

# ERM 1003C A

## ECCENTRIC ROTATING MASS

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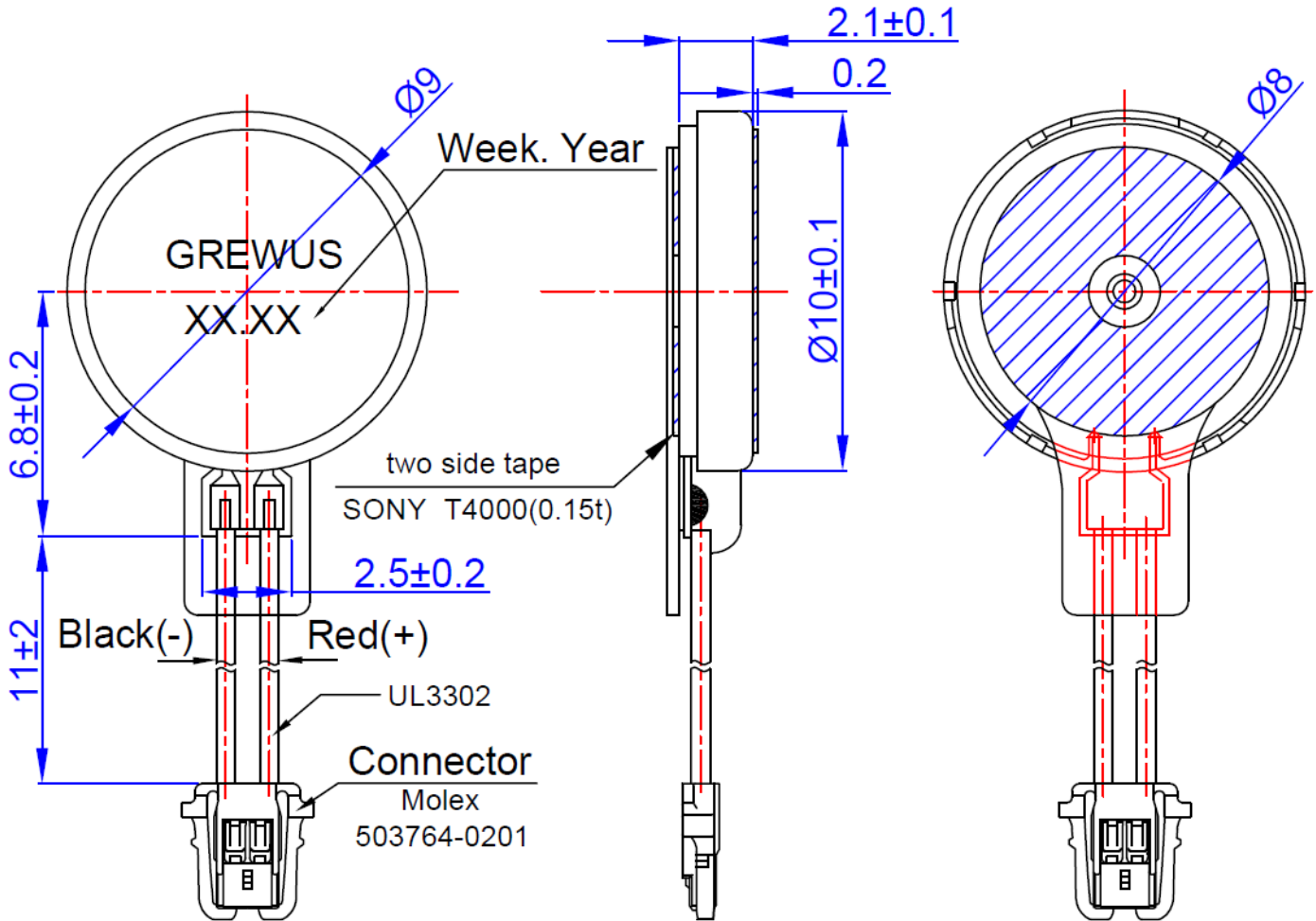


### 1. SPECIFICATIONS

Parameter	Unit	Conditions / Description	MIN	TYP	MAX
Rated Voltage	VDC			3	
Operating Voltage	VDC		2.7		3.3
Rotation		CW (clockwise) or CCW (counterclockwise)			
Rated Speed	r/min	Value applying 3VDC	9.000		
Current	mA	Value applying 3VDC, at 25°C			90
Starting Current	mA				120
Starting Voltage	VDC				2.3
Terminal Resistance	Ω	At 25°C Single Phase	26.35	31	35.65
		At 25°C Double Phase	50.15	59	67.85
Insulation Resistance	MΩ	At 100VDC between lead wire and case	10		
Bracket Deflection Strength	N		9.8		
Mechanical Noise	dB				50
Contact				CONNECTOR	
Packaging				TRAY	
Operating Temperature	°C		-20		+60
Storage Temperature	°C		-30		+70
Weight	g			0,94	

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2. DRAWING



Unit: mm

Tolerance: ± 0.3mm

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### 3. RELIABILITY TEST

#### 3.1 Life Test

Power Rated Voltage  
Duration 2 seconds on, 2 seconds off  
As one cycle  
Cycles 50.000  
Motors shall be approved as specified in item A.

#### 3.2 High Temperature Test

Temperature +70°C  
Duration 96 hours  
Motors shall be approved as specified in item B.

#### 3.3 Low Temperature Test

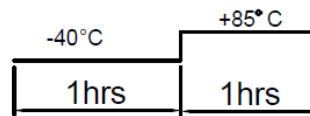
Temperature -30°C  
Duration 96 hours  
Motors shall be approved as specified in item B.

#### 3.4 Humidity Test

Temperature +40°C  
Relative Humidity 95% RH  
Duration 96 hours  
Motors shall be approved as specified in item B.

#### 3.5 Temperature Cycle Test

Cycles 15



Motors shall be approved as specified in item B.

All these tests above should be measured after leaving normal temperature for 4 hours.

#### 3.6 Vibration Test

Vibration Frequency 10~55Hz  
Amplitude 1.5mm  
Duration x, y, z directions 30 minutes  
Motors shall be approved as specified in item B.

#### 3.7 Drop Test

Height 1.5m (free falling on concrete floor)  
Times 2 times in each of 6 planes  
Motors shall be approved as specified in item B.

### JUDGMENTS AFTER RELIABILITY TEST:

Item	Requirements
A	<ol style="list-style-type: none"> <li>1) Rated Speed: Not lower than -30% of initial data Not more than +50% of initial data</li> <li>2) Rated Current: Not lower than -30% of initial data Not more than +50% of initial data</li> <li>3) Terminal Resistance: Not lower than -15% of initial data Not more than +15% of initial data</li> <li>4) Starting Voltage: Max. 2.5DC</li> <li>5) Insulation Resistance: Min. 10M Ω</li> </ol>
B	<ol style="list-style-type: none"> <li>1) Rated Speed: Not lower than -20% of initial data Not more than +20% of initial data</li> <li>2) Rated Current: Not lower than -20% of initial data Not more than +20% of initial data</li> <li>3) Terminal Resistance: Not lower than -15% of initial data Not more than +15% of initial data</li> <li>4) Starting Voltage: Max. 2.5DC</li> </ol>

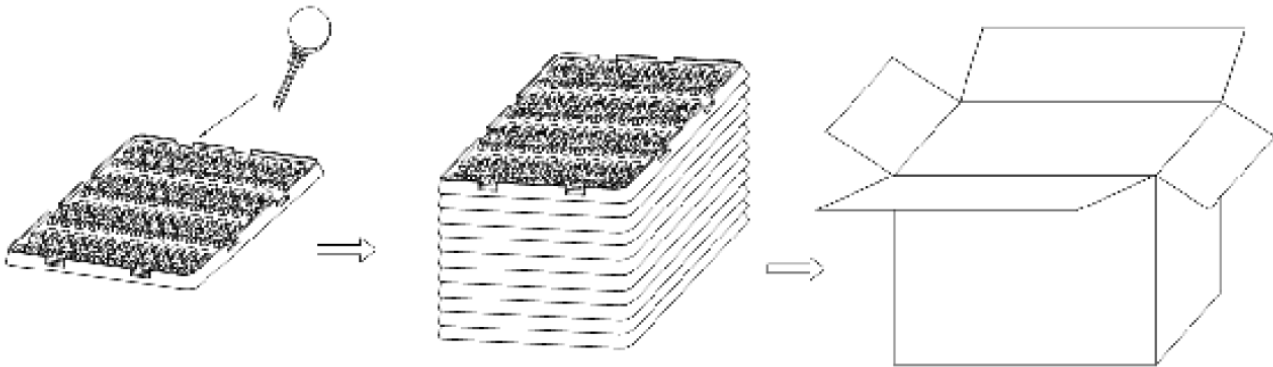
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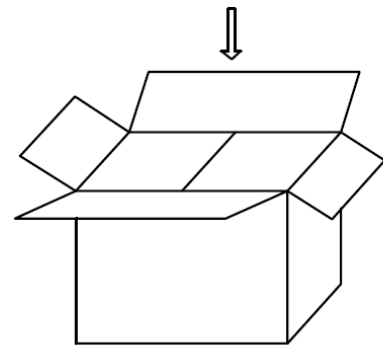
### 4. PACKING

#### 4.1 PACKING DRAWING



#### 4.2 PACKING QUANTITY

100pcs per tray  
 10 trays per bundle  
 1000pcs per bundle in total  
 4000pcs or 6000pcs per carton  
 Carton Size 45x28x20cm or 45x28x30cm



### 5. NOTICE

5.1 The products mustn't be washed

#### 5.2 Storage Condition

The products should be stored in the room, where the temperature/humidity is stable. And avoid such places where there are large temperature changes. Please store the products at the following conditions:  
 Temperature: -10 to + 40 °C Humidity: 15 to 85% R.H.

#### 5.3 Expire Date on Storage

Expire date (Shelf life) of the products is six months after delivery under the conditions of a sealed and an unopened package. Please use the products within six months after delivery. If you store the products for a long time (more than six months), use carefully because the products may be degraded in the solderability and/or rusty. Please confirm solderability and characteristics for the products regularly.

#### 5.4 Notice on Product Storage

- (1) Please do not store the products in a chemical atmosphere (Acids, Alkali, Bases, Organic gas, Sulfides and so on), because the characteristics may be reduced in quality, and/or be degraded in the solderability due to the storage in a chemical atmosphere.
- (2) Please use the products immediately after the package is opened, because the characteristics may be reduced in quality, and/or be degraded in the solderability due to storage under the poor condition.

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6. HISTORY CHANGE RECORD

REV	CHANGE ITEMS		DATE
	BEFORE CHANGE	AFTER CHANGE	
1	Connector: Molex 503764-0201	Connector: Molex 78172-0002	2017.07.26
2	Old layout	New layout	2019.08.22
3	Part Name: LRA 1003C A	Part Name: ERM 1003C A	2019.08.26
4	Connector: Molex 78172-0002	Connector: Molex 503764-0201	2020.01.14
5		Update Drawing: Add printing	2020.01.14

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