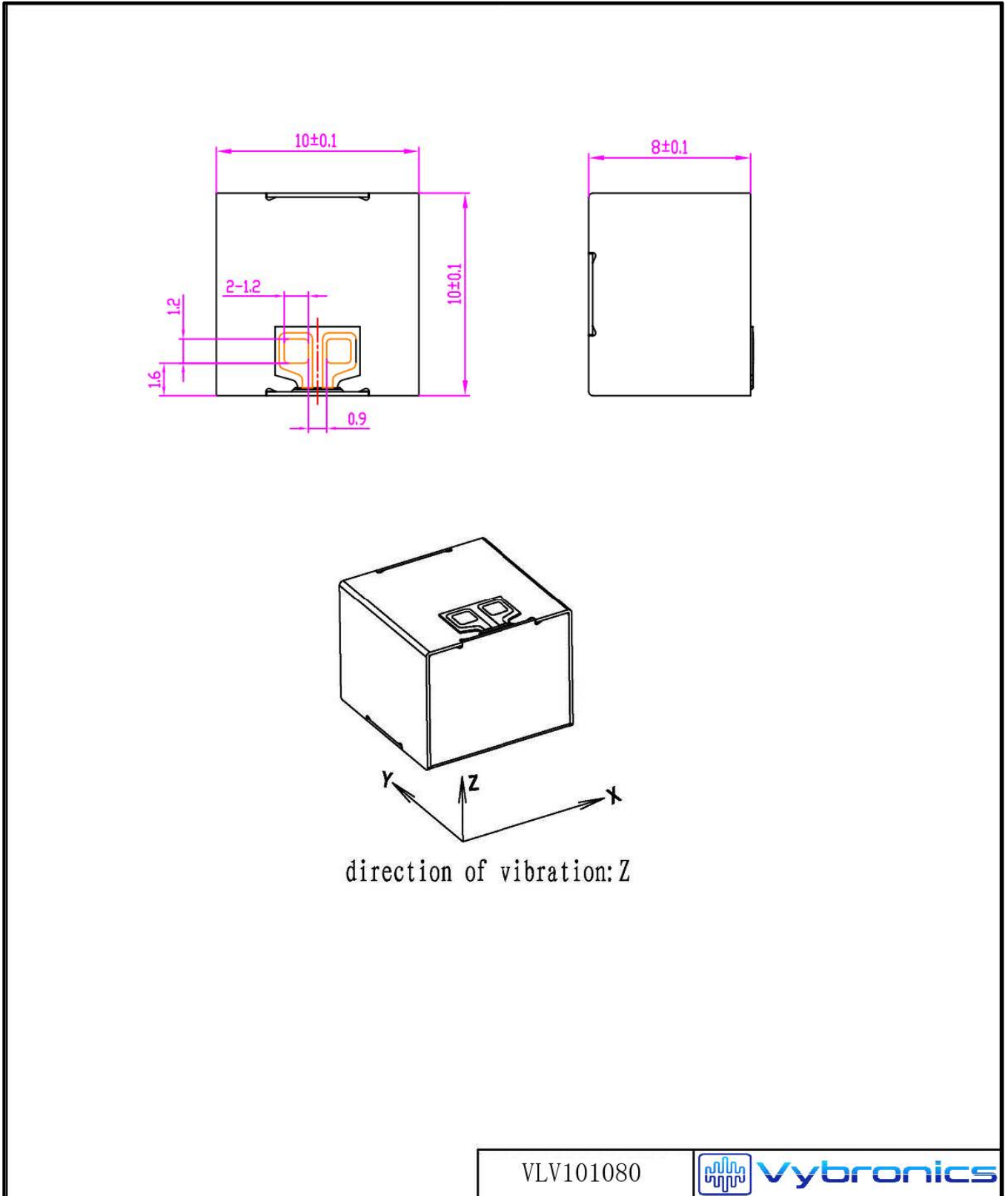
溴加氯之和最大允许含量为1500ppm/Br+Cl $\leq$ 1500ppm

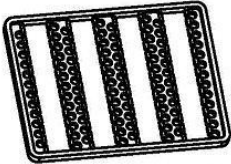
REACH 指令按最新法规内容管控执行/The instructions are subject to the latest regulations

包装材料环保管控要求/Environmental control requirements for packaging materials:

Pb+Cd+Hg+Cr6 < 100ppm (其中, Cd<50ppm)

8. 外形图/Vibration Outside View

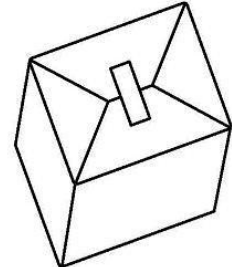


**9. 包装/Packaging**


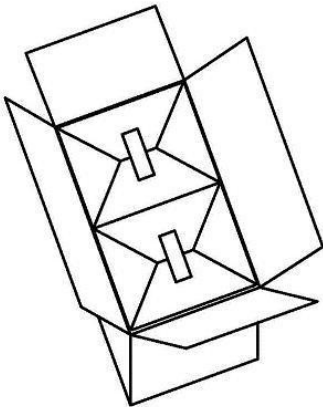
Each tray is equipped  
with 100 motors  
每托盘装100只马达



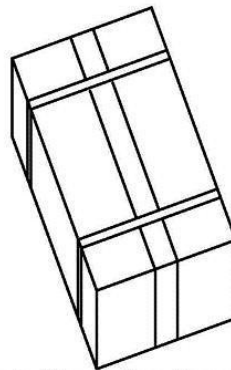
2500 motors per heap  
每堆2500只马达



Use plastic bags to  
prevent humid  
用塑料袋包装防潮



Each packing box is equipped  
with 5000/10000 motors  
每个包装外箱装5000/10000只马达



Seal the outer box with adhesive  
tape and tie it firmly with  
packing strap  
用胶带密封外箱，并用打包带捆扎牢固。

Packing box specification table  
包装箱规格表

数量 (pcs)	长 (cm)	宽 (cm)	高 (cm)
5000	23.5	18.5	21.5
10000	35	23.5	21.5