愛立德電子（香港）有限公司
INEED ELECTRONICS (HONGKONG) LIMITED
Company No.: 1653395 - Registered Office: Room 1103, Hang Seng Mongkok Building, 677 Nathan Road, Mongkok, Kowloon, Hong Kong
China Office:Room 4-1904, Yuan Meng Ya Ju, Zongbu 3rd Road, Songshanhu North Hi-Tech Park, Dongguan, Guangdong 523808, China
Tel: (+86) 769 2289 1073 Fax: (+86) 769 2289 1076 URL: http://www.ineed.hk

# 產品規格說明書

# Product Specification

| | | | |
|---|---|---|---|
| 客戶名稱 Buyer Name | | 客戶代碼 Buyer Code | |
| 產品名稱 Product Name | Cylinder Type Micro Vibration Motor | 產品編碼 Product Part No. | IND-YZ0610H-2830 |
| 規格書號 Specification No. | IND090 | 發佈日期 Date of Release | 2009-2-6 |

聲明：本產品符合歐盟 2005/618/EC 環保指令相關要求。

We declare that the product is compliant with EU 2005/618/EC directives.

貴司確認本產品樣品後，在決定採購本產品之前，請您仔細閱讀本產品規格說明書，並在客戶承認欄內簽名及蓋章並回傳此頁給我司相關人員備案。After you approve the product samples, please read this specification carefully and return this page to us with your signature and company chop in below *Customer Approval* table before you decide to purchase this product.

| ***客戶承認欄 Customer Approval*** | | | | |
|---|---|---|---|---|
| | *工程 Engineering* | *品質 Quality* | *生產 Production* | *採購 Procurement* |
| *簽名及蓋章*<br>*Signature & Company Chop* | | | | |
| *日期 Date* | | | | |

| ***愛立德工廠承認欄 INEED Factory Approval*** | | | |
|---|---|---|---|
| *簽名及蓋章*<br>*Signature & Company Chop* | *批准 Approved by* | *審核 Checked by* | *編制 Prepared by* |
| | *倪曉萍 NI XIAOPIN* | *白兵 BAIBING* | *孟紅麗 MENG HONGLI* |
| *日期 Date* | 2009-2-6 | 2009-2-6 | 2009-2-6 |

# 目錄Contents


| 章節<br>Paragraph | 標題<br>Headlines | 頁碼<br>Page |
|---|---|---|
| 1 | 適用範圍 General Scope | 2 |
| 2 | 使用條件 Operating Conditions | 2 |
| 3 | 初期電氣性能 Initial Electrical Characteristics | 2 |
| 4 | 機械性能 Mechanical Characteristics | 3 |
| 5 | 壽命測試及後期要求 Lifetime Test & Post Requirements | 3 |
| 6 | 使用時注意事項 Precautions in Use | 4 |
| 7 | 外形圖 Outline Drawing | 4 |
| | | |
| | | |
| | | |

# 規格說明SPECIFICATIONS

## 1. 適用範圍 General Scope

本文規定IND-YZ0610H-2830直流永磁電動機有關技術要求和試驗方法。

This specification specifies the related technical data and test methods of DC motorIND-YZ0610H-2830.

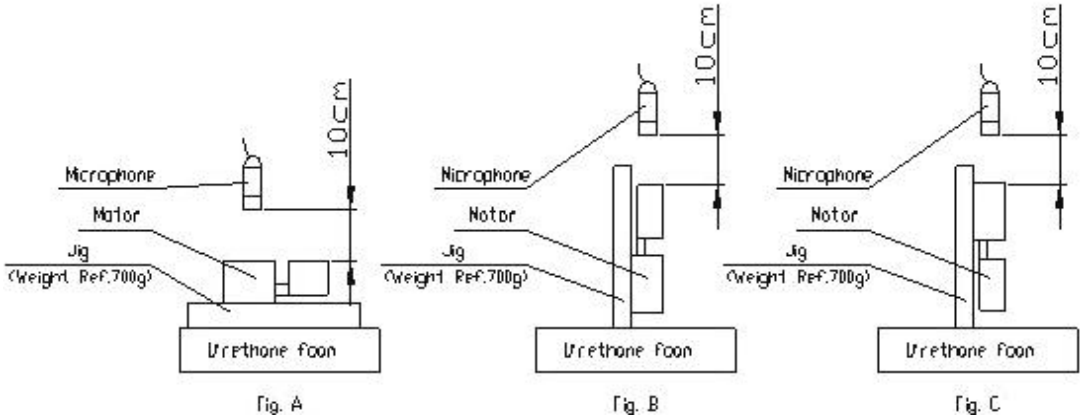
## 2. 使用條件 Operating Conditions

| 序號 No. | 專案 Items | 規格 Specifications |
|---|---|---|
| 2-1 | 使用溫度範圍<br>Operating Temperature Ranges | -10°C~+60°C |
| 2-2 | 使用濕度範圍<br>Operating Humidity Ranges | 10%~90% RH |
| 2-3 | 測試環境<br>Test Environment | 溫度：+15°C~+30°C、相對濕度：30%~70% RH。<br>Temperature: +15°C~30°C; Humidity: 30%~70% RH. |
| 2-4 | 旋轉方向<br>Direction of Rotation | 從輸出軸側看，CW或CCW均可。<br>CW or CCW, viewed from output shaft side. |

## 3. 初期電氣性能 Initial Electrical Characteristics

| 序號 No. | 專案 Items | 規格 Specifications |
|---|---|---|
| 3-1 | 額定電壓<br>Rated Voltage | 3.0V DC |
| 3-2 | 使用電壓範圍<br>Operating Voltage Ranges | 2.2-3.6V DC |
| 3-3 | 額定負載<br>Rated Load | Counterweight R2.8*3.0 |
| 3-4 | 額定轉速<br>Rated Speed | 10,000±2,500 RPM |
| 3-5 | 額定電流<br>Rated Current | 70mA Max |
| 3-6 | 起動電流<br>Starting Current | 105mA Max |
| 3-7 | 起動電壓<br>Starting Voltage | 1.7V DC Max |
| 3-8 | 絕緣電阻<br>Insulation Resistance | 1.0 MΩ MIN, at 100V DC meg |

## 4. 機械性能 Mechanical Characteristics

| 序號 No. | 專案 Items | 規格 Specifications |
|---|---|---|
| 4-1 | 軸向間隙（串量）<br>Axial End Play | 0.1-0.3mm |
| 4-2 | 軸伸徑向圓跳動量<br>Shaft Radial Run-out | 距軸端部1.0mm處測試應不大於0.1mm。<br>(It shall be no more than 0.1mm from the 1.0mm place of output shaft side.) |
| 4-3 | 單臺重量<br>Weight | 2.40 g (ref.) |
| 4-4 | 軸向垂直度<br>Axial Upright Degree | 90°±1° |
| 4-5 | 振子固定力<br>Holding Force of Counterweight | 49N (5kgf) Min |
| 4-6 | Mechanical Noise<br>機械雜訊 | 50 dB (MAX) 100mm (background noise within 32dB). |
| | 測試方法：在額定電壓、額定負載（振子）下。背景雜音：不大於 32dB（A 計權）。測試儀器：B&k；夾具重量：700g。<br>Test Method: At rated voltage. Back ground noise: 32dB (A) Max. Measuring instruments: B&k. Weight of jig: 700g.<br>  <br> | |

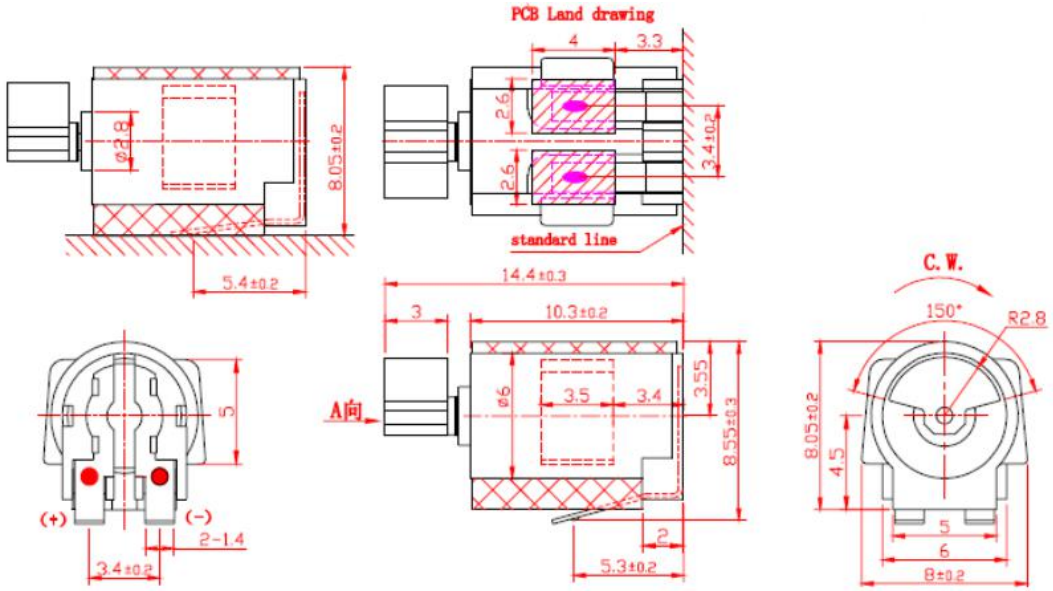
## 5. 壽命測試及後期要求 Lifetime Test & Post Requirements

| 序號 No. | 專案 Items | 規格 Specifications |
|---|---|---|
| 5-1 | 壽命測試<br>Lifetime Test | 按一個週期8秒開、52秒關，連續運轉48小時後，按5-2、5-3進行相關專案測試驗證。<br>8 secs on 52 secs off as 1 cycle, for 48 hours, and then test and verify according to item 5-2 and 5-3. |
| 5-2 | 額定轉速<br>Rated Speed | 不低於初始值-50%，不高於初始值+50%。<br>No less than initial data -50%, no more than initial data +50%. |
| 5-3 | 額定電流<br>Rated Current | 不低於初始值-50%，不高於初始值+50%。<br>No less than initial data -50%, no more than initial data +50%. |

## 6. 使用時注意事項 Precautions in Use

| 序號 No. | 使用時注意事項 Precautions in Use |
|---|---|
| 6-1 | 必須按照此產品規格說明書使用，否則性能和壽命都將受到相當地減少。尤其注意電壓的使用範圍。<br>Please operate the motors in accordance with this specification, especially be careful with the operating voltage ranges, otherwise the performance and lifetime of the motors would be considerably reduced. |
| 6-2 | 建議馬達收貨後六個月內必須使用。不可以在以下環境中使用及保存馬達：<br>✧ 高溫高濕區域；<br>✧ 腐蝕性氣體環境，如：$H_2S$、$SO_2$、$NO_2$、$Cl_2$，等等；<br>✧ 易導致金屬物生銹場所。<br>It is suggested to use the motors within 6 months after delivery. It is not allowed to use or store the motors at such environments:<br>✧ High damp and high temperature areas.<br>✧ Places full of corrosive gas, such as $H_2S$, $SO_2$, $NO_2$, $Cl_2$, etc.<br>✧ Areas that easily cause metals rusty. |
| 6-3 | 注意清潔工作環境，避免含鐵質雜物被馬達吸進，否則馬達將會產生雜訊，性能會受影響，從而降低產品可靠性。<br>Please pay much attention to clean the working environment, to avoid iron sundries from being sucked into the motors; otherwise, the motors would make noise, the performance would be affected, and reliability would be reduced. |
| 6-4 | 拿馬達時，要輕拿輕放。不允許隨意丟置。<br>Please place the motors gently and carefully in use. It is not allowed to throw it at random. |
| 6-5 | 機殼鋼板面或邊緣有少許鏽斑是允許的。<br>It is allowed to have a little rust on the brim of steel plate of the housing. |
| 6-6 | 因為測試設備可能有誤差，所以±5%的轉動頻率偏差是允許的。<br>It is allowed to have a tolerance of ±5% rotation frequency due to discrepancies between different testing equipments. |
| 6-7 | 用戶自身應確信使用本產品不會與相關標準、法律、政令相背。<br>Users shall assure themselves that they do not violate related standards, laws or any political policies when they use this product. |

## 7. 外形圖 Outline Drawing




未注公差 Unmarked tolerance: ±0.1.