

# Micro Brushless DC Motor



2023-2024 REV3.1



# Content

|                  |     |
|------------------|-----|
| About PrimoPal   | 1-2 |
| Technical Basics | 4-5 |
| Naming rule      | 6   |

## INNER ROTOR

|         |    |
|---------|----|
| PLN1625 | 8  |
| PLN2412 | 9  |
| PLN2418 | 10 |
| PLN2430 | 11 |
| PLN2832 | 12 |
| PLN2838 | 13 |
| PLN2847 | 14 |
| PLN3220 | 15 |
| PLN3626 | 16 |
| PLN3630 | 17 |
| PLN3640 | 18 |
| PLN3650 | 19 |
| PLN3657 | 20 |
| PLN4235 | 21 |
| PLN4250 | 22 |
| PLN4260 | 23 |
| PLN4275 | 24 |
| PLN5265 | 25 |
| PLN5285 | 26 |
| PLN6050 | 27 |
| PLN6060 | 28 |

## Outrunner

|          |    |
|----------|----|
| PLE2413  | 30 |
| PLE2717  | 31 |
| PLE2719  | 32 |
| PLE2725  | 33 |
| PLE2827  | 34 |
| PLE2830  | 35 |
| PLE2913  | 36 |
| PLE2915  | 37 |
| PLE3025  | 38 |
| PLE3525S | 39 |
| PLE3525  | 40 |
| PLE3717  | 41 |
| PLE3825S | 42 |
| PLE3825  | 43 |
| PLE3830  | 44 |

# Content

|          |       |    |
|----------|-------|----|
| PLE3835S | ----- | 45 |
| PLE4020  | ----- | 46 |
| PLE4035  | ----- | 47 |
| PLE4220  | ----- | 48 |
| PLE4225  | ----- | 49 |
| PLE4525  | ----- | 50 |
| PLE4825  | ----- | 51 |
| PLE5025  | ----- | 52 |
| PLE5520  | ----- | 53 |
| PLE5525  | ----- | 54 |
| PLE5530  | ----- | 55 |

## Reduction gearbox

|          |       |    |
|----------|-------|----|
| PLN1625G | ----- | 57 |
| PLN2418G | ----- | 58 |
| PLN2430G | ----- | 59 |
| PLN2838G | ----- | 60 |
| PLN2847G | ----- | 61 |
| PLN3626G | ----- | 62 |
| PLN3630G | ----- | 63 |
| PLN3640G | ----- | 64 |
| PLN3650G | ----- | 65 |
| PLN3657G | ----- | 66 |
| PLN4235G | ----- | 67 |
| PLN4260G | ----- | 68 |
| PLN4275G | ----- | 69 |

# About | PrimoPal Company Profile

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Entering into the hybrid stepper motor business in 2007, PrimoPal has grown to where it is now one of China's top manufacturers of stepper motors, brushless motors, and an integrated provider of related motion control products and solutions. PrimoPal has become the reliable partner for many industries, from factory automation components to the smart home appliance, from the intelligent management system of large industrial equipment to the control actuator in automotive and telecommunication devices.

Highly recognized for high performance and quality products, now PrimoPal offers four major series of products: stepper motors, brushless DC motors, servo motors and linear actuators. Production capacity exceeds more than 2 million motors and actuators per year. PrimoPal also has several joint venture companies who specialize in the production of PMDC motors, motion controllers and precision gearboxes. We sell nearly 3 million different motors and actuators to customers worldwide every year.

Our manufacturing bases are equipped with advanced quality testing devices, precise honing machines, auto winding machines, CNC machining centers, and other advanced manufacturing equipment. It makes us have the ability of continuously providing products with superior quality. Besides, we have an engineering team with many years of experience in motor design and application engineering.

We have no doubt that our endeavors enable us to maintain strong presence in the competitive market. To demonstrate our commitment to all our customers, PrimoPal has adopted "Bringing out the Best in Motion" as our official slogan, which means our ultimate goal is to become one of the world's top-level companies in the industry of precision motor and motion control system.



# About | PrimoPal BLDC production Line

PrimoPal is a professional development, manufacturing and selling company, specializing in the processing of Micro Brushless motors. We have a complete and scientific quality management system to ensure that our products are of top-quality.



Our Micro Brushless motors are widely used in various fields such as home application, vacuum cleaner, personal care, business equipment, medical apparatus, industry apparatus.

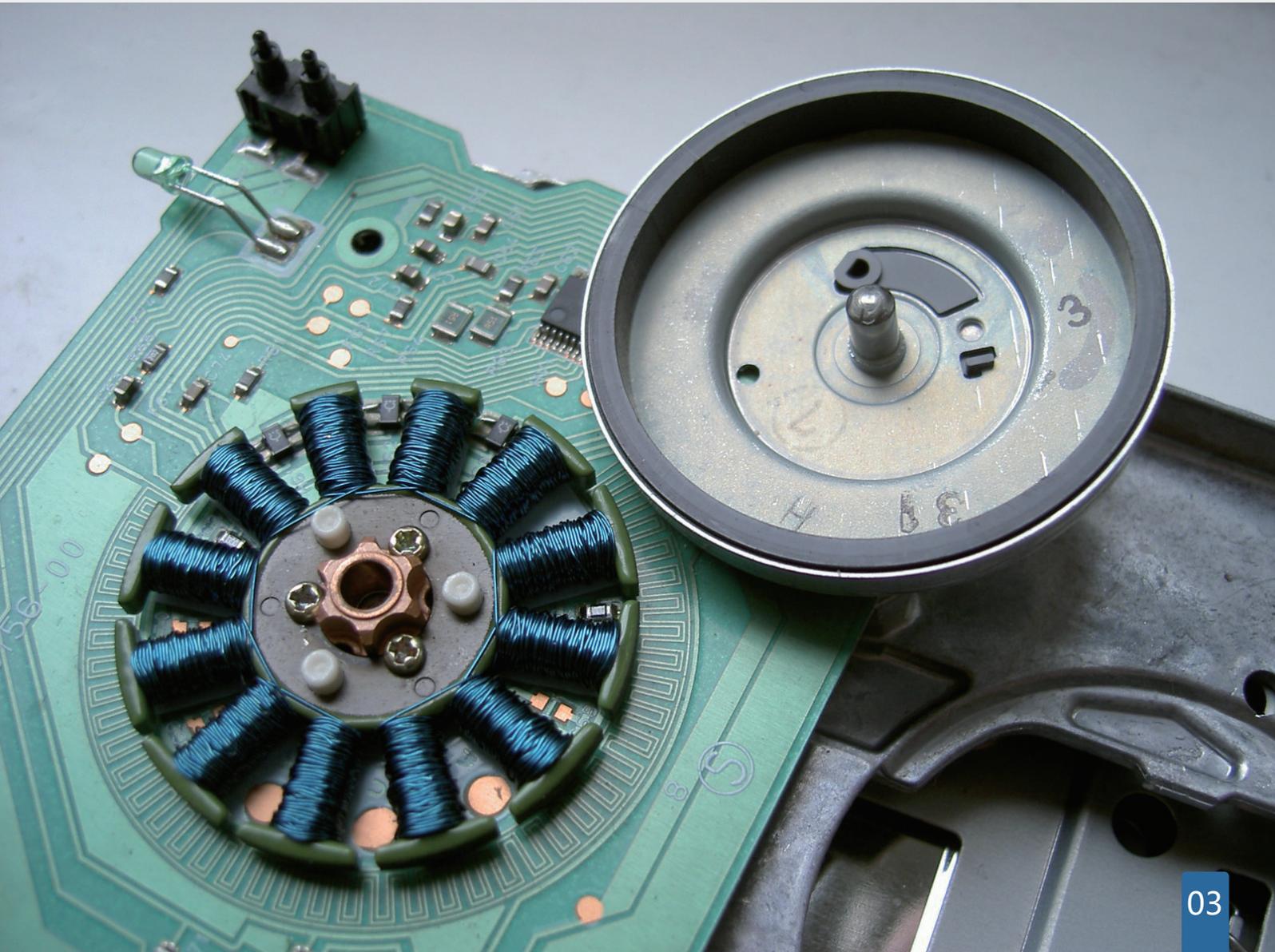


Our standard inner rotors is available in diameters from  $\text{Ø}16\text{mm}$  to  $\text{Ø}60\text{mm}$ . The outer rotor range is available from  $\text{Ø}23.8\text{mm}$  to  $\text{Ø}61\text{mm}$ .

PrimoPal's Micro Brushless motors division boasts of over 100 sets of automatic production equipment, including automatic winding machines, welding machines, stator pinning machines, feeders, and so on. We are equipped with eight motor assembly lines, which allows us to have an annual production capacity of more than 20 million units of various Micro Brushless motors suitable for both domestic and foreign customers.

# Technical Basics

- About Micro Brushless DC Motor
- Micro Brushless DC Motor Product Application
- Advantages Of Micro Brushless DC motor



## About Brushless DC Motor

A brushless DC (BLDC) motor, also known as an electronically commutated motor, is a synchronous motor that uses a direct current (DC) power supply. It uses an electronic controller to switch DC currents to the motor windings, creating magnetic fields that effectively rotate in space and which the permanent magnet rotor follows. The controller adjusts the phase and amplitude of the DC pulses to control the speed and torque of the motor. This control system is an alternative to the mechanical commutator (brushes) used in many conventional electric motors.

The design of a brushless motor system is typically similar to a permanent magnet synchronous motor (PMSM), but can also be a switched reluctance motor or an induction (asynchronous) motor. They can also use neodymium magnets and be outrunner (the stator is surrounded by the rotor), inrunner (the rotor is surrounded by the stator) or axial (the rotor and stator are flat and parallel). The advantages of a brushless motor over brushed motors are high power to weight ratio, high speed, almost instantaneous control of speed (rpm) and torque, high efficiency and low maintenance. Brushless motors are used in computer peripherals (disc drives, printers), hand-held power tools and vehicles ranging from model aircraft to automobiles. In modern washing machines, brushless DC motors have made it possible to replace rubber belts and gears with a direct drive design.

## Micro Brushless DC Motor Product Application



### Cleaning Appliances

Sweepers, scrubbers, window cleaners, vacuum cleaners, air purifiers, intelligent toilets, etc.



### Personal Care

Hairdryers, curling irons, shavers, electric clippers, etc.



### Kitchen Appliances

Blender, juicer, stir-fry machine, etc.



### Automobiles

Charging cover, seat adjustment, light adjustment, electric tailgate etc.



### Power Tool

Electric screwdriver, electric hydraulic pliers, electric scissors etc.



### 5G Communications

Industry, agriculture, government, health care, culture and entertainment, tourism, education, etc.

### 1. Micro BLDC motor with high reliability

As the brushless DC motor is the evolution of brush motor products, its working principle is the use of electronic phase switching instead of brush motor brush commutation, so there is no mechanical commutation due to the problem of sparks, and can be high-speed operation, because there is no need to replace the carbon brushes on a regular basis, so that the motor's reliability will be higher, better protection, suitable for a variety of working environments.

### 2. Micro BLDC motor with wide speed range

Brushless DC motor does not have the problem of carbon brush pressure drop at low speed and high current, it can run normally at low speed and high current, and the maximum speed can be up to tens of thousands of revolutions, compared with brush motor, it is easy to produce commutation sparks when running, the upper limit of high speed is lower, and when running at low speed and high current, the brush pressure drop is larger, which is not suitable for long time running.

### 3. Micro BLDC motor has high efficiency.

Brushed motor because there are brushes, increasing the loss of the motor, the motor efficiency is naturally reduced, but the brushless motor is the permanent magnets on the rotor to establish the main magnetic field of the motor, which is more energy-saving, and the efficiency is also high.

### 4. Micro BLDC motor power density

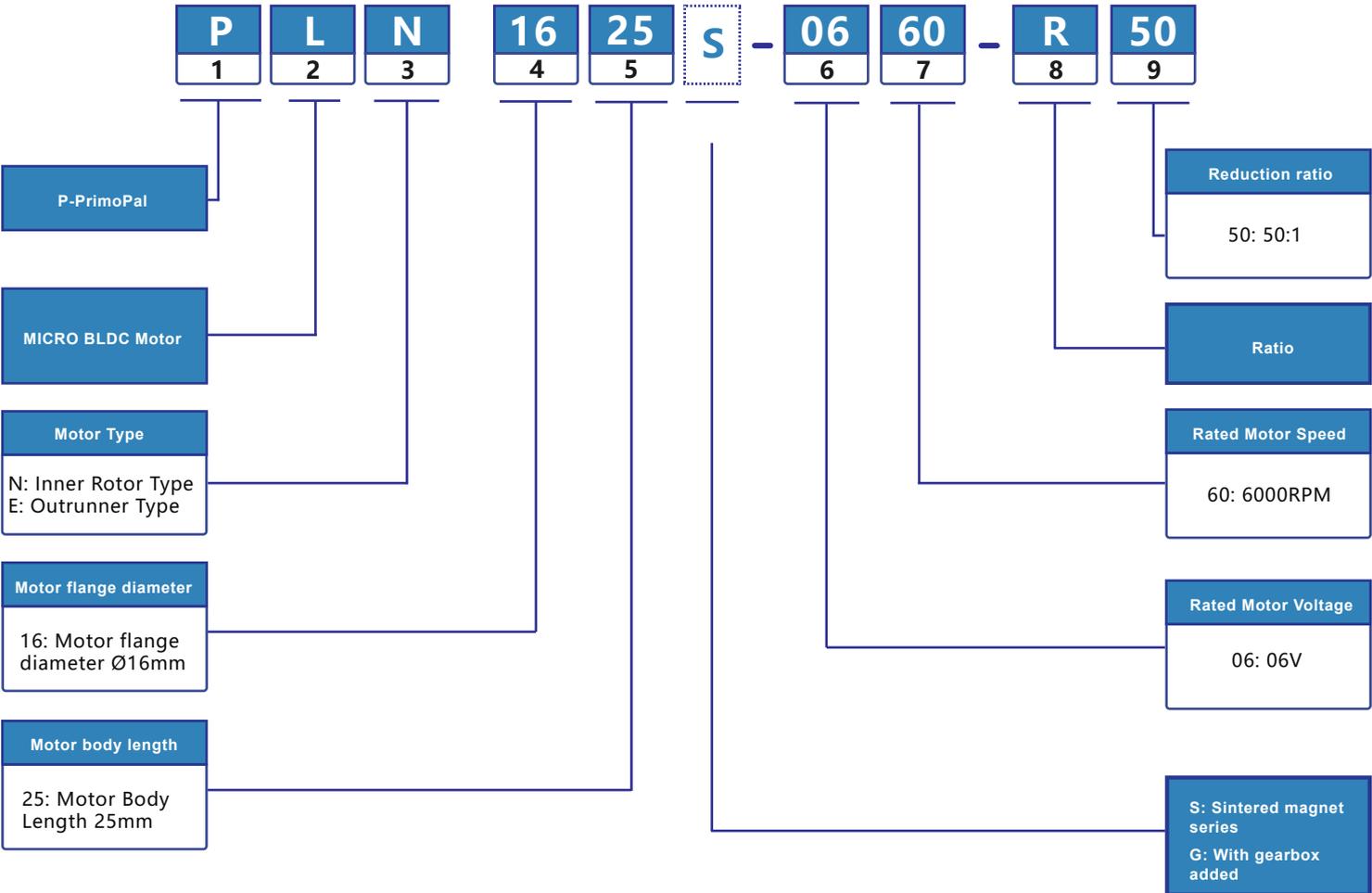
Brushed motor has collector ring brush, occupies the effective volume of the motor, so the motor power density is small, while the brushless motor rotor no current, low motor heat, smaller volume can produce greater power, the unit volume of the motor out of force, motor power density.

### 5. Micro BLDC motor has low noise.

As the brushless motor without brushes, the friction is greatly reduced during operation, running smoothly, the noise will be much lower.

Micro BLDC motor features a wide range of use, long service life, up to tens of thousands of hours, brushless motor is a digital frequency control, controllability, from a few revolutions per minute to tens of thousands of revolutions per minute can be achieved.

# Naming rules for Micro Brushless DC Motors



# Micro Brushless DC Motor

## INNER ROTOR

PrimoPal inner rotor micro brushless DC motors use electronic commutation instead of mechanical commutation. Its superior performance is also shown in high reliability of the motor, high rotational speed, small size, strong overload capacity, low electromagnetic interference, low noise, good speed regulation, and it can work in harsh environments.





# PLN1625

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 0.1W~5W  
WEIGHT: 18g (APPROX)

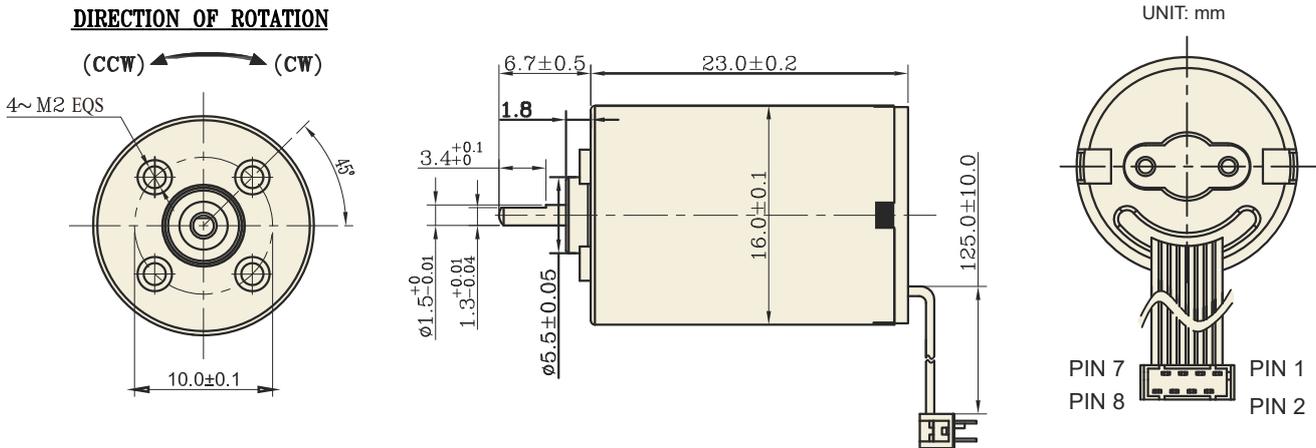
### Typical Application 典型应用

- 通讯设备 (Communication Equipment)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| PIN | COLOR | FUNCTION                |
|-----|-------|-------------------------|
| 08  | WHITE | COIL W                  |
| 07  | WHITE | COIL V                  |
| 06  | WHITE | COIL U                  |
| 05  | WHITE | VCC " + "               |
| 04  | WHITE | GND " - "               |
| 03  | WHITE | H3 (Hall Sensor Output) |
| 02  | WHITE | H2 (Hall Sensor Output) |
| 01  | RED   | H1 (Hall Sensor Output) |

## Outline Dimension 外形图

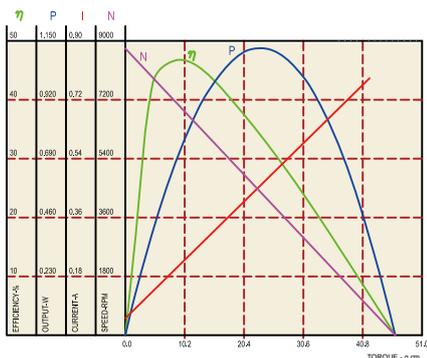


## Specifications 特性参数

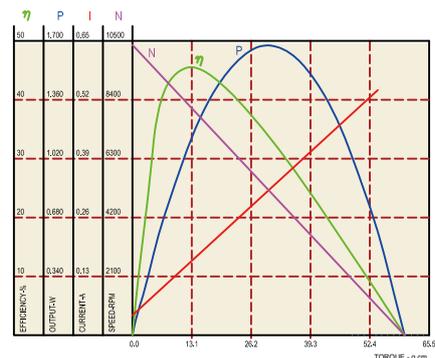
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN1625-0661 | 5V~9V           | 6 V   | 8576    | 0.132   | 6175                  | 0.336   | 14.3   | 0.904  | 51.0   | 0.861   |
| PLN1625-8510 | 5V~12V          | 8.5 V | 13289   | 0.144   | 10365                 | 0.490   | 20.4   | 2.168  | 92.7   | 1.715   |
| PLN1625-1274 | 8V~16V          | 12 V  | 10006   | 0.077   | 7404                  | 0.224   | 17.0   | 1.288  | 65.2   | 0.644   |

## Performance Curves 性能曲线

PLN1625-0661 6V



PLN1625-1274 12V



# PLN2412

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 1W~10W  
WEIGHT: 20g (APPROX)

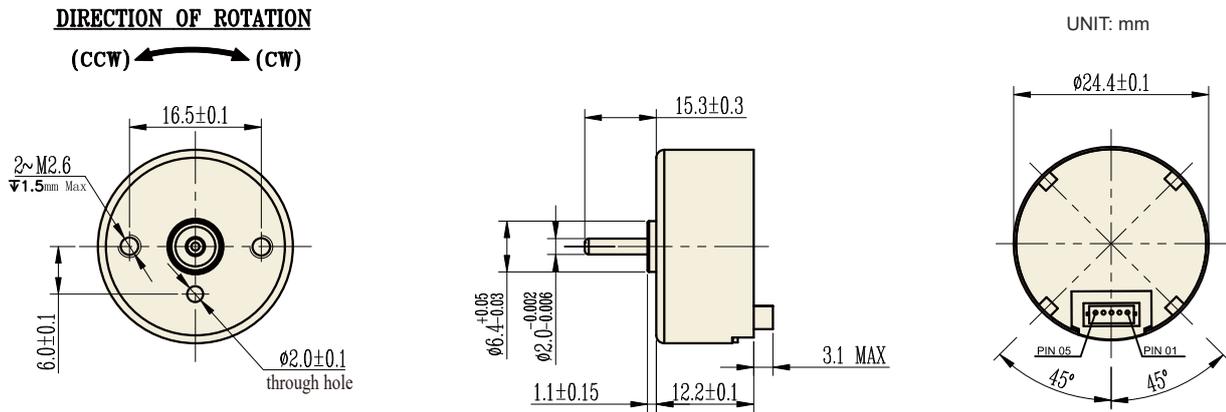
### Typical Application 典型应用

- 吸尘器 (Vacuum Cleaner)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| PIN | FUNCTION        |
|-----|-----------------|
| 01  | GND " " -       |
| 02  | Vcc " " +       |
| 03  | FG              |
| 04  | PWM (TYP 20KHz) |
| 05  | FR CCW/CW       |

## Outline Dimension 外形图

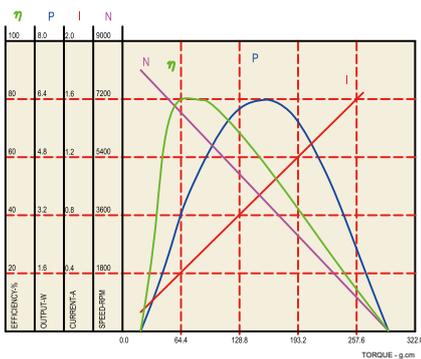


## Specifications 特性参数

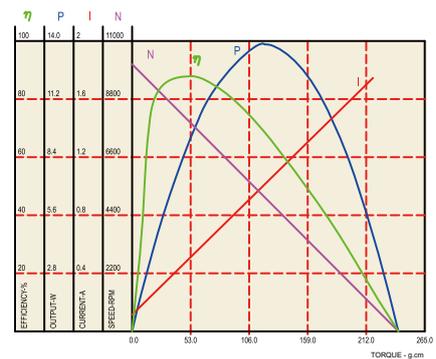
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN2412-0555 | 4V~8V           | 5 V   | 7300    | 0.08    | 5500                  | 0.5     | 35.0   | 2.5    | 130.0  | 1.5     |
| PLN2412-1270 | 8V~26V          | 12 V  | 8600    | 0.11    | 7050                  | 0.4     | 55.0   | 4.8    | 290.0  | 1.9     |
| PLN2412-2410 | 8V~26V          | 24 V  | 10500   | 0.04    | 9200                  | 0.26    | 60.0   | 6.2    | 460.0  | 1.8     |

## Performance Curves 性能曲线

PLN2412-1270 12V



PLN2412-2410 24V



# PLN2418

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 1W~6W  
WEIGHT: 30g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

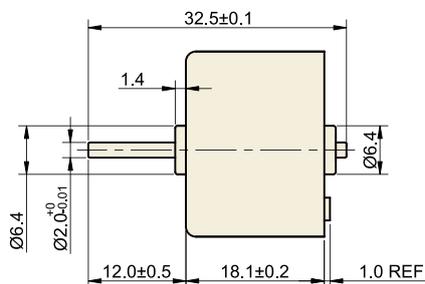
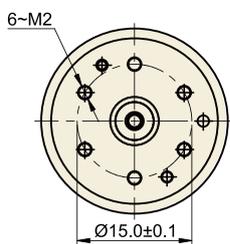
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

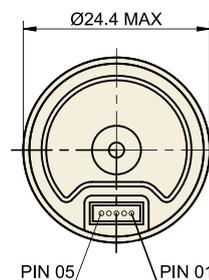
### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← → (CW)



UNIT: mm

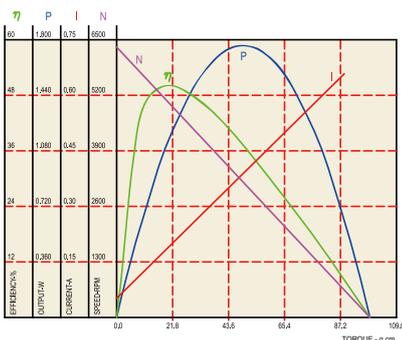


### Specifications 特性参数

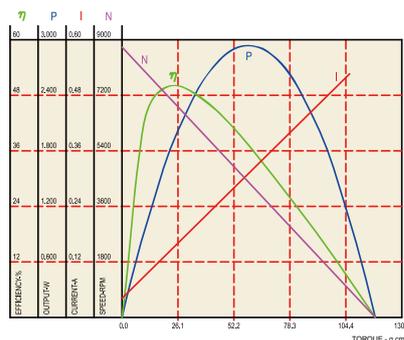
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN2418-0657 | 5V~9V           | 6 V   | 7230    | 0.14    | 5784                  | 0.543   | 29.5   | 1.751  | 147.6  | 2.157   |
| PLN2418-1250 | 8V~16V          | 12 V  | 6430    | 0.05    | 5080                  | 0.194   | 22.8   | 1.188  | 108.6  | 0.738   |
| PLN2418-2469 | 8V~26V          | 24 V  | 8900    | 0.045   | 6942                  | 0.164   | 28.7   | 2.04   | 130.2  | 0.588   |

### Performance Curves 性能曲线

PLN2418-1250 12V



PLN2418-2469 24V





# PLN2430

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 1W~8W  
WEIGHT: 50g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

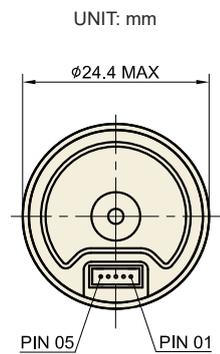
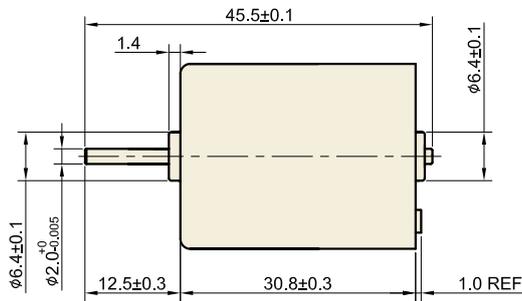
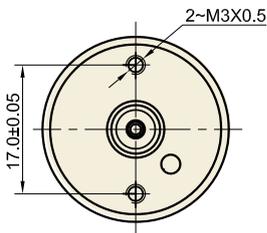
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

**DIRECTION OF ROTATION**

(CCW) ← (CW)



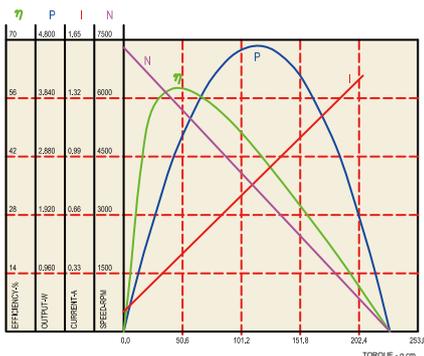
UNIT: mm

### Specifications 特性参数

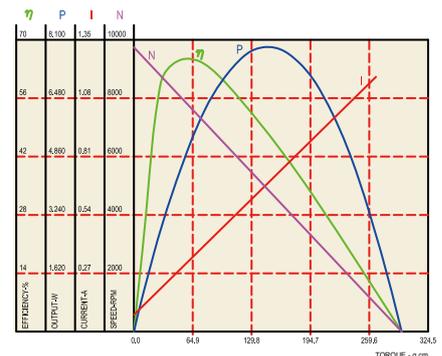
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN2430-0947 | 5V~12V          | 9 V   | 6086    | 0.13    | 4747                  | 0.442   | 48.7   | 2.371  | 221.3  | 1.546   |
| PLN2430-1258 | 8V~16V          | 12 V  | 7380    | 0.12    | 5830                  | 0.438   | 53.1   | 3.174  | 252.7  | 1.636   |
| PLN2430-2476 | 8V~26V          | 24 V  | 9737    | 0.09    | 7692                  | 0.369   | 68.1   | 5.37   | 324.1  | 1.322   |

### Performance Curves 性能曲线

PLN2430-1258 12V



PLN2430-2476 24V



# PLN2832

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 1W~15W  
WEIGHT: 60g (APPROX)

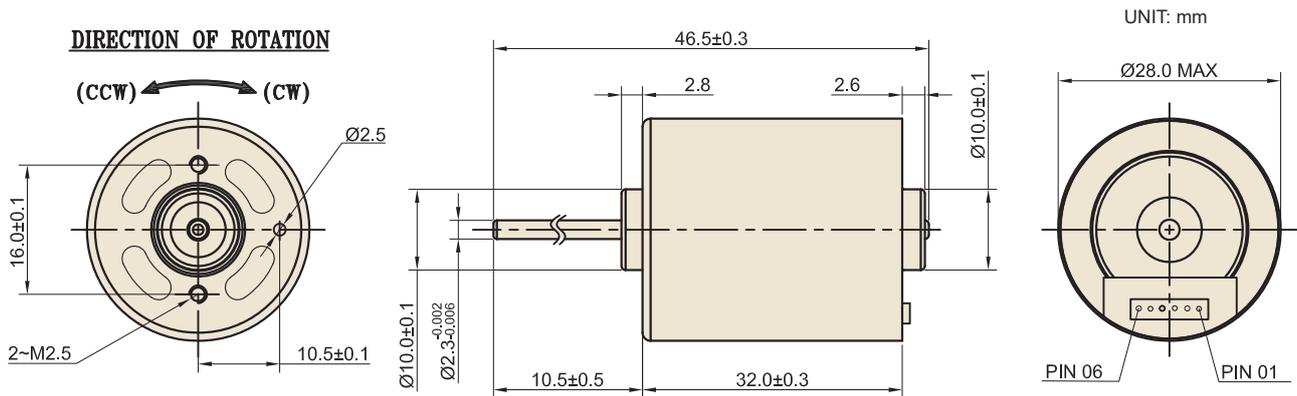
Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| PIN | COLOR  | FUNCTION  |
|-----|--------|-----------|
| 01  | RED    | VCC " " + |
| 02  | BLACK  | GND " " - |
| 03  | YELLOW | CW/CCW    |
| 04  | GREEN  | PWM       |
| 05  | BLUE   | FG        |
| 06  | WHITE  | BRAKE     |

### Outline Dimension 外形图

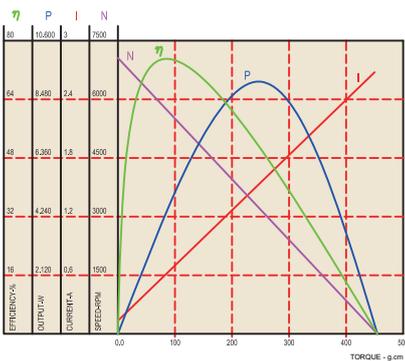


### Specifications 特性参数

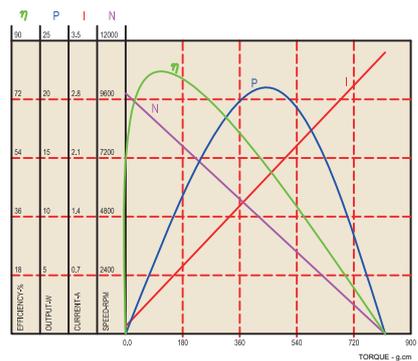
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN2832-0739 | 6V~12V          | 7.4 V | 5000    | 0.15    | 3957                  | 0.581   | 74     | 3.049  | 359    | 2.2     |
| PLN2832-1257 | 8V~16V          | 12 V  | 7000    | 0.129   | 5766                  | 0.588   | 90     | 5.33   | 498    | 2.67    |
| PLN2832-2486 | 8V~26V          | 24 V  | 10000   | 0.09    | 8600                  | 0.538   | 120    | 10.63  | 843    | 3.23    |

### Performance Curves 性能曲线

PLN2832-1257 12V

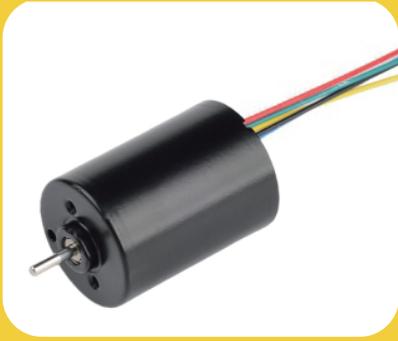


PLN2832-2486 24V



# PLN2838

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 1W~15W  
WEIGHT: 75g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

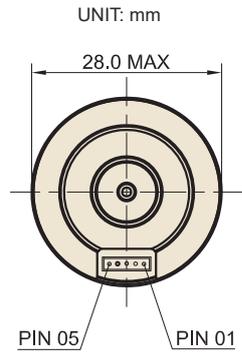
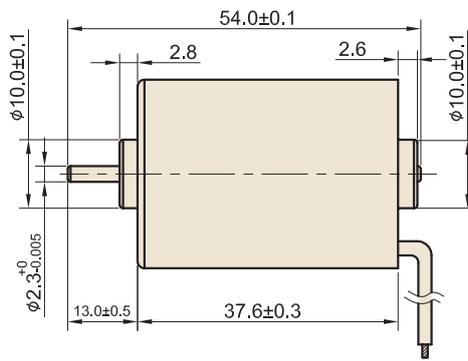
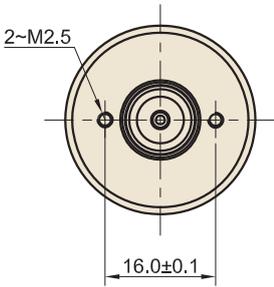
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← → (CW)

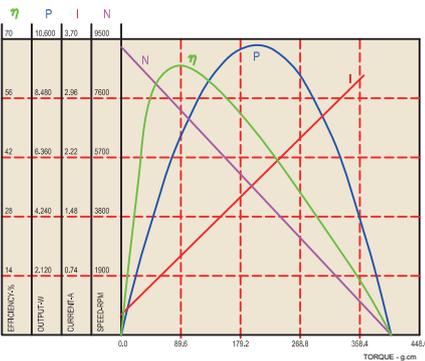


### Specifications 特性参数

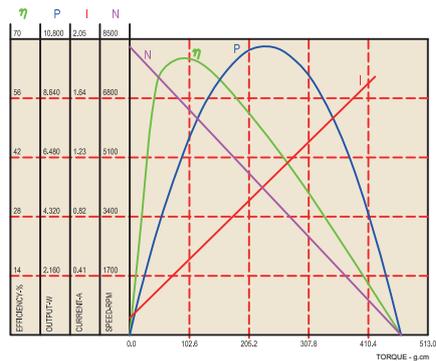
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN2838-0743 | 6V~12V          | 7.4 V | 5345      | 0.19    | 4329                  | 0.798   | 84.5   | 3.752  | 444.7  | 3.392   |
| PLN2838-1273 | 8V~16V          | 12 V  | 9220      | 0.23    | 7376                  | 0.918   | 89.5   | 6.772  | 447.6  | 3.689   |
| PLN2838-2468 | 8V~26V          | 24 V  | 8200      | 0.08    | 6806                  | 0.411   | 87.1   | 6.082  | 512.5  | 2.028   |

### Performance Curves 性能曲线

PLN2838-1273 12V



PLN2838-2468 24V



# PLN2847

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 5W~25W  
WEIGHT: 115g (APPROX)

Typical Application 典型应用

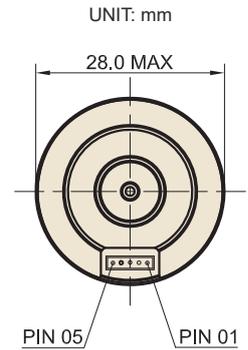
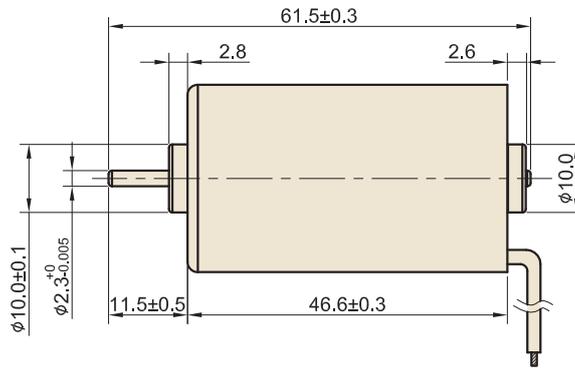
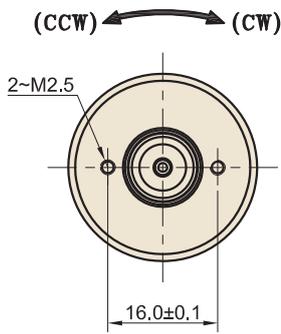
- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

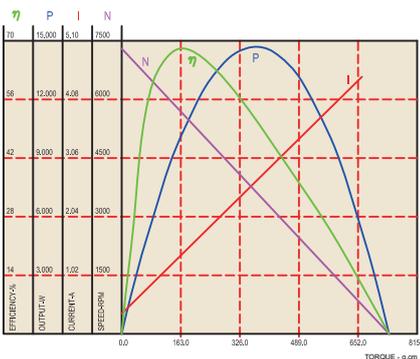


### Specifications 特性参数

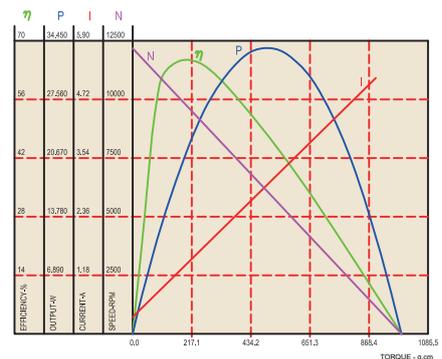
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN2847-1260 | 6V~12V          | 12 V  | 7170    | 0.17    | 6095                  | 0.903   | 122.2  | 7.64   | 814.8  | 5.059   |
| PLN2847-1891 | 8V~16V          | 18 V  | 10833   | 0.20    | 9100                  | 1.087   | 147.9  | 13.81  | 924.3  | 5.746   |
| PLN2847-2410 | 8V~26V          | 24 V  | 12370   | 0.21    | 10391                 | 1.113   | 173.6  | 18.50  | 1085.1 | 5.852   |

### Performance Curves 性能曲线

PLN2847-1260 12V



PLN2847-2410 24V





# PLN3220

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 5W~25W  
WEIGHT: 55g (APPROX)

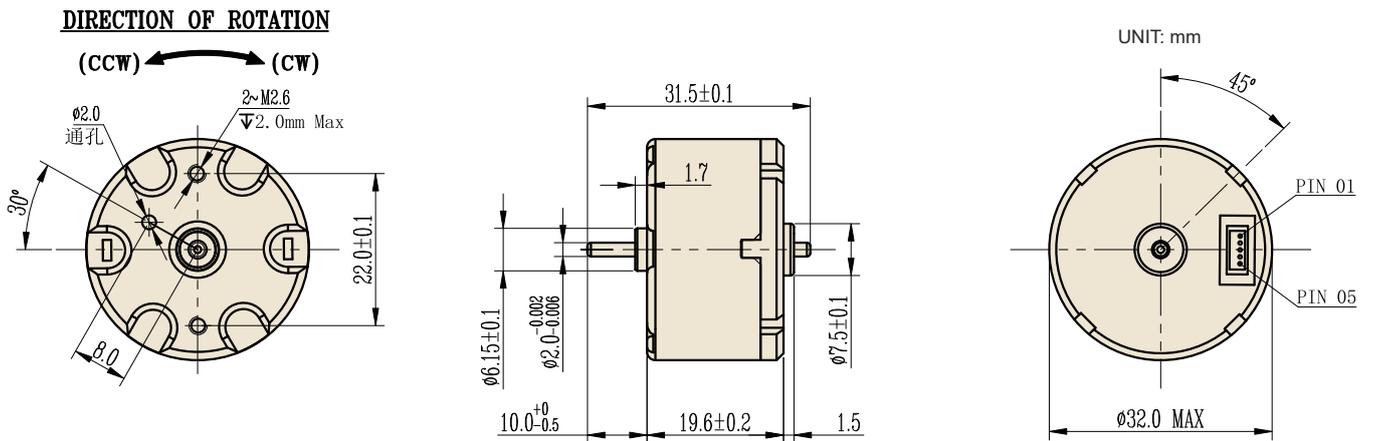
### Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 筋膜枪 (Massage Gun)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| PIN | FUNCTION        |
|-----|-----------------|
| 01  | Vcc " + "       |
| 02  | CCW/CW          |
| 03  | GND " - "       |
| 04  | PWM (TYP 20KHz) |
| 05  | FG              |

## Outline Dimension 外形图

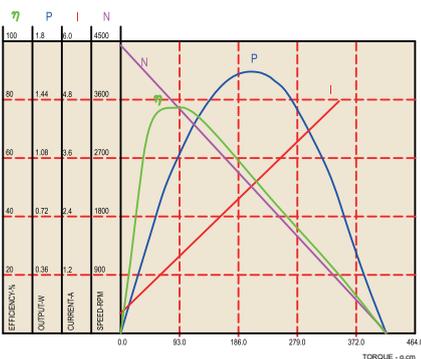


## Specifications 特性参数

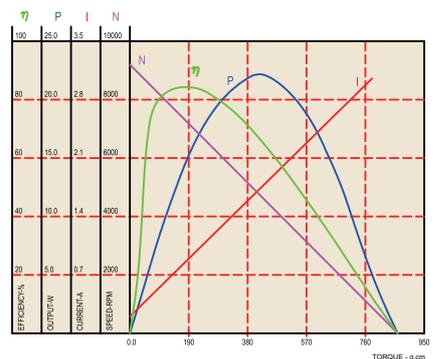
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN3220-0546 | 4.5V~9V         | 5 V   | 5200    | 0.26    | 4600                  | 0.6     | 40.0   | 3.0    | 450.0  | 2.0     |
| PLN3220-1238 | 8V~18V          | 12 V  | 4400    | 0.07    | 3800                  | 0.27    | 60.0   | 3.5    | 410.0  | 1.4     |
| PLN3220-2477 | 8V~26V          | 24 V  | 9000    | 0.37    | 7700                  | 0.45    | 110.0  | 11.0   | 879.0  | 3.0     |

## Performance Curves 性能曲线

PLN3220-1238 12V



PLN3220-2477 24V



# PLN3626

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 2W~15W  
WEIGHT: 95g (APPROX)

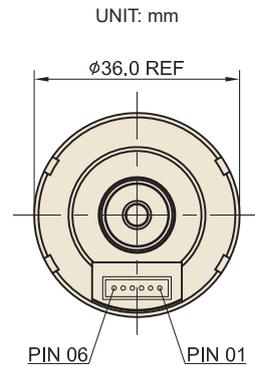
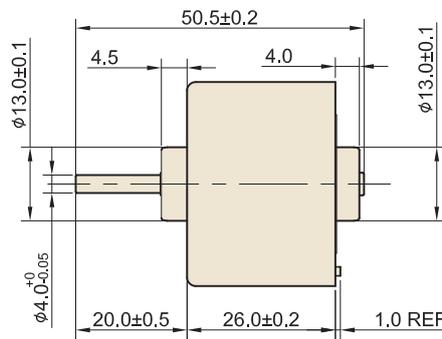
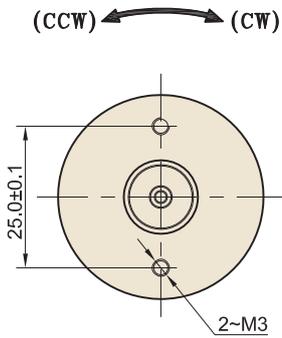
- Typical Application 典型应用
- 电动工具 (Power Tools)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 商业设备 (Business Equipment)
  - 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

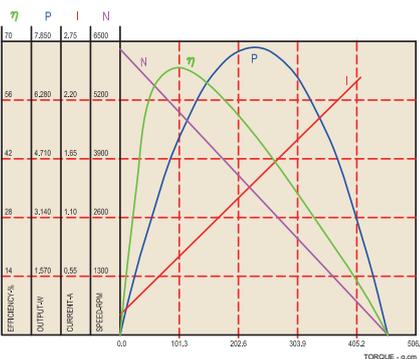


### Specifications 特性参数

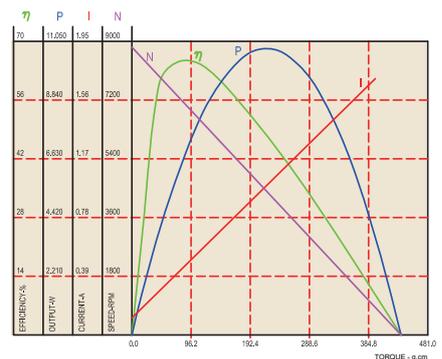
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN3626-1248 | 8V~16V          | 12 V  | 6027      | 0.15    | 4882                  | 0.638   | 96.1   | 4.814  | 506    | 2.721   |
| PLN3626-1860 | 8V~26V          | 18 V  | 7435      | 0.124   | 6022                  | 0.504   | 91.0   | 5.621  | 478.9  | 2.121   |
| PLN3626-2472 | 8V~26V          | 24 V  | 8927      | 0.111   | 7231                  | 0.456   | 91.3   | 6.774  | 480.8  | 1.926   |

### Performance Curves 性能曲线

PLN3626-1248 12V



PLN3626-2472 24V





# PLN3630

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 2W~18W  
WEIGHT: 110g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

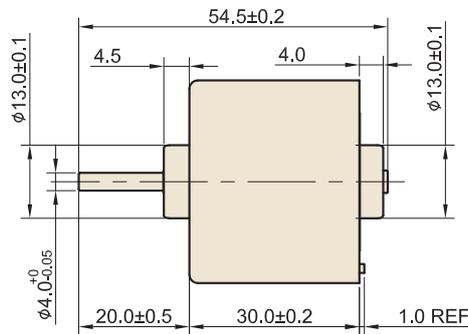
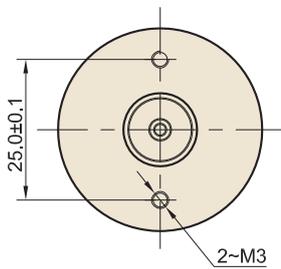
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

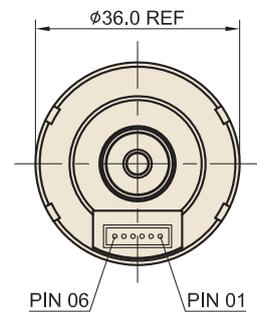
### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← → (CW)



UNIT: mm

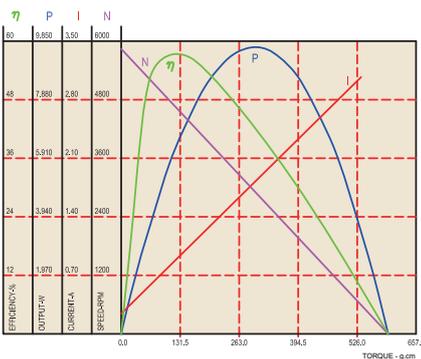


### Specifications 特性参数

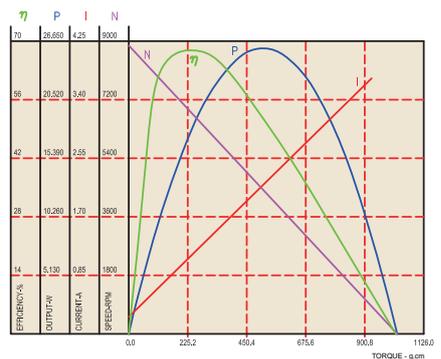
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN3630-1248 | 8V~16V          | 12 V  | 5817      | 0.249   | 4882                  | 0.638   | 138.1  | 6.507  | 657.4  | 3.456   |
| PLN3630-1861 | 8V~26V          | 18 V  | 7526      | 0.209   | 6171                  | 0.957   | 183.0  | 11.584 | 1016.8 | 4.366   |
| PLN3630-2473 | 8V~26V          | 24 V  | 8872      | 0.184   | 7364                  | 0.872   | 191.3  | 14.451 | 1125.6 | 4.234   |

### Performance Curves 性能曲线

PLN3630-1248 12V



PLN3630-2473 24V





# PLN3640

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 5W~30W  
WEIGHT: 150g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

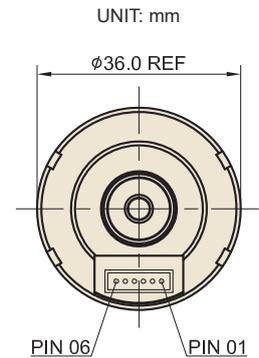
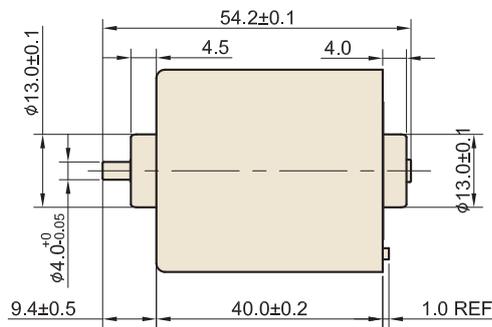
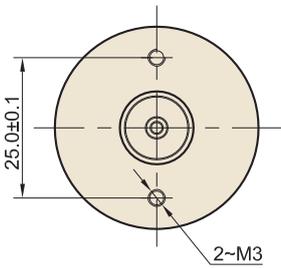
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← → (CW)

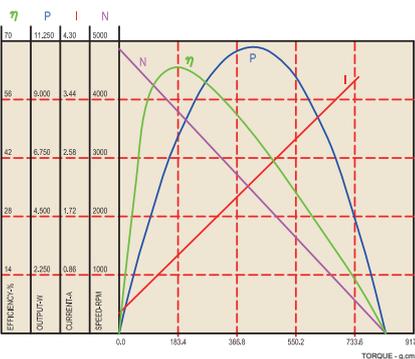


### Specifications 特性参数

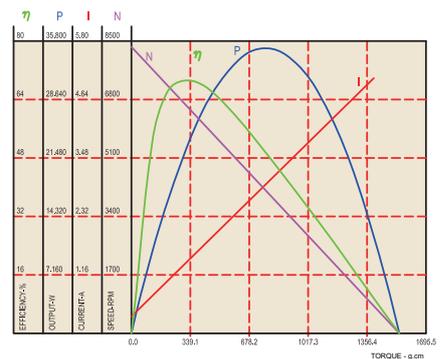
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN3640-1240 | 8V~16V          | 12 V  | 4769    | 0.16    | 4006                  | 0.818   | 146.7  | 6.028  | 917.0  | 4.271   |
| PLN3640-1860 | 8V~26V          | 18 V  | 7068    | 0.19    | 6008                  | 1.071   | 211.9  | 13.055 | 1412.4 | 6.066   |
| PLN3640-2468 | 8V~26V          | 24 V  | 8235    | 0.247   | 6835                  | 1.186   | 288.2  | 20.205 | 1695.4 | 5.769   |

### Performance Curves 性能曲线

PLN3640-1240 12V



PLN3640-2468 24V



# PLN3650

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 5W~40W  
WEIGHT: 180g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

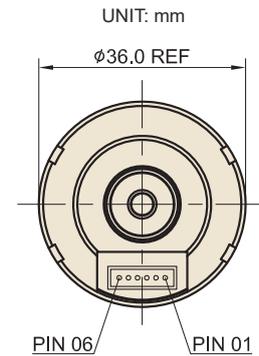
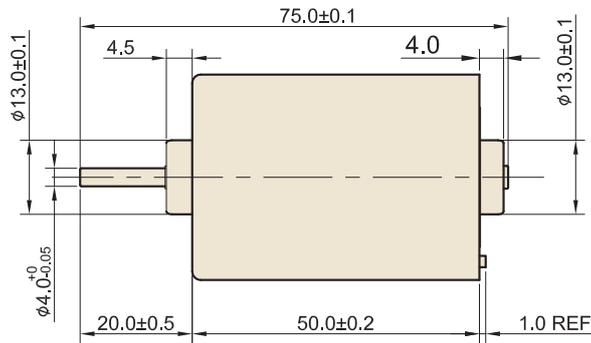
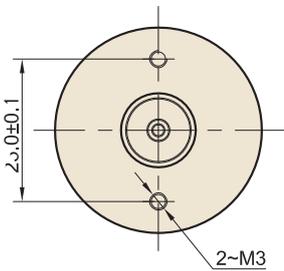
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← → (CW)

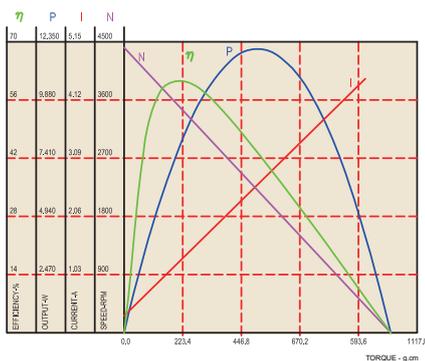


### Specifications 特性参数

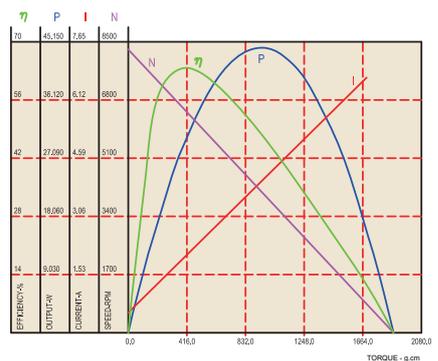
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN3650-1234 | 8V~16V          | 12 V  | 4304      | 0.28    | 3486                  | 1.197   | 211.2  | 7.586  | 1116.6 | 5.104   |
| PLN3650-1855 | 8V~26V          | 18 V  | 6693      | 0.3     | 5555                  | 1.552   | 305.9  | 17.43  | 1799.5 | 7.537   |
| PLN3650-2468 | 8V~26V          | 24 V  | 8458      | 0.4     | 6851                  | 1.794   | 395.2  | 27.77  | 2079.8 | 7.628   |

### Performance Curves 性能曲线

PLN3650-1234 12V



PLN3650-2468 24V



# PLN3657

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 5W~50W  
WEIGHT: 220g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

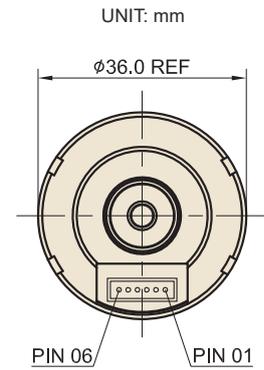
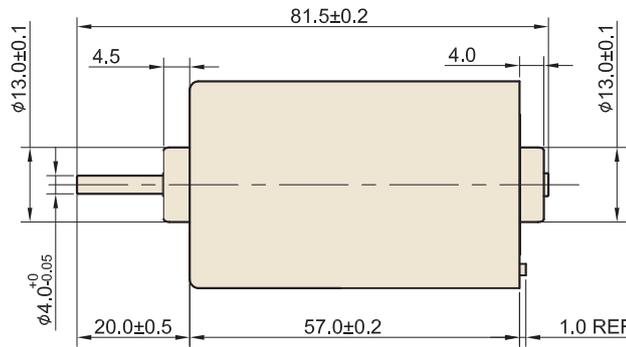
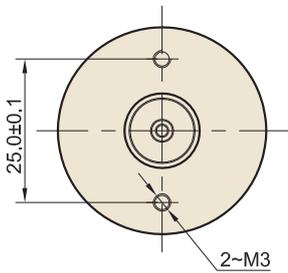
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← (CW)

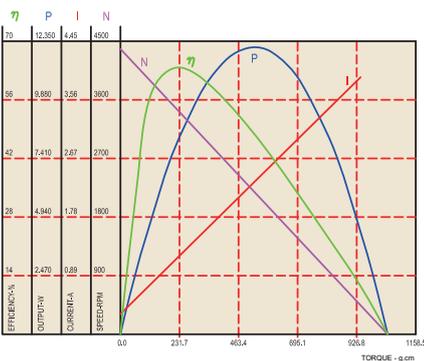


### Specifications 特性参数

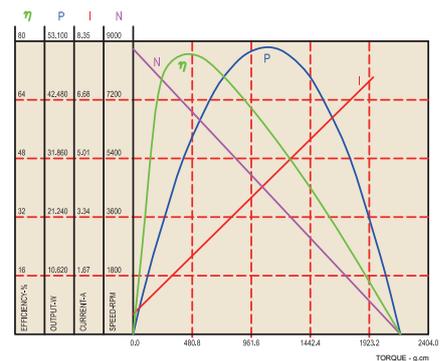
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN3657-1234 | 8V~16V          | 12 V  | 4154      | 0.19    | 3448                  | 0.904   | 196.9  | 6.963  | 1158.3 | 4.405   |
| PLN3657-1854 | 8V~26V          | 18 V  | 6382      | 0.22    | 5425                  | 1.174   | 267.0  | 14.85  | 1779.7 | 6.604   |
| PLN3657-2472 | 8V~26V          | 24 V  | 8610      | 0.28    | 7230                  | 1.572   | 384.6  | 28.53  | 2403.9 | 8.342   |

### Performance Curves 性能曲线

PLN3657-1234 12V



PLN3657-2472 24V





# PLN4235

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 5W~35W  
WEIGHT: 160g (APPROX)

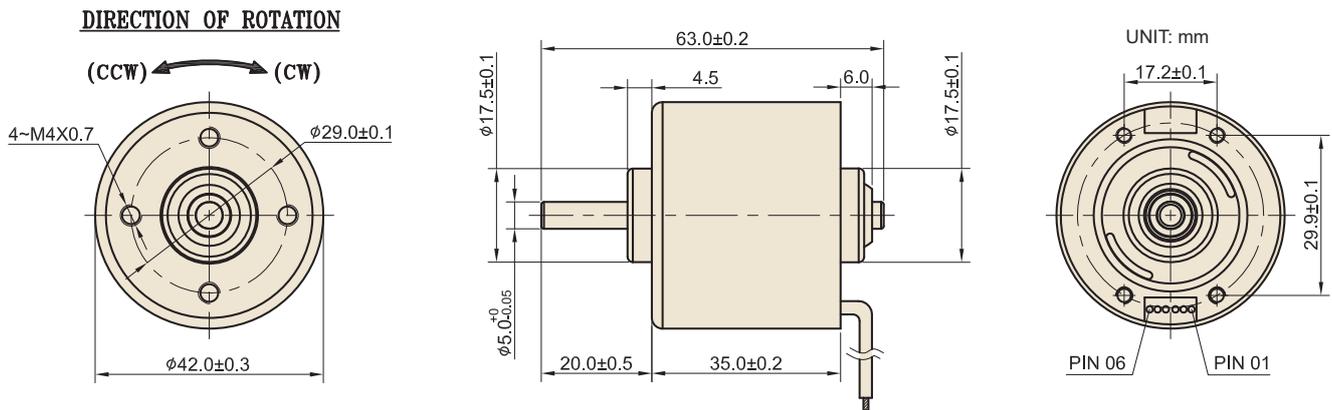
Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

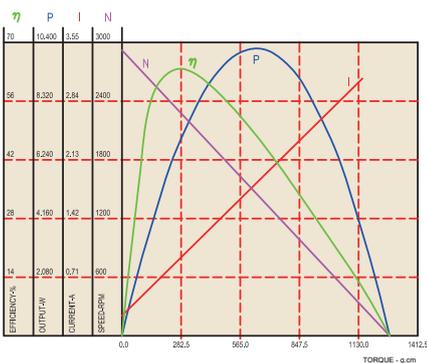


### Specifications 特性参数

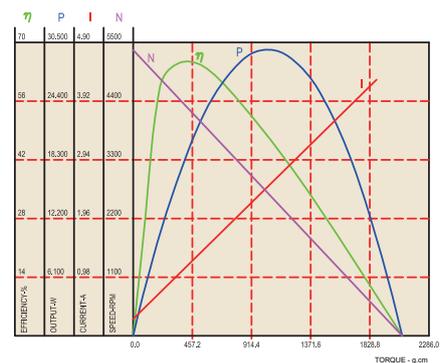
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN4235-1222 | 8V~16V          | 12 V  | 2860      | 0.21    | 2288                  | 0.874   | 282.5  | 6.629  | 1412.3 | 3.529   |
| PLN4235-1835 | 8V~26V          | 18 V  | 4290      | 0.25    | 3518                  | 1.127   | 381.3  | 13.76  | 2118.5 | 5.123   |
| PLN4235-2441 | 8V~26V          | 24 V  | 5200      | 0.30    | 4160                  | 1.214   | 457.1  | 19.51  | 2285.7 | 4.871   |

### Performance Curves 性能曲线

PLN4235-1222 12V



PLN4235-2441 24V





# PLN4250

## 微型无刷直流电机 Micro Brushless DC Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 5W~35W  
WEIGHT: 160g (APPROX)

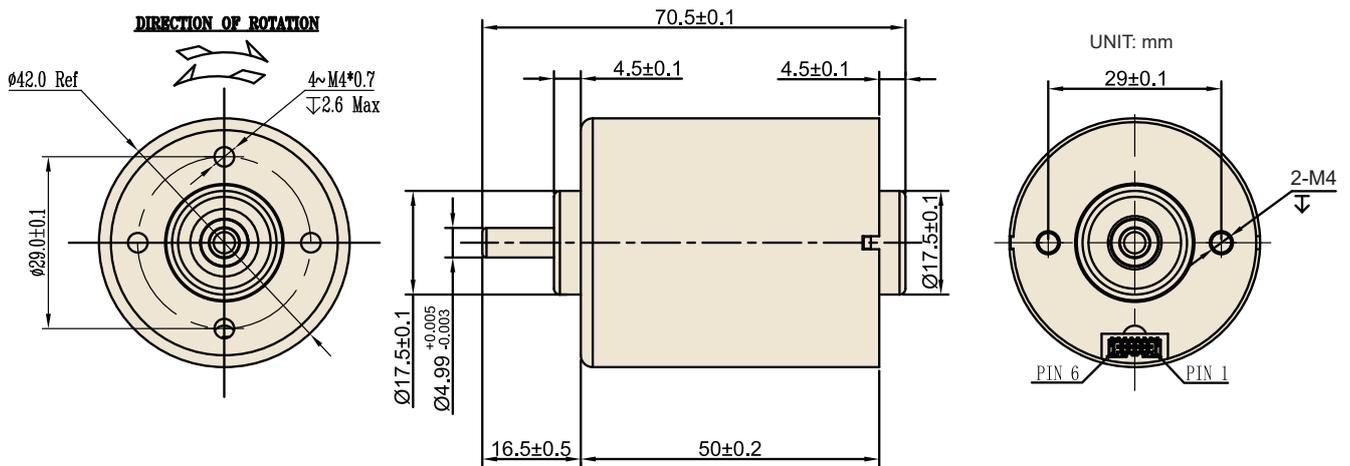
### Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

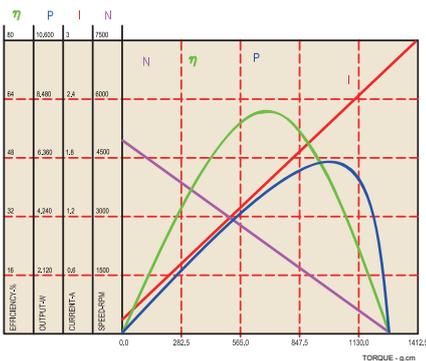


## Specifications 特性参数

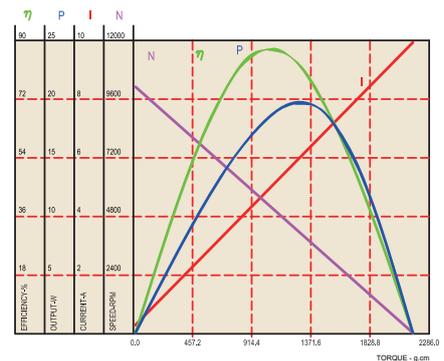
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN4250-1233 | 8V~16V          | 12 V  | 4600    | 0.3     | 3355                  | 1.5     | 400    | 14.05  | 1400   | 4.63    |
| PLN4250-2476 | 8V~26V          | 24 V  | 9000    | 0.3     | 7667                  | 1.8     | 500    | 40.14  | 2900   | 9.13    |

## Performance Curves 性能曲线

PLN4250-1233 12V



PLN4250-2476 24V





# PLN4260

## 微型无刷直流电机 Micro Brushless DC Motor

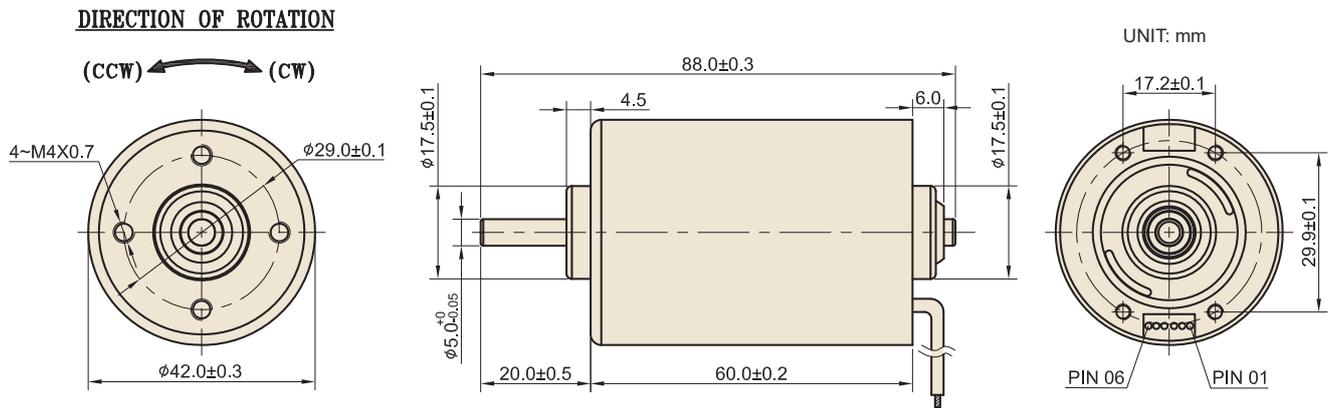
INNER ROTOR SERIES  
OUTPUT: APPROX 10W~75W  
WEIGHT: 295g (APPROX)

- Typical Application 典型应用
- 电动工具 (Power Tools)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 商业设备 (Business Equipment)
  - 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

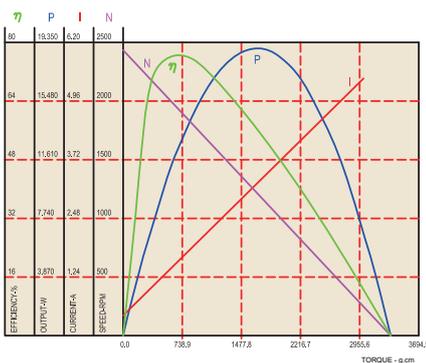


### Specifications 特性参数

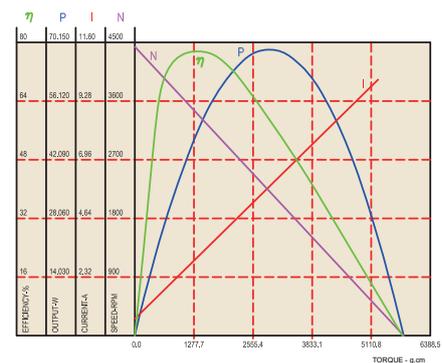
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN4260-1217 | 8V~16V          | 12 V  | 2038      | 0.15    | 1773                  | 0.934   | 480.3  | 8.734  | 3694.3 | 6.184   |
| PLN4260-1832 | 8V~26V          | 18 V  | 3690      | 0.20    | 3284                  | 1.564   | 654.7  | 22.05  | 5951.6 | 12.60   |
| PLN4260-2437 | 8V~26V          | 24 V  | 4280      | 0.20    | 3766                  | 1.567   | 766.6  | 29.62  | 6388.1 | 11.59   |

### Performance Curves 性能曲线

PLN4260-1217 12V



PLN4260-1832 24V



# PLN4275

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 10W~90W  
WEIGHT: 340g (APPROX)

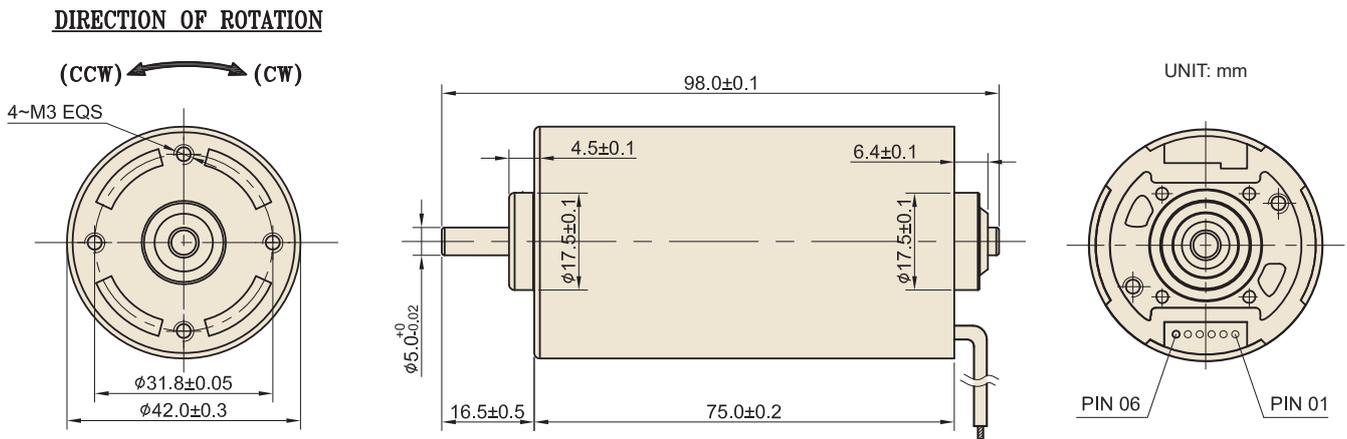
### Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

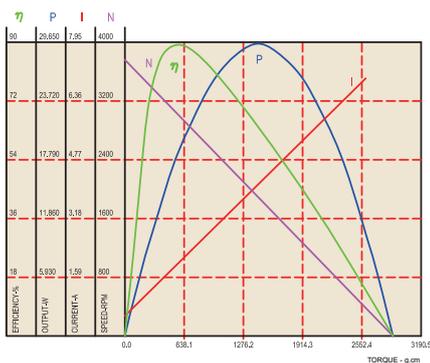


## Specifications 特性参数

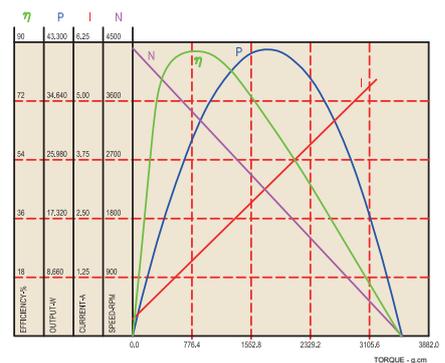
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TOGQUE | OUTPUT | TOGQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN4275-1230 | 8V~16V          | 12 V  | 3620      | 0.25    | 3045                  | 1.324   | 447.5  | 13.98  | 2817.9 | 7.011   |
| PLN4275-1846 | 8V~26V          | 18 V  | 5429      | 0.30    | 4622                  | 1.721   | 579.8  | 27.49  | 3905.8 | 9.869   |
| PLN4275-2437 | 8V~26V          | 24 V  | 4350      | 0.19    | 3703                  | 1.089   | 579.7  | 22.02  | 3902.4 | 6.237   |

## Performance Curves 性能曲线

PLN4275-1230 12V



PLN4275-2437 24V



# PLN5265

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 10W~100W  
WEIGHT: 590g (APPROX)

### Typical Application 典型应用

- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

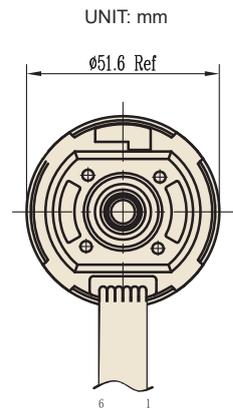
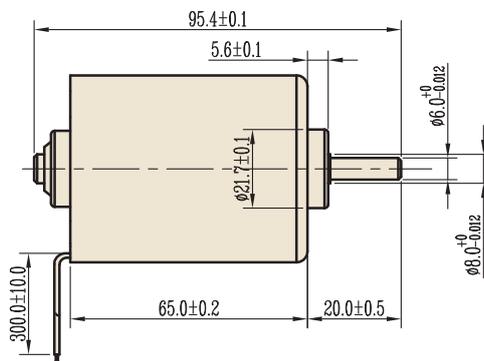
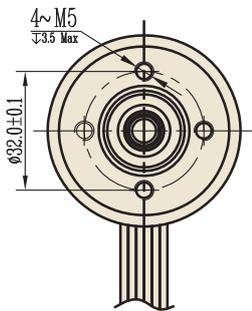
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

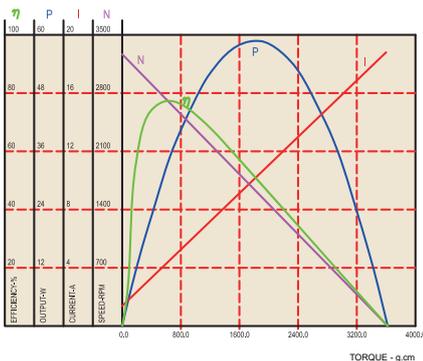


## Specifications 特性参数

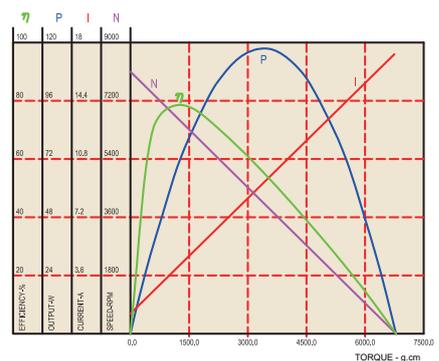
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN5265-1222 | 8V~16V          | 12V   | 2980      | 0.65    | 2270                  | 2.1     | 710    | 16.6   | 2980   | 6.6     |
| PLN5265-1835 | 8V~26V          | 18V   | 4480      | 0.67    | 3560                  | 2.6     | 918    | 34     | 4450   | 9.9     |
| PLN5265-2465 | 8V~26V          | 24V   | 7970      | 0.8     | 6510                  | 3.95    | 1090   | 73     | 5950   | 17.5    |

## Performance Curves 性能曲线

PLN5265-1222 12V



PLN5265-2465 24V



# PLN5285

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 20W~130W  
WEIGHT: 700g (APPROX)

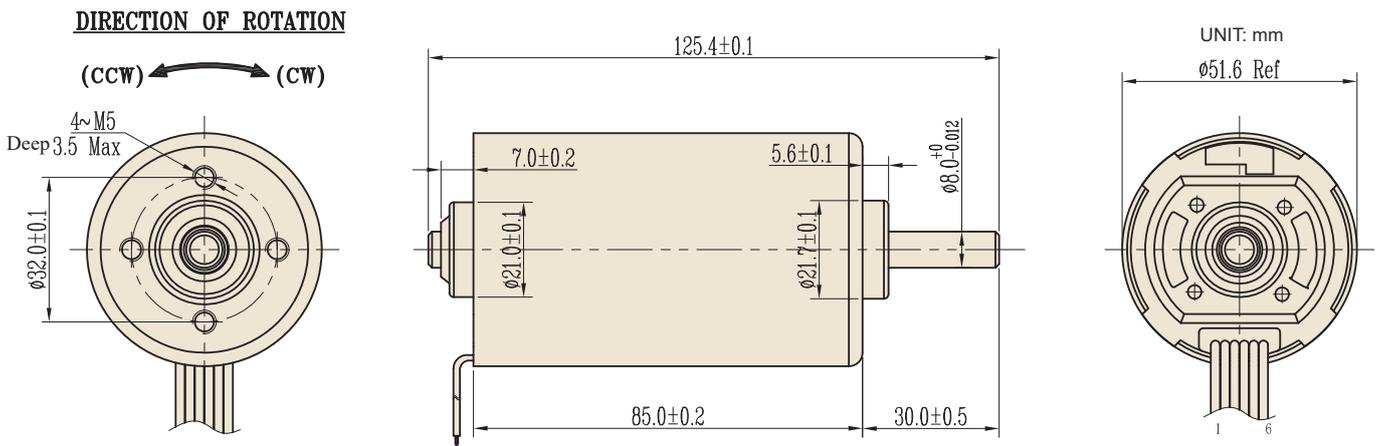
Typical Application 典型应用

- 电工工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

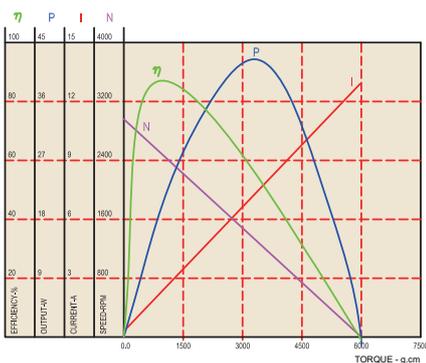


### Specifications 特性参数

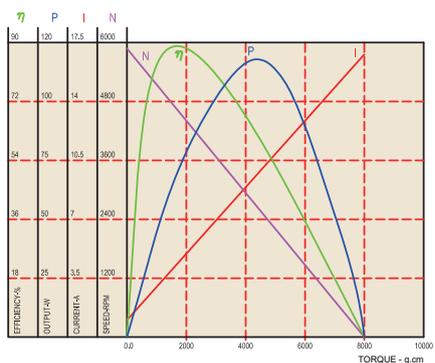
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TOGQUE | OUTPUT | TOGQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN5285-1221 | 8V~16V          | 12 V  | 2920      | 0.28    | 2190                  | 3.4     | 1500   | 34     | 6040   | 12.8    |
| PLN5285-1831 | 8V~26V          | 18 V  | 4400      | 0.33    | 3150                  | 4.4     | 2000   | 65     | 7150   | 15      |
| PLN5285-2443 | 8V~26V          | 24 V  | 5800      | 0.39    | 4350                  | 4.5     | 2000   | 90     | 7900   | 16.6    |

### Performance Curves 性能曲线

PLN5285-1221 12V



PLN5285-2443 24V



# PLN6050

## 微型无刷直流电机 Micro Brushless DC Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 10W~100W  
WEIGHT: 710g (APPROX)

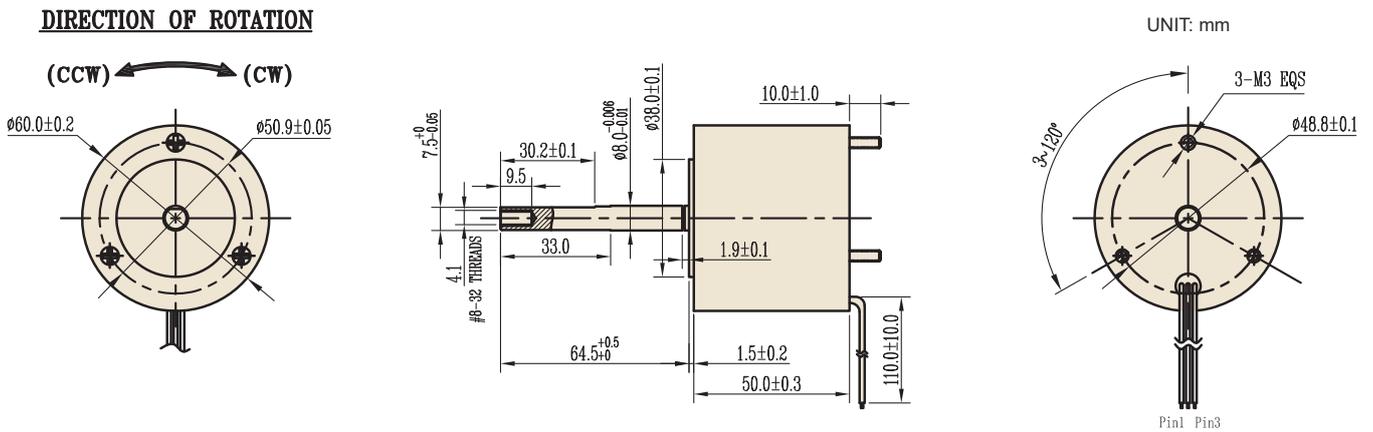
Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | U (Red wire)    |
| 2   | V (Black wire)  |
| 3   | W (Green wire)  |

### Outline Dimension 外形图

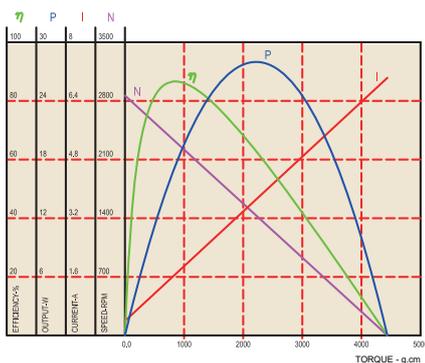


### Specifications 特性参数

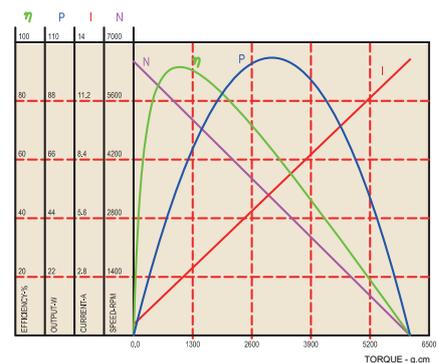
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN6050-1239 | 6V~12V          | 12 V  | 4907    | 0.80    | 3964                  | 3.34    | 853.2  | 34.75  | 4440.7 | 14.06   |
| PLN6050-1850 | 8V~16V          | 18 V  | 6133    | 0.66    | 5062                  | 3.13    | 980.4  | 50.98  | 5613.9 | 14.81   |
| PLN6050-2454 | 8V~26V          | 24 V  | 6540    | 0.53    | 5453                  | 2.63    | 1033.7 | 57.84  | 6200.9 | 13.18   |

### Performance Curves 性能曲线

PLN6050-1239 12V



PLN6050-2454 24V





# Micro Brushless DC Motor

## OUTRUNNER

PrimoPal outrunner brushless DC motors have a much higher rotor moment of inertia . Brushless motors of the same series and same form factor will exhibit different KV characteristics depending on the number of turns of the winding.



# PLE2413

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 5W~30 W  
WEIGHT: 35g (APPROX)

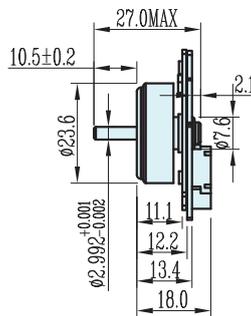
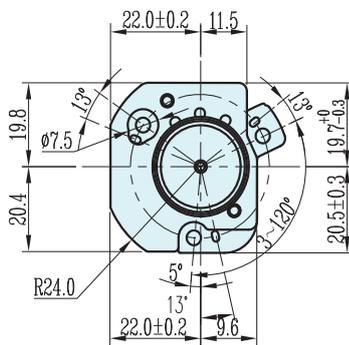
- Typical Application 典型应用
- 吸尘器 (Vacuum Cleaner)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 商业设备 (Business Equipment)
  - 医疗器械 (Medical Device)

Motor Terminals 电机端口

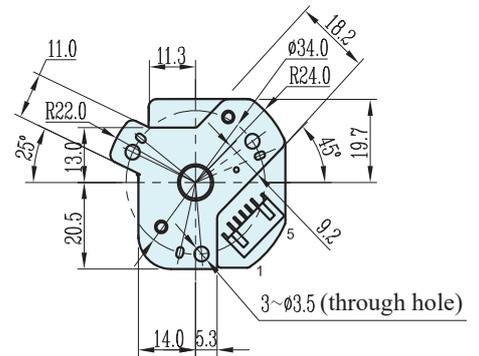
| PIN | FUNCTION        |
|-----|-----------------|
| 01  | ST/SP           |
| 02  | FG              |
| 03  | PWM (TYP 20KHz) |
| 04  | GND " " -       |
| 05  | Vcc " " +       |

### Outline Dimension 外形图

DIRECTION OF ROTATION



UNIT: mm

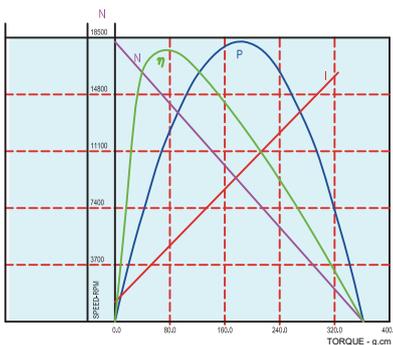


### Specifications 特性参数

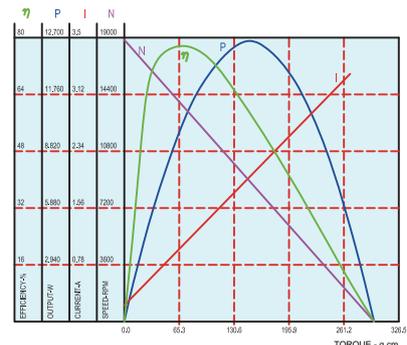
| MODEL        | VOLTAGE         |        | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2413-1215 | 8V~16V          | 12 V   | 18220   | 0.23    | 15111                 | 1.32    | 75.9   | 12.75  | 350.5  | 3.5     |
| PLE2413-1415 | 8V~26V          | 14.4 V | 20457   | 0.41    | 15497                 | 1.41    | 87.6   | 13.95  | 361.2  | 3.5     |
| PLE2413-2414 | 8V~26V          | 24 V   | 18747   | 0.26    | 14350                 | 0.768   | 81.2   | 11.8   | 326.5  | 3.3     |

### Performance Curves 性能曲线

PLE2413-1215 12V



PLE2413-2414 24V



# PLE2717

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 5W~35W  
WEIGHT: 50g (APPROX)

### Typical Application 典型应用

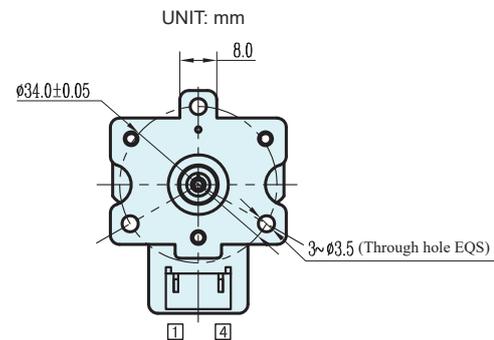
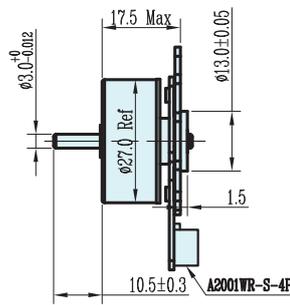
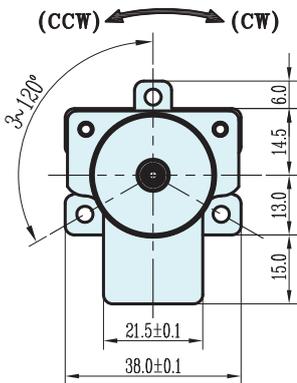
- 吸尘器 (Vacuum Cleaner)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | PWM             |
| 2   | FG              |
| 3   | VCC             |
| 4   | GND             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

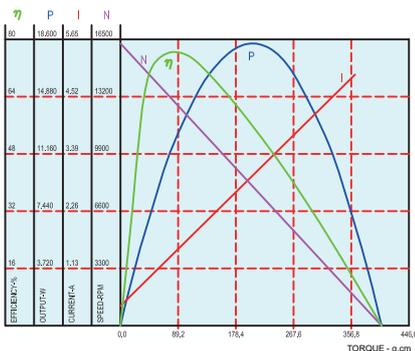


## Specifications 特性参数

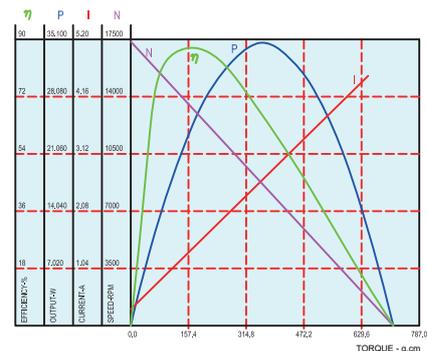
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2717-1213 | 8V~16V          | 12 V  | 16249   | 0.31    | 13332                 | 1.26    | 84.7   | 11.5   | 445.7  | 5.6     |
| PLE2717-1814 | 8V~26V          | 18 V  | 17265   | 0.22    | 14330                 | 1.13    | 113.8  | 16.7   | 668.5  | 5.6     |
| PLE2717-2414 | 8V~26V          | 24 V  | 17389   | 0.16    | 14780                 | 1.18    | 118.0  | 17.8   | 786.6  | 5.2     |

## Performance Curves 性能曲线

PLE2717-1213 12V



PLE2717-2414 24V





# PLE2719

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~180W  
WEIGHT: 55g (APPROX)

### Typical Application 典型应用

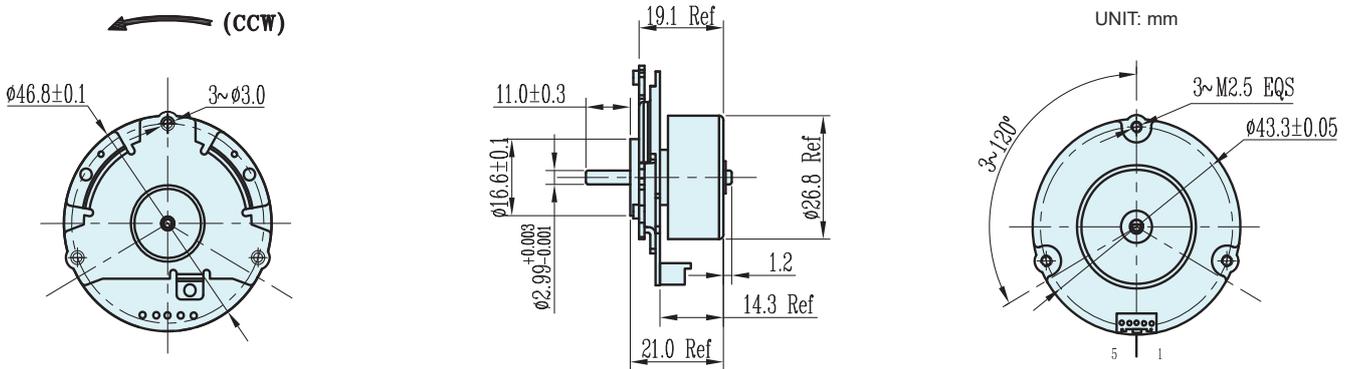
- 吸尘器 (Vacuum Cleaner)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| PIN | FUNCTION        |
|-----|-----------------|
| 01  | ST/SP           |
| 02  | FG              |
| 03  | PWM (TYP 20KHz) |
| 04  | GND "-"         |
| 05  | Vcc "+"         |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

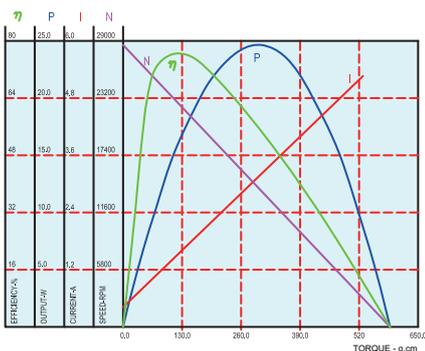


## Specifications 特性参数

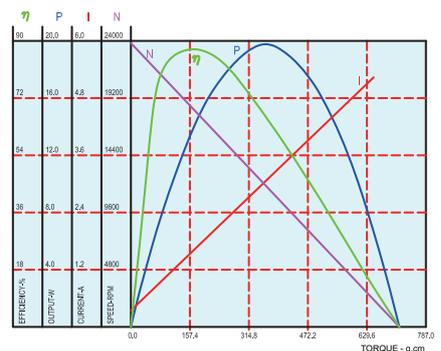
| MODEL        | VOLTAGE         |        | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2719-1423 | 8V~18V          | 14.4 V | 28280   | 0.39    | 23550                 | 2.19    | 99.0   | 24.2   | 596.7  | 5.6     |
| PLE2719-1823 | 8V~26V          | 18 V   | 27440   | 0.31    | 23420                 | 1.805   | 108.1  | 26.1   | 739.5  | 5.2     |
| PLE2719-2419 | 8V~26V          | 24 V   | 23395   | 0.18    | 19023                 | 0.91    | 91.8   | 17.9   | 490.6  | 5.0     |

## Performance Curves 性能曲线

PLE2719-1423 14.4V



PLE2719-2419 24V



# PLE2725

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 10W~100W  
WEIGHT: 55g (APPROX)

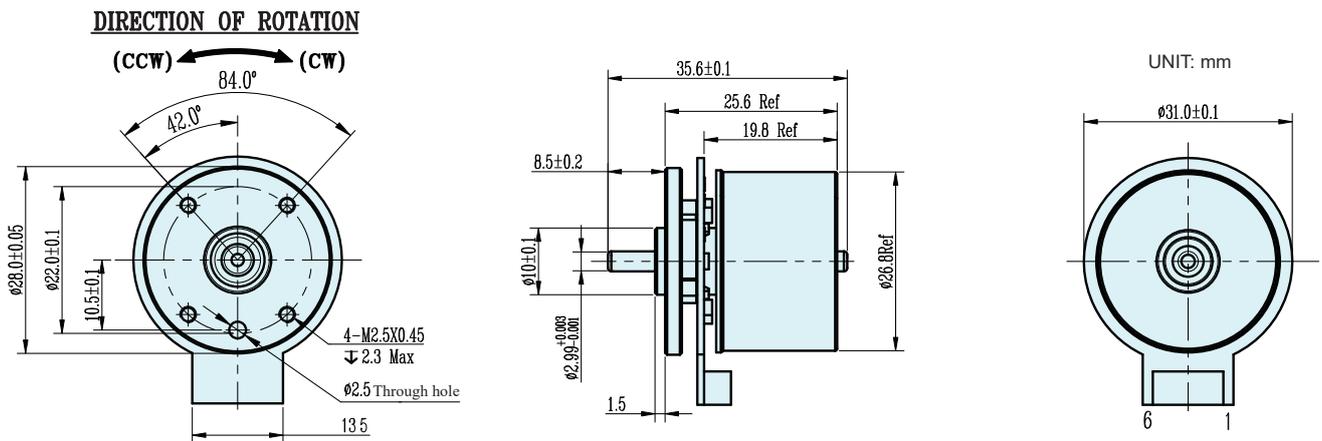
### Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| PIN | FUNCTION        |
|-----|-----------------|
| 01  | Vcc " " +       |
| 02  | CCW/CW          |
| 03  | GND " - "       |
| 04  | PWM (TYP 20KHz) |
| 05  | FG              |
| 06  | BRAKE           |

## Outline Dimension 外形图

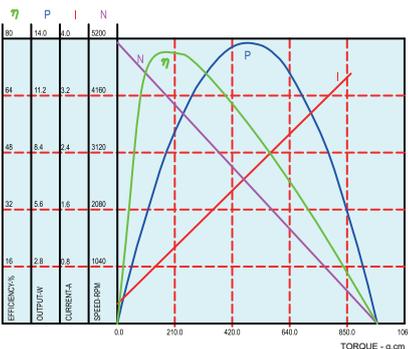


## Specifications 特性参数

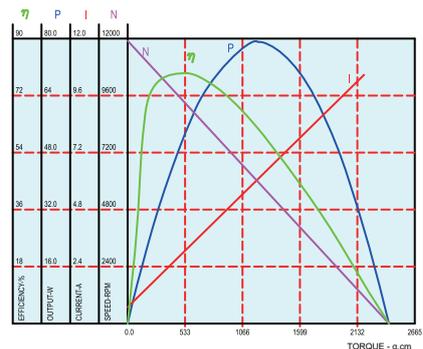
| MODEL        | VOLTAGE         |        | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2725-1441 | 8V~18V          | 14.4 V | 5000      | 0.26    | 4100                  | 0.8     | 200.0  | 12.0   | 1000.0 | 3.1     |
| PLE2725-1880 | 8V~26V          | 18 V   | 9000      | 0.37    | 8050                  | 1.5     | 280.0  | 27.0   | 1800.0 | 7.2     |
| PLE2725-2410 | 8V~26V          | 24 V   | 12000     | 0.37    | 10500                 | 1.6     | 300.0  | 38.0   | 2400.0 | 9.0     |

## Performance Curves 性能曲线

PLE2725-1441 14.4V



PLE2725-2410 24V



# PLE2827

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 5W~20W  
WEIGHT: 75g (APPROX)

### Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

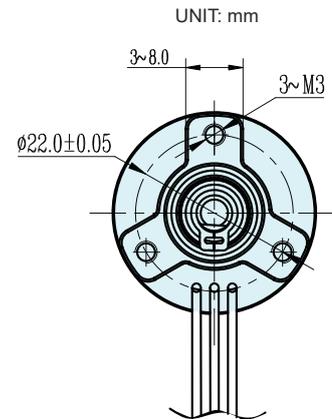
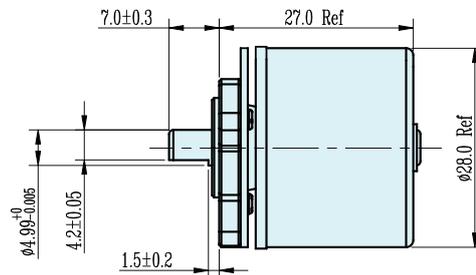
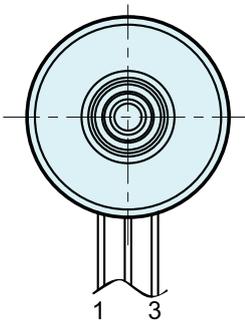
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | W               |
| 2   | V               |
| 3   | U               |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

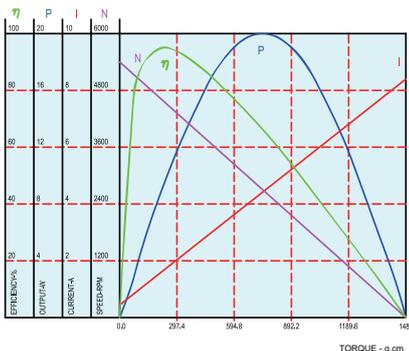


## Specifications 特性参数

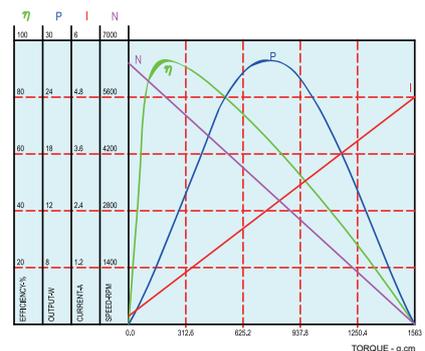
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2827-0744 | 5V~12V          | 7.4V  | 5220      | 0.27    | 4400                  | 1.5     | 227    | 10     | 1487   | 8.3     |
| PLE2827-1249 | 8V~16V          | 12.0V | 5800      | 0.18    | 4900                  | 1.0     | 228    | 11     | 1492   | 5.7     |
| PLE2827-1655 | 8V~26.4V        | 16.8V | 6500      | 0.15    | 5500                  | 0.8     | 258    | 14     | 1563   | 4.8     |

## Performance Curves 性能曲线

PLE2827-0744 7.4V



PLE2827-1655 16.8V





# PLE2830

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 5W~25W  
WEIGHT: 90g (APPROX)

### Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

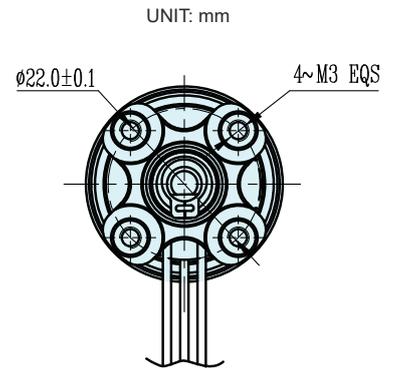
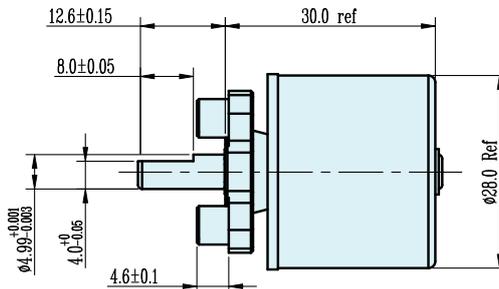
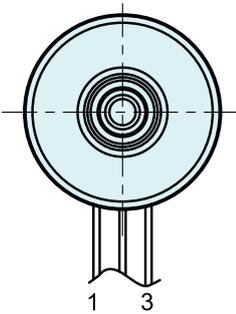
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | W               |
| 2   | V               |
| 3   | U               |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

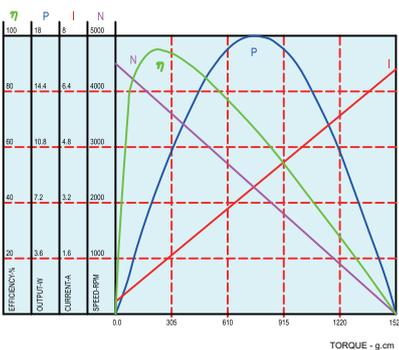


## Specifications 特性参数

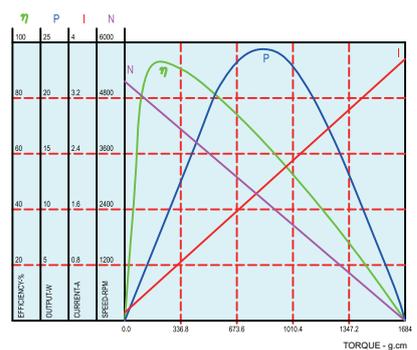
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2830-0737 | 5V~12V          | 7.4V  | 4400    | 0.27    | 3700                  | 1.4     | 240    | 9      | 1526   | 7.2     |
| PLE2830-1237 | 8V~16V          | 12.0V | 4400    | 0.17    | 3700                  | 0.8     | 260    | 10     | 1650   | 4.7     |
| PLE2830-1640 | 8V~26.4V        | 16.8V | 4800    | 0.13    | 4000                  | 0.68    | 280    | 11     | 1700   | 4.2     |

## Performance Curves 性能曲线

PLE2830-0737 7.4V



PLE2830-1640 16.8V



# PLE2913

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 1W~20W  
WEIGHT: 30g (APPROX)

### Typical Application 典型应用

- 吸尘器 (Vacuum Cleaner)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

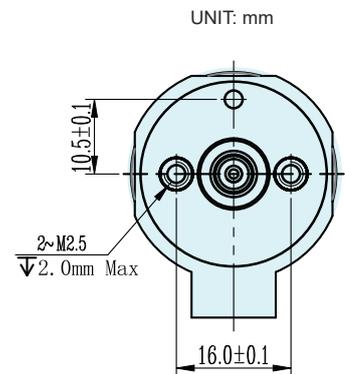
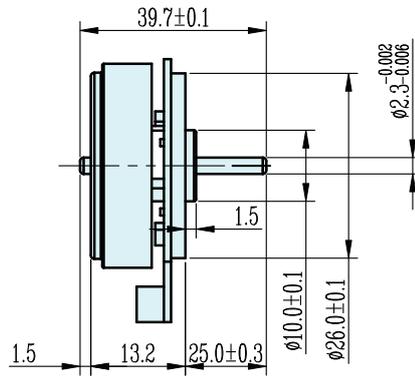
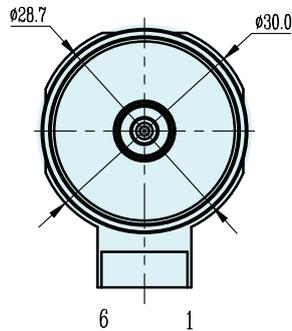
### Motor Terminals 电机端口

| PIN | FUNCTION |
|-----|----------|
| 01  | GND "-"  |
| 02  | VCC "+"  |
| 03  | FG       |
| 04  | PWM      |
| 05  | FR       |
| 06  | BRK      |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← → (CW)

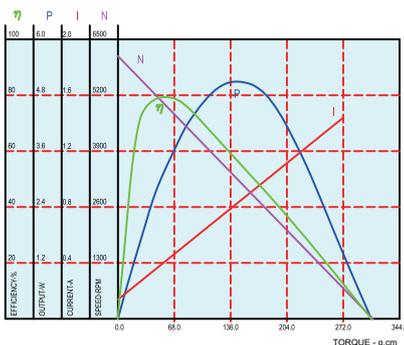


## Specifications 特性参数

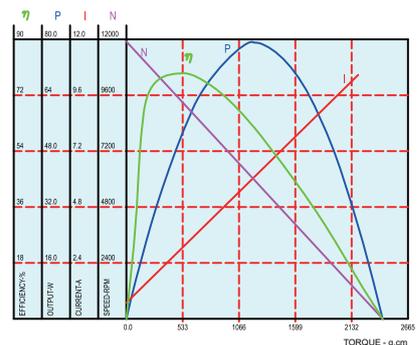
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2913-1250 | 8V~18V          | 12 V  | 6200    | 0.08    | 5000                  | 0.33    | 60.0   | 4.0    | 320.0  | 1.3     |
| PLE2913-2485 | 8V~26V          | 24 V  | 10000   | 0.06    | 8500                  | 0.31    | 75.0   | 7.5    | 470.0  | 1.7     |

## Performance Curves 性能曲线

PLE2913-1250 12V



PLE2913-2485 24V



# PLE2915

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 5W~35W  
WEIGHT: 50g (APPROX)

### Typical Application 典型应用

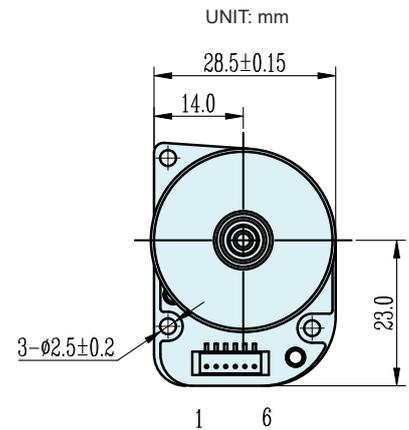
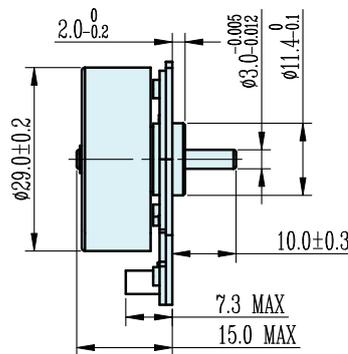
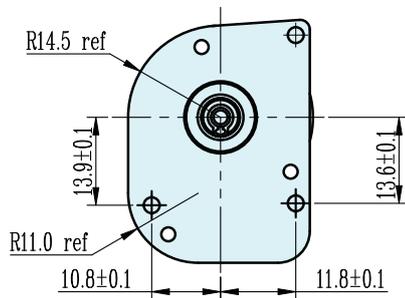
- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| PIN | FUNCTION |
|-----|----------|
| 01  | W        |
| 02  | V        |
| 03  | U        |
| 04  | COM      |
| 05  | GND      |
| 06  | TEM      |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

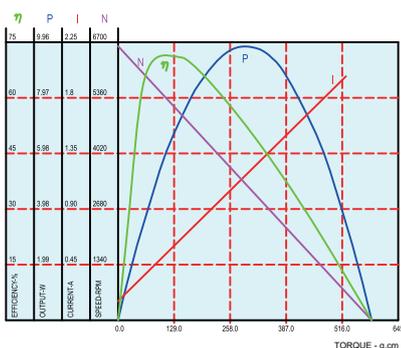


## Specifications 特性参数

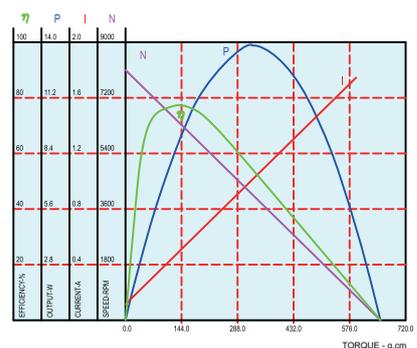
| MODEL        | VOLTAGE         |        | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE2915-1449 | 8V~20V          | 14.4 V | 6550    | 0.23    | 4937                  | 0.70    | 143.3  | 7.2    | 581.0  | 2.1     |
| PLE2915-2461 | 8V~26V          | 24 V   | 8000    | 0.16    | 6100                  | 0.50    | 150.0  | 12.0   | 650.0  | 1.8     |

## Performance Curves 性能曲线

PLE2915-1449 14.4V



PLE2915-2461 24V



# PLE3025

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 5W~30W  
WEIGHT: 80g (APPROX)

Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

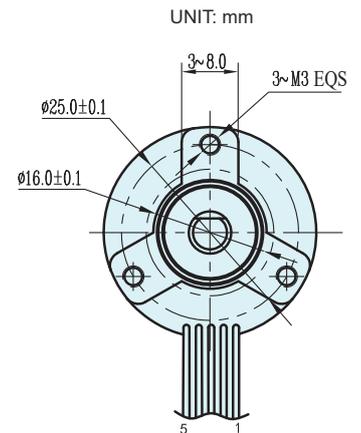
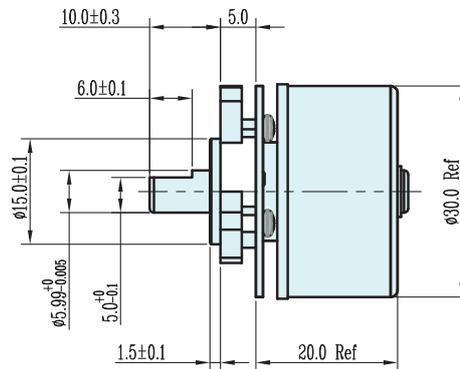
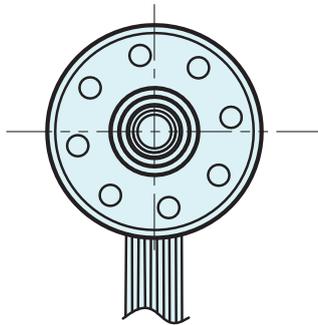
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← → (CW)

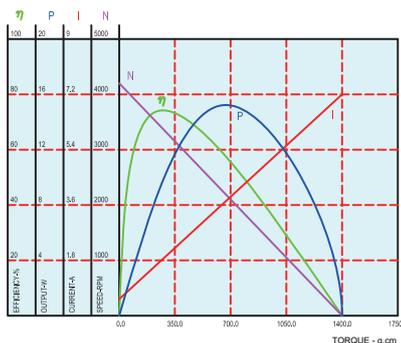


### Specifications 特性参数

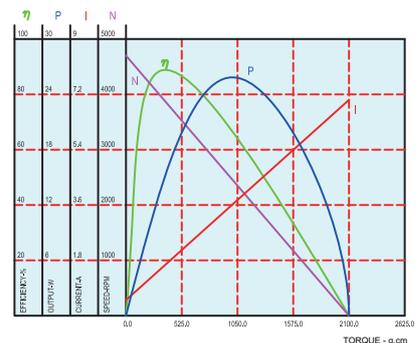
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3025-0330 | 3.7V~6V         | 3.7 V | 3800    | 0.60    | 3000                  | 2.2     | 193    | 6.0    | 950    | 8.7     |
| PLE3025-0734 | 5V~12V          | 7.4 V | 4200    | 0.35    | 3400                  | 1.6     | 258    | 9.0    | 1428   | 7.2     |
| PLE3025-1240 | 8V~15V          | 12 V  | 4700    | 0.25    | 4000                  | 1.3     | 342    | 14.0   | 2142   | 7.0     |

### Performance Curves 性能曲线

PLE3025-0734 7.4V



PLE3025-1240 12V





# PLE3525S (Sintered NdFeB) 微型无刷直流电机 MiCro Brushless DC Motor

OUTRUNNER SERIES  
 OUTPUT: APPROX 5W~30W  
 WEIGHT: 90g (APPROX)

- Typical Application 典型应用
- 筋膜枪 (Massage Gun)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (power tool)
  - 医疗器械 (Medical Device)

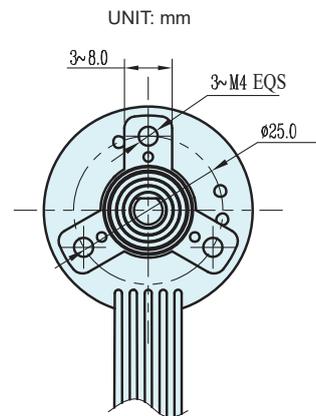
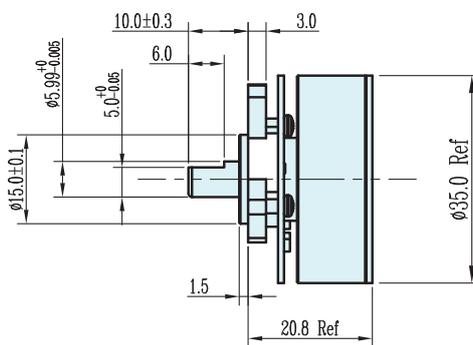
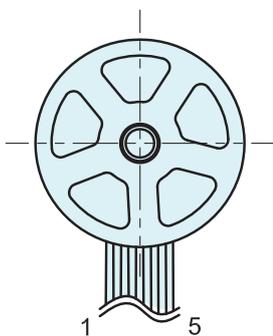
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← → (CW)

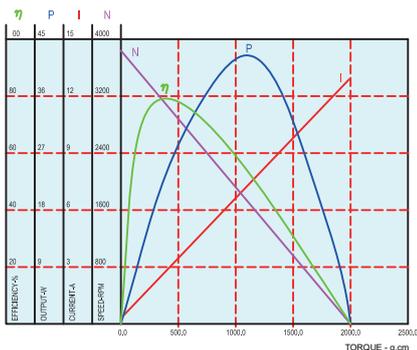


## Specifications 特性参数

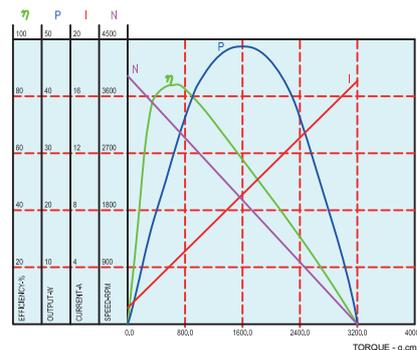
| MODEL         | VOLTAGE         |        | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|---------------|-----------------|--------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|               | OPERATING RANGE | RATED  | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|               |                 |        | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3525S-0732 | 5V~12V          | 7.4 V  | 3820      | 0.28    | 3210                  | 1.5     | 285    | 17     | 1825   | 8.3     |
| PLE3525S-1232 | 8V~15V          | 12 V   | 3800      | 0.20    | 3222                  | 1.1     | 325    | 22     | 2220   | 6.0     |
| PLE3525S-1632 | 8V~26V          | 16.8 V | 3850      | 0.28    | 3289                  | 0.98    | 380    | 29     | 2780   | 10.2    |
| PLE3525S-2433 | 8V~26V          | 24 V   | 3860      | 0.21    | 3300                  | 0.9     | 430    | 36     | 3200   | 7.9     |

## Performance Curves 性能曲线

PLE3525S-0732 12V



PLE3525S-2433 24V





# PLE3717

## 微型无刷直流电机 Micro Brushless DC Motor



OUTRUNNER SERIES  
OUTPUT: APPROX 2W~30W  
WEIGHT: 75g (APPROX)

### Typical Application 典型应用

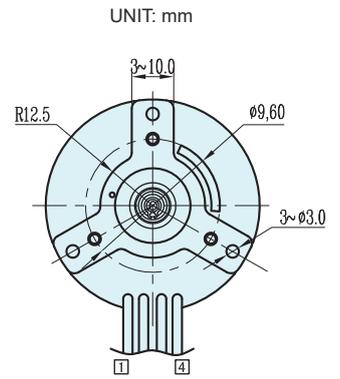
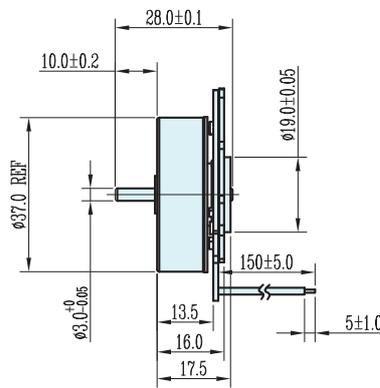
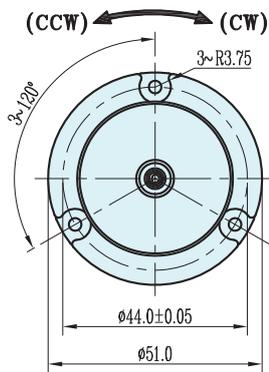
- 吸尘器 (Vacuum Cleaner)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | PWM             |
| 2   | FG              |
| 3   | VCC             |
| 4   | GND             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

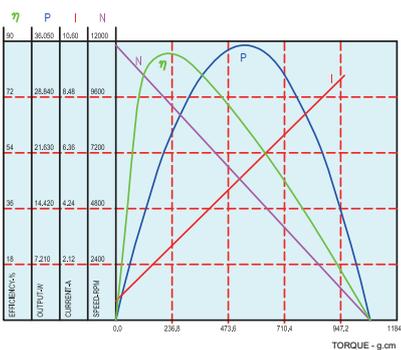


## Specifications 特性参数

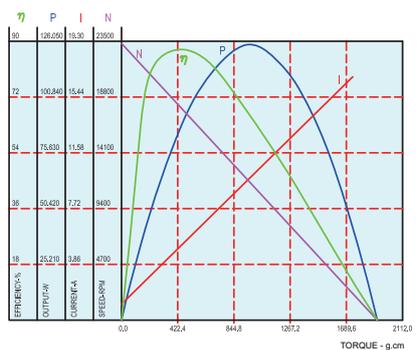
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3717-1210 | 8V~16V          | 12 V  | 11876   | 0.25    | 10332                 | 1.60    | 153.9  | 16.31  | 1184.8 | 10.64   |
| PLE3717-2615 | 8V~26V          | 18 V  | 18020   | 0.29    | 15497                 | 1.79    | 168.4  | 26.76  | 1202.7 | 10.98   |
| PLE3717-2620 | 8V~26V          | 24 V  | 23274   | 0.34    | 20481                 | 2.61    | 253.4  | 53.24  | 2111.9 | 19.28   |

## Performance Curves 性能曲线

PLE3717-1210 12V



PLE3717-2620 24V





# PLE3825S (Sintered NdFeB)

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 2W~30W  
WEIGHT: 75g (APPROX)

Typical Application 典型应用  
 ● 筋膜枪 (Massage Gun)  
 ● 家用电器 (Home Application)  
 ● 个人护理 (Personal Care)  
 ● 商业设备 Business Equipment  
 ● 医疗器械 (Medical Device)

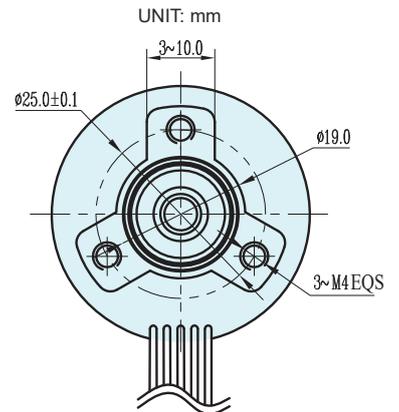
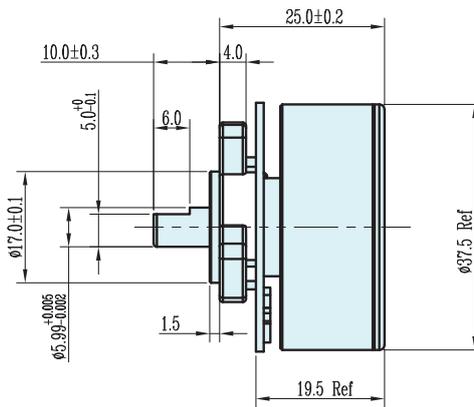
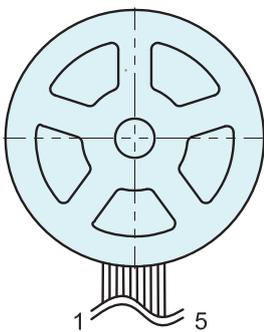
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← → (CW)

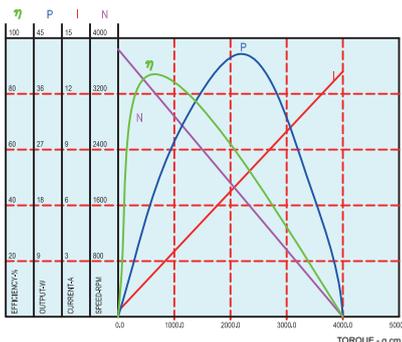


### Specifications 特性参数

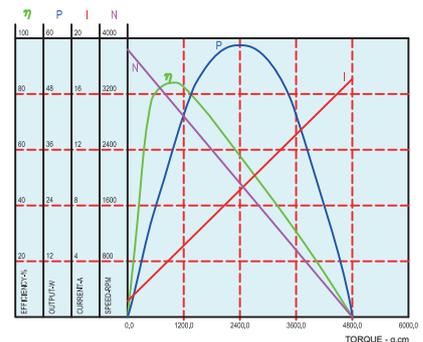
| MODEL         | VOLTAGE         |        | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|---------------|-----------------|--------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|               | OPERATING RANGE | RATED  | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|               |                 |        | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3825S-1233 | 8V~15V          | 12 V   | 3868      | 0.28    | 3321                  | 1.4     | 438    | 31     | 3221   | 8.9     |
| PLE3825S-1634 | 8V~26V          | 16.8 V | 3900      | 0.33    | 3408                  | 2.5     | 502    | 43     | 4320   | 10.2    |
| PLE3825S-2435 | 8V~26V          | 24 V   | 3960      | 0.28    | 3550                  | 3.4     | 615    | 51     | 5100   | 12.2    |

### Performance Curves 性能曲线

PLE3825S-1233 12V



PLE3825S-2435 24V





# PLE3825

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~45W  
WEIGHT: 120g (APPROX)

- Typical Application 典型应用
- 筋膜枪 (Massage Gun)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (Power Tool)
  - 医疗器械 (Medical Device)

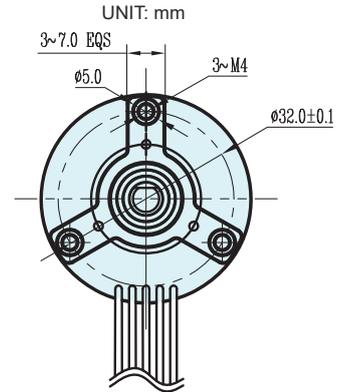
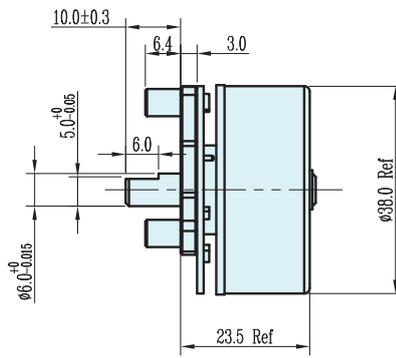
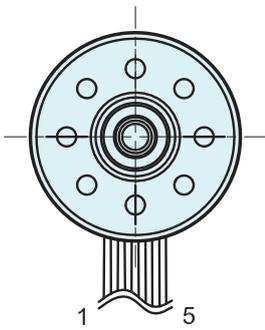
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← (CW)

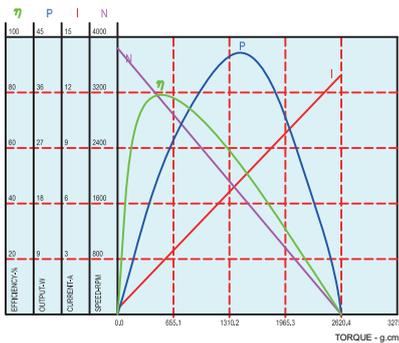


### Specifications 特性参数

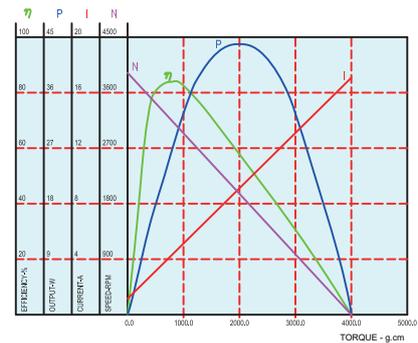
| MODEL        | VOLTAGE         |        | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3825-1232 | 8V~15V          | 12 V   | 3810      | 0.23    | 3230                  | 1.4     | 397    | 26     | 2700   | 7.6     |
| PLE3825-1633 | 8V~20V          | 16.8 V | 3820      | 0.17    | 3300                  | 1.08    | 438    | 32     | 3400   | 12      |
| PLE3825-2433 | 8V~26V          | 24 V   | 3850      | 0.39    | 3385                  | 0.9     | 490    | 40     | 4200   | 6.5     |

### Performance Curves 性能曲线

PLE3825-1232 12V



PLE3825-2433 24V





# PLE3830

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~40W  
WEIGHT: 130g (APPROX)

Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (Power Tool)
- 医疗器械 (Medical Device)

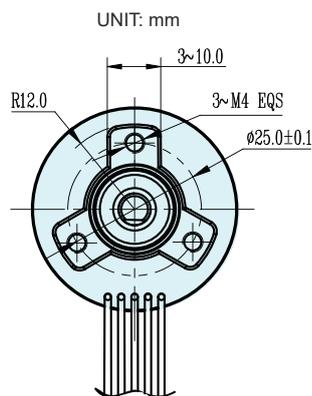
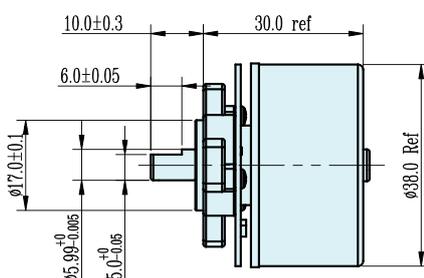
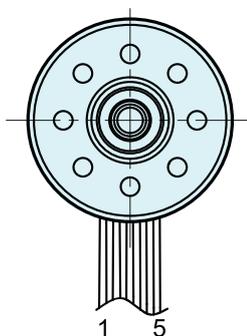
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← → (CW)

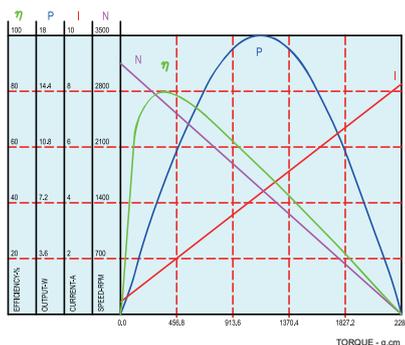


### Specifications 特性参数

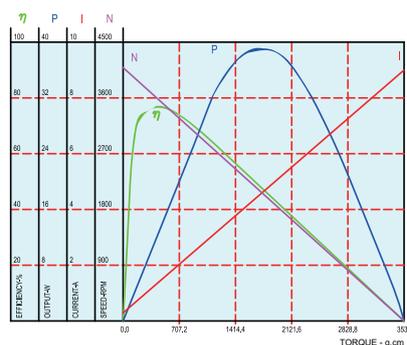
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3830-0725 | 5V~12V          | 7.4V  | 3000    | 0.3     | 2500                  | 1.6     | 365    | 10     | 2284   | 8.3     |
| PLE3830-1234 | 8V~16V          | 12.0V | 4000    | 0.24    | 3400                  | 1.5     | 468    | 17     | 3485   | 10      |
| PLE3830-1636 | 8V~26.4V        | 16.8V | 4200    | 0.26    | 3600                  | 1.5     | 520    | 21     | 3536   | 8.7     |

### Performance Curves 性能曲线

PLE3830-0725 7.4V



PLE3830-1636 16.8V





# PLE3835S (Sintered NdFeB) 微型无刷直流电机

Micro Brushless DC Motor

OUTRUNNER SERIES  
 OUTPUT: APPROX 10W~80W  
 WEIGHT: 150g (APPROX)

Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (Power Tool)
- 医疗器械 (Medical Device)

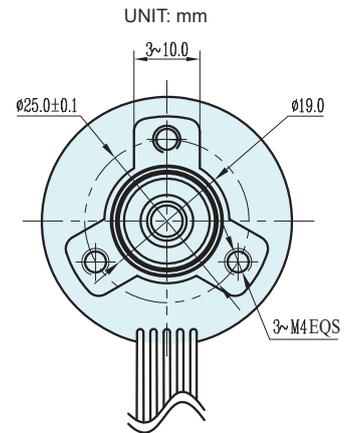
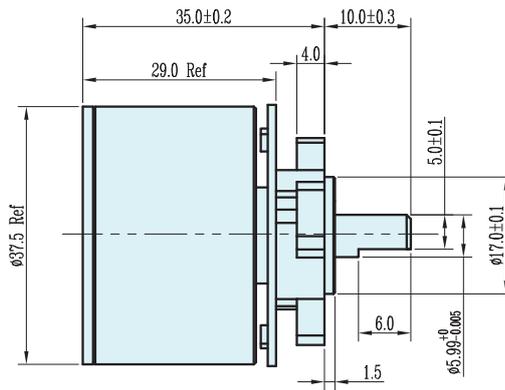
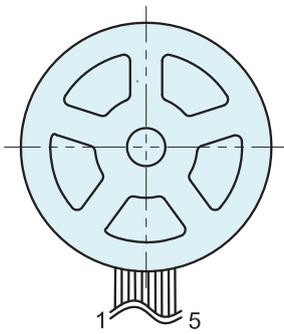
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

## Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← (CW)

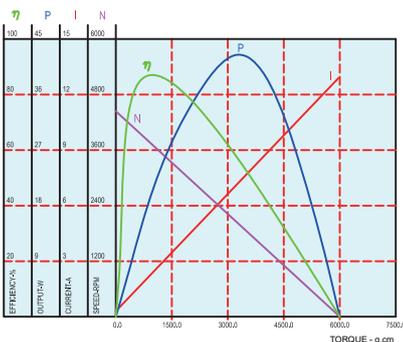


## Specifications 特性参数

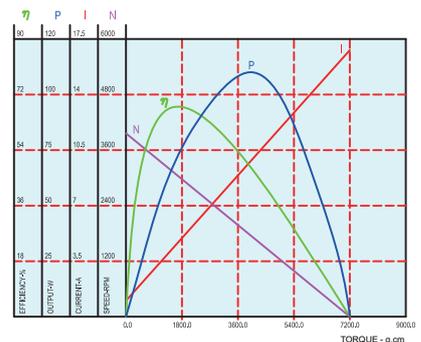
| MODEL         | VOLTAGE         |        | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|---------------|-----------------|--------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|               | OPERATING RANGE | RATED  | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|               |                 |        | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE3835S-1237 | 8V~15V          | 12 V   | 4200      | 0.39    | 3790                  | 2.7     | 720    | 32     | 6108   | 19.2    |
| PLE3835S-1638 | 8V~26V          | 16.8 V | 4400      | 0.31    | 3810                  | 1.9     | 810    | 52     | 6982   | 12.4    |
| PLE3835S-2438 | 8V~26V          | 24 V   | 4460      | 0.39    | 3852                  | 1.3     | 892    | 65     | 7250   | 10.2    |

## Performance Curves 性能曲线

PLEN3835S-1237 12V



PLE3835S-2438 24V





# PLE4020

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~80W  
WEIGHT: 150g (APPROX)

Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (Power Tool)
- 医疗器械 (Medical Device)

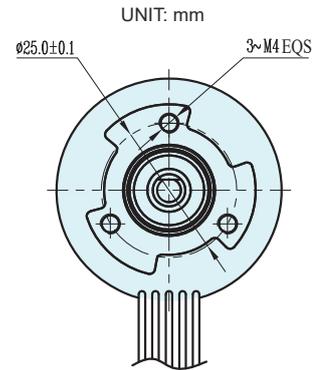
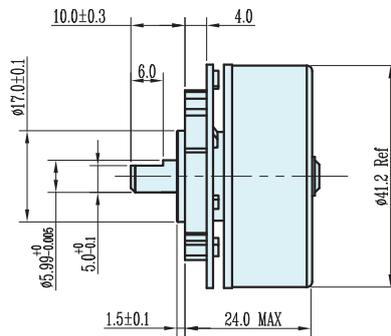
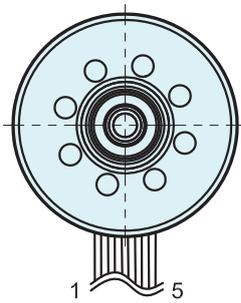
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

DIRECTION OF ROTATION

(CCW) ← (CW)

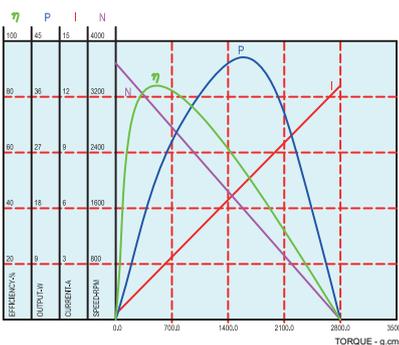


### Specifications 特性参数

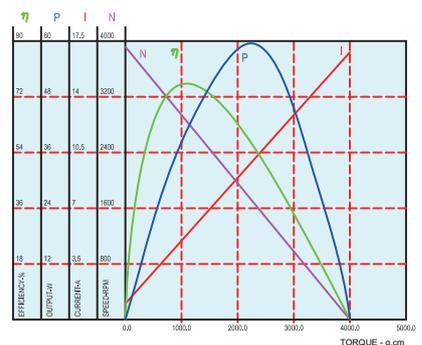
| MODEL        | VOLTAGE         |        | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE4020-1232 | 8V~15V          | 12 V   | 3880    | 0.32    | 3200                  | 1.5     | 390    | 23     | 2300   | 7.3     |
| PLE4020-1633 | 8V~26V          | 16.8 V | 3800    | 0.27    | 3300                  | 2.6     | 450    | 30     | 3150   | 9.2     |
| PLE4020-2434 | 8V~26V          | 24 V   | 3860    | 0.15    | 3400                  | 3.6     | 510    | 43     | 4100   | 10.3    |

### Performance Curves 性能曲线

PLE4020-1232 12V



PLE4020-2434 24V





# PLE4035

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~80W  
WEIGHT: 190g (APPROX)

- Typical Application 典型应用
- 筋膜枪 (Massage Gun)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (Power Tool)
  - 医疗器械 (Medical Device)

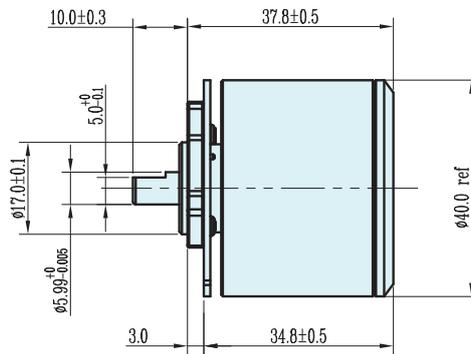
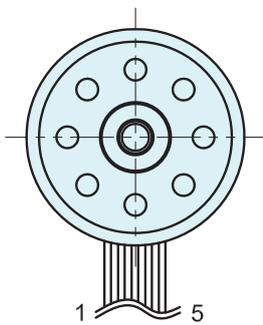
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

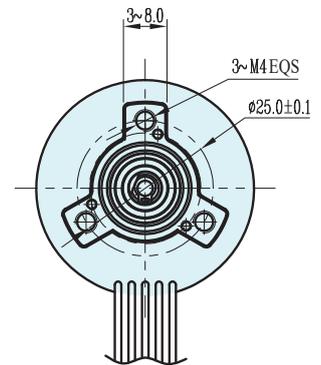
## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← → (CW)



UNIT: mm

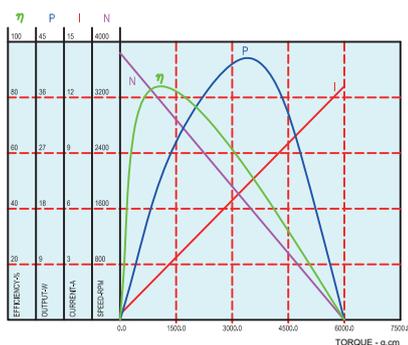


## Specifications 特性参数

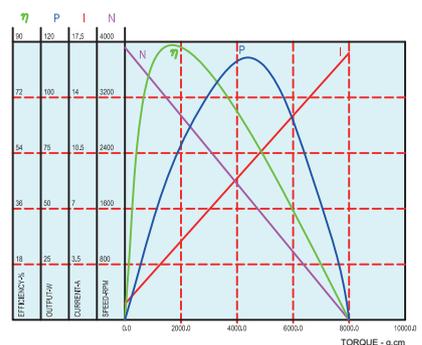
| MODEL        | VOLTAGE         |        | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|--------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED  | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |        | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE4035-1230 | 8V~15V          | 12 V   | 3620    | 0.34    | 3010                  | 3.1     | 905    | 28     | 6052   | 13.4    |
| PLE4035-1632 | 8V~26V          | 16.8 V | 3760    | 0.39    | 3250                  | 4.4     | 1130   | 40     | 7486   | 15      |
| PLE4035-2433 | 8V~26V          | 24 V   | 3800    | 0.28    | 3350                  | 4.5     | 410    | 66     | 8220   | 12.1    |

## Performance Curves 性能曲线

PLE4035-1230 12V



PLE4035-2433 24V





# PLE4220

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~80W  
WEIGHT: 190g (APPROX)

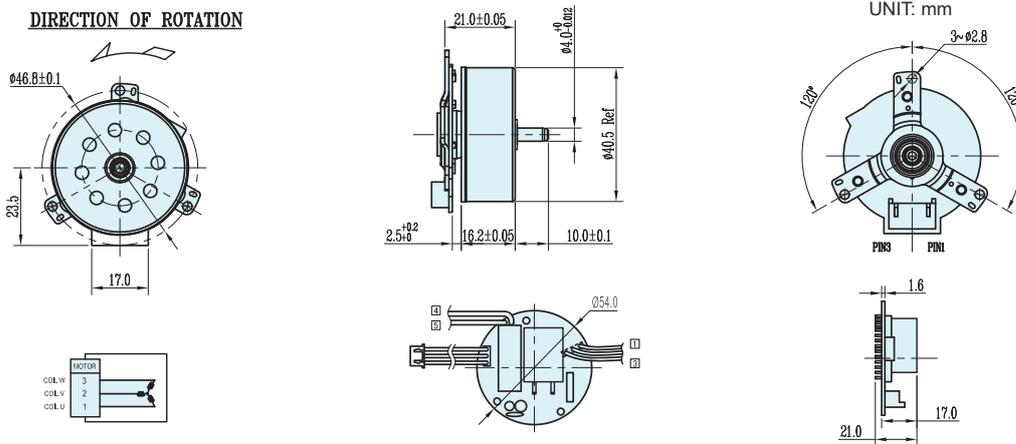
### Typical Application 典型应用

- 电吹风 (Hair Drier)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT   |
|-----|-------------------|
| 1   | BLACK WIRE (AC±N) |
| 2   | RED WIRE (AC±L)   |
| 3   | WHITE WIRE (AC±S) |

## Outline Dimension 外形图



NOTE: PCBA driver can be adjusted according to customer's requirement, this product is suitable for side air inlet and rear air inlet hairdryer.

## Specifications 特性参数

| MODEL        | VOLTAGE         |         | NO-LOAD |           | RATED LOAD |        |           |
|--------------|-----------------|---------|---------|-----------|------------|--------|-----------|
|              | OPERATING RANGE | RATED   | SPEED   | INPUT (P) | SPEED      | TORQUE | INPUT (P) |
|              |                 |         | r/min   | W         | r/min      | g.cm   | W         |
| PLE4220-1225 | 100~125VAC      | 120 VAC | 25800   | 10        | 18700      | 350    | 105       |
| PLE4220-2324 | 220~240VAC      | 230 VAC | 24200   | 9         | 18500      | 350    | 106       |

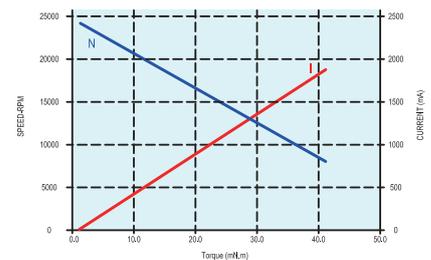
## Distinctive Feature 电机特性

Winding Insulation: Class B

Working temperature: -10 to 65 degrees celsius

Life Time: 5000 hours

Cable characteristic: 3-phase (ABC). length of cable 160MM.





# PLE4225

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~180W  
WEIGHT: 125g (APPROX)

### Typical Application 典型应用

- 电吹风 (Hair Drier)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)

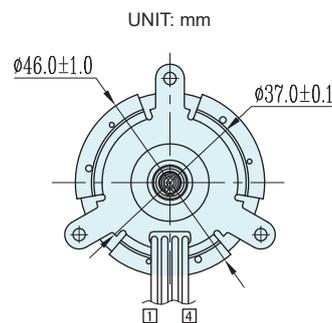
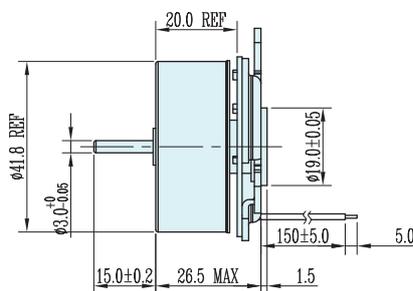
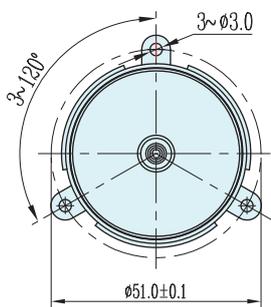
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | PWM             |
| 2   | FG              |
| 3   | VCC             |
| 4   | GND             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

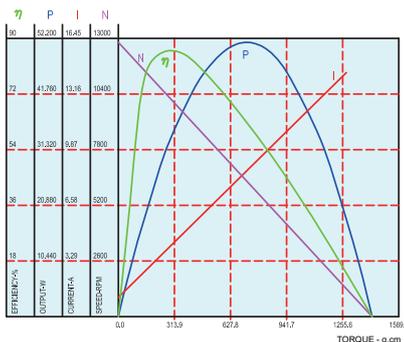


## Specifications 特性参数

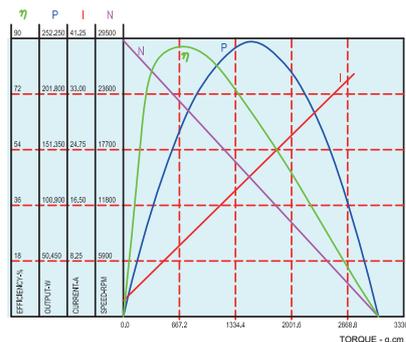
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE4225-1211 | 8V~16V          | 12 V  | 12963   | 0.23    | 11537                 | 2.01    | 172.6  | 20.43  | 1569.4 | 16.44   |
| PLE4225-1821 | 8V~26V          | 18 V  | 23246   | 0.34    | 21066                 | 3.29    | 237.6  | 51.38  | 2533.8 | 31.77   |
| PLE4225-2426 | 8V~26V          | 24 V  | 29489   | 0.53    | 26540                 | 4.60    | 333.6  | 90.81  | 3335.9 | 41.23   |

## Distinctive Feature 电机特性

PLE4225-1211 12V



PLE4225-2426 24V





# PLE4525

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~50W  
WEIGHT: 170g (APPROX)

Typical Application 典型应用

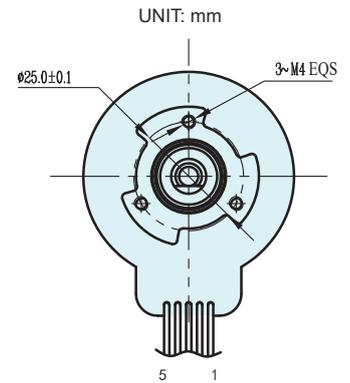
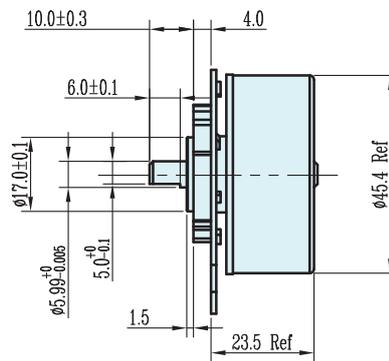
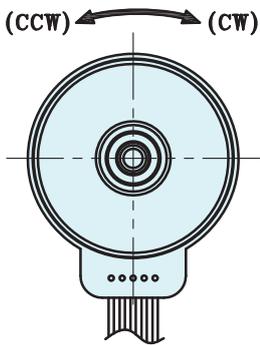
- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (Power Tool)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

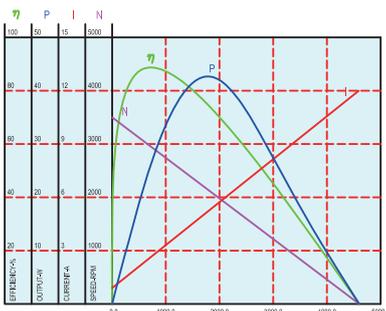


### Specifications 特性参数

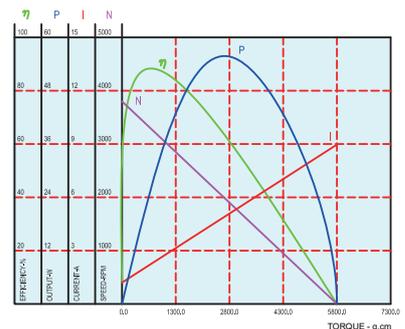
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLE4525-1230 | 8V~15V          | 12 V  | 3500      | 0.35    | 3000                  | 2.0     | 678    | 20     | 4651   | 12.0    |
| PLE4525-1635 | 8V~26.4V        | 16.8V | 3800      | 0.20    | 3500                  | 1.5     | 613    | 22     | 5151   | 11.1    |
| PLE4525-2433 | 8V~26.4V        | 24V   | 3800      | 0.15    | 3300                  | 1.2     | 683    | 23     | 5871   | 8.6     |

### Distinctive Feature 电机特性

PLE4525-1230 12V



PLE4525-2433 24V





# PLE4825

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~50W  
WEIGHT: 165g (APPROX)

### Typical Application 典型应用

- 筋膜枪 (Massage Gun)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

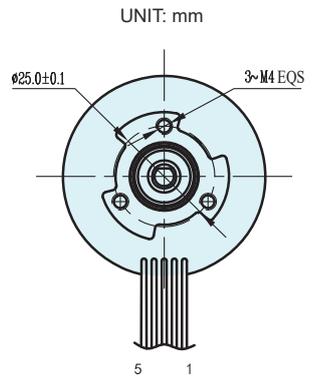
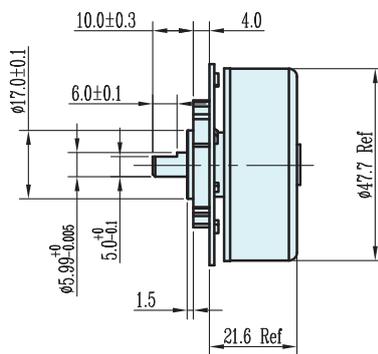
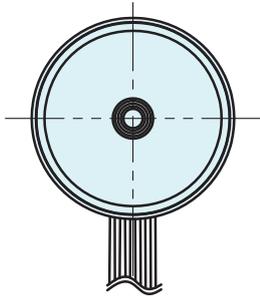
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

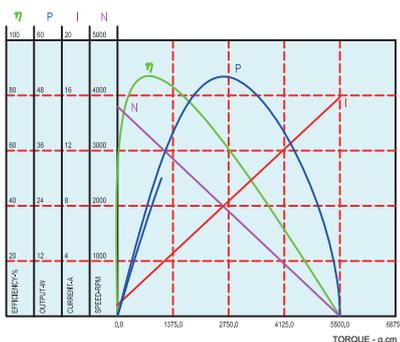


## Specifications 特性参数

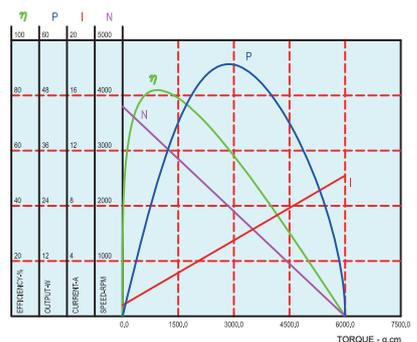
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN4825-1233 | 8V~15V          | 12 V  | 3800    | 0.30    | 3300                  | 2.2     | 660    | 22     | 5532   | 15.7    |
| PLN4825-1632 | 8V~26.4V        | 16.8V | 3800    | 0.28    | 3200                  | 2.0     | 728    | 24     | 5809   | 13.7    |
| PLN4825-2432 | 8V~26.4V        | 24V   | 3800    | 0.17    | 3200                  | 1.7     | 851    | 27     | 6043   | 10.3    |

## Performance Curves 性能曲线

PLE4825-1233 12V



PLE4825-2432 24V





# PLE5025

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
 OUTPUT: APPROX 10W~60W  
 WEIGHT: 190g (APPROX)

- Typical Application 典型应用
- 筋膜枪 (Massage Gun)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (power tool)
  - 医疗器械 (Medical Device)

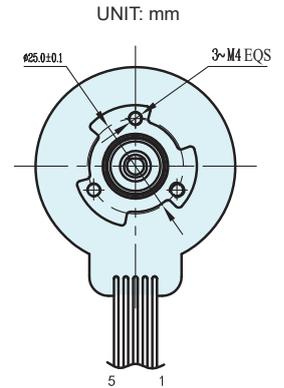
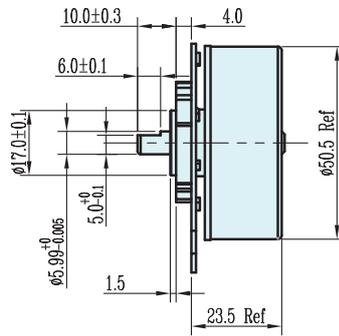
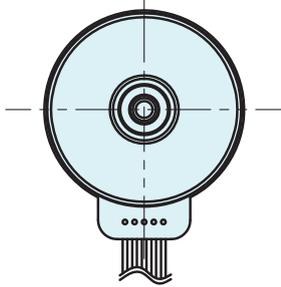
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← → (CW)

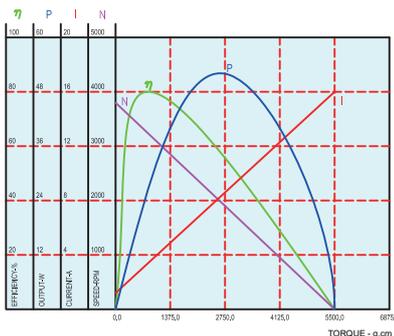


### Specifications 特性参数

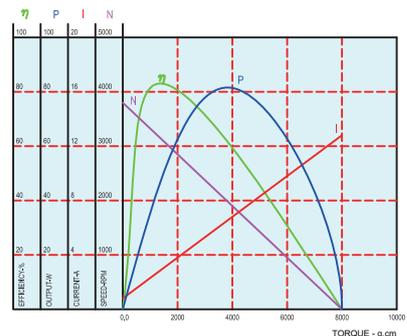
| MODEL        | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min     | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN5025-1232 | 8V~15V          | 12 V  | 3800      | 0.45    | 3200                  | 2.7     | 783    | 26     | 5435   | 16.0    |
| PLN5025-1633 | 8V~26.4V        | 16.8V | 3800      | 0.32    | 3300                  | 2.3     | 948    | 32     | 7610   | 16.0    |
| PLN5025-2434 | 8V~26.4V        | 24V   | 3800      | 0.22    | 3400                  | 1.7     | 970    | 34     | 8278   | 12.8    |

### Performance Curves 性能曲线

PLE5025-1232 12V



PLE5025-2434 24V





# PLE5520

## 微型无刷直流电机 Micro Brushless DC Motor

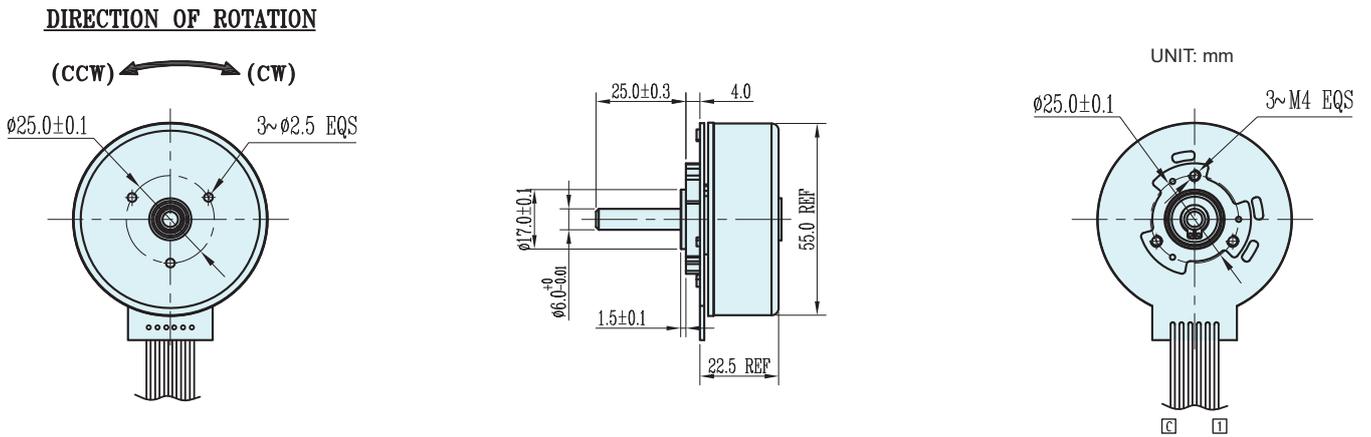
OUTRUNNER SERIES  
OUTPUT: APPROX 10W~80W  
WEIGHT: 220g (APPROX)

- Typical Application 典型应用
- 机械设备 (Industry Apparatus)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (power tool)
  - 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

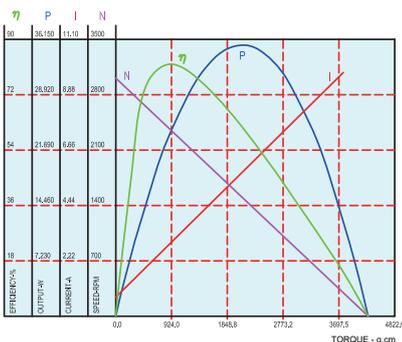


### Specifications 特性参数

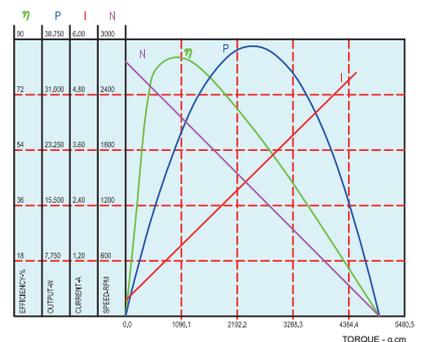
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN5520-1226 | 8V~16V          | 12 V  | 3050    | 0.24    | 2657                  | 1.639   | 595.5  | 16.25  | 4661.7 | 11.19   |
| PLN5520-1824 | 8V~26V          | 18 V  | 2758    | 0.17    | 2408                  | 1.171   | 702.5  | 17.37  | 5545.8 | 8.065   |
| PLN5520-2423 | 8V~26V          | 24 V  | 2383    | 0.14    | 2383                  | 0.933   | 738.5  | 18.06  | 5473.2 | 5.988   |

### Performance Curves 性能曲线

PLE5520-1226 12V



PLE5520-2423 24V





# PLE5525

## 微型无刷直流电机 Micro Brushless DC Motor

OUTRUNNER SERIES  
OUTPUT: APPROX 10W~80W  
WEIGHT: 280g (APPROX)

- Typical Application 典型应用
- 筋膜枪 (Massage Gun)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (power tool)
  - 医疗器械 (Medical Device)

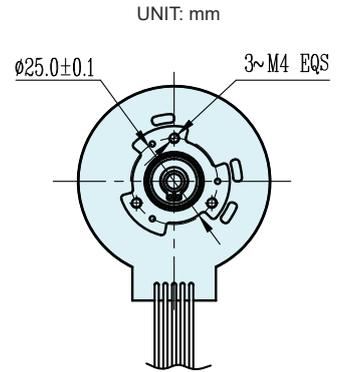
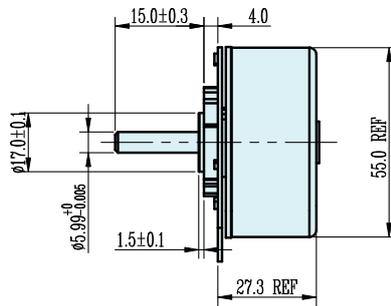
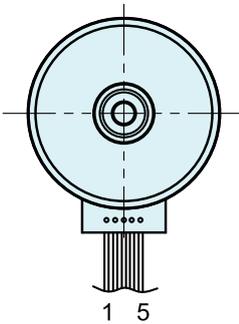
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← → (CW)

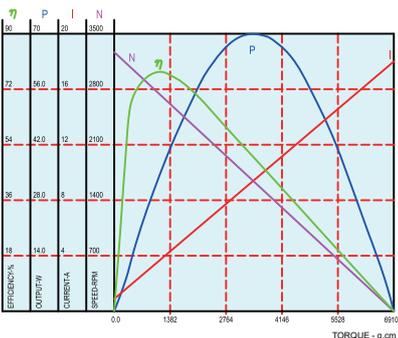


### Specifications 特性参数

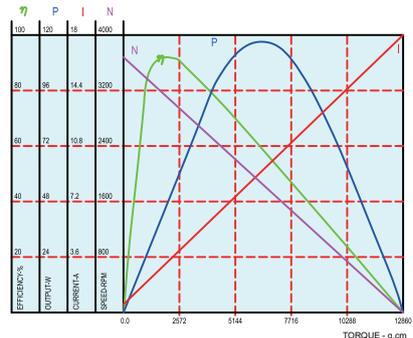
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN5525-1227 | 8V~16V          | 12V   | 3200    | 0.45    | 2700                  | 2.9     | 1010   | 29     | 6910   | 19      |
| PLN5525-1631 | 8V~26.4V        | 16.8V | 3500    | 0.36    | 3100                  | 2.6     | 1220   | 37     | 9130   | 18      |
| PLN5525-2432 | 8V~26.4V        | 24V   | 3500    | 0.25    | 3200                  | 2.1     | 1335   | 45     | 12860  | 18      |

### Performance Curves 性能曲线

PLE5525-1227 12V



PLE5525-2432 24V





# PLE5530

## 微型无刷直流电机 Micro Brushless DC Motor

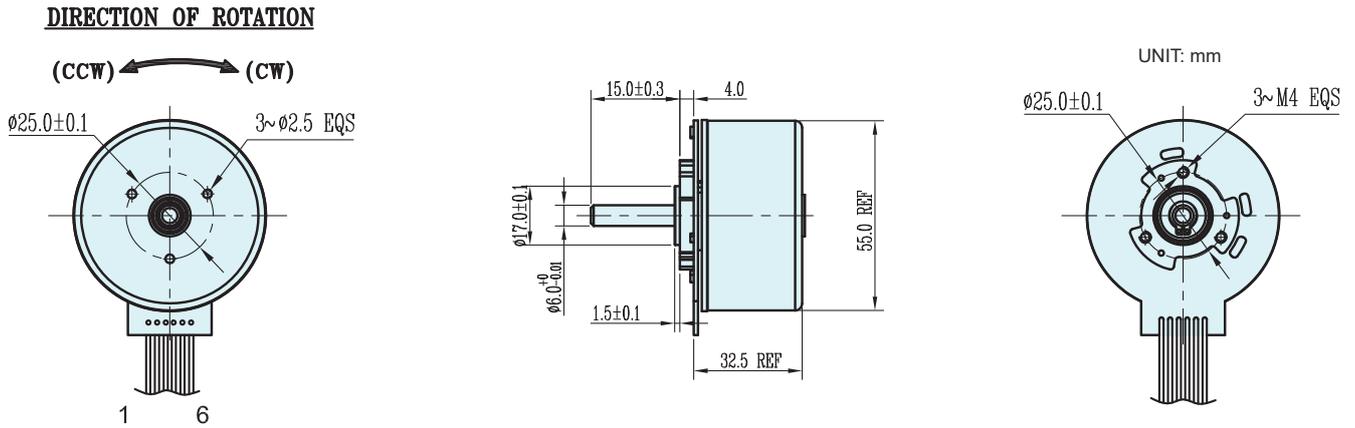
OUTRUNNER SERIES  
OUTPUT: APPROX 10W~100W  
WEIGHT: 300g (APPROX)

- Typical Application 典型应用
- 机械设备 (Industry Apparatus)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 电动工具 (power tool)
  - 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

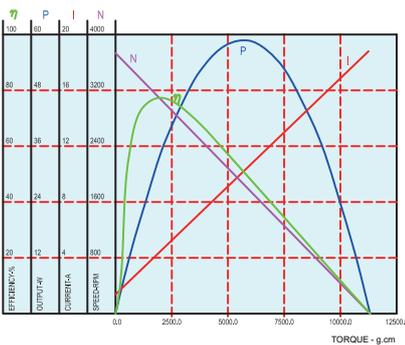


### Specifications 特性参数

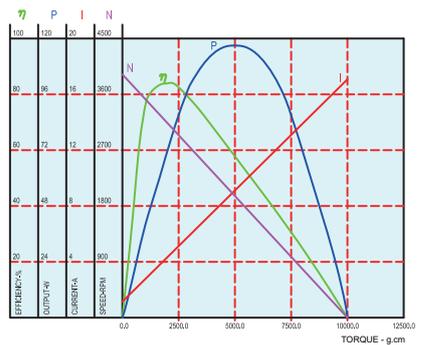
| MODEL        | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|--------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|              | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|              |                 |       | r/min   | A       | r/min                 | A       | g.cm   | W      | g.cm   | A       |
| PLN5530-1228 | 8V~16V          | 12V   | 3260    | 0.5     | 2800                  | 3.2     | 1080   | 31     | 7250   | 18.9    |
| PLN5530-1630 | 8V~26.4V        | 16.8V | 3500    | 0.4     | 3060                  | 3.0     | 1320   | 42     | 10400  | 20.9    |
| PLN5530-2433 | 8V~26.4V        | 24V   | 3830    | 0.3     | 3380                  | 2.5     | 1430   | 50     | 12200  | 18.8    |

### Performance Curves 性能曲线

PLE5530-1228 12V



PLE5530-2433 24V



# PLANTERY GEARBOX BLDC MOTOR

## GEARBOX

PriomoPal geared brushless DC motors can be equipped with precision reduction gear sets of various structures and reduction ratios to meet the requirements of high torque and low rotational speed; the products feature small size, large reduction ratio, low rotational speed and large torque.



# PLN1625G-R50

## 直流无刷减速电机 Micro BLDC Geared Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 2W~5W  
WEIGHT: 45g (APPROX)

### Typical Application 典型应用

- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 5G基站 (5G Base Station)
- 电动工具 (power tool)
- 医疗器械 (Medical Device)

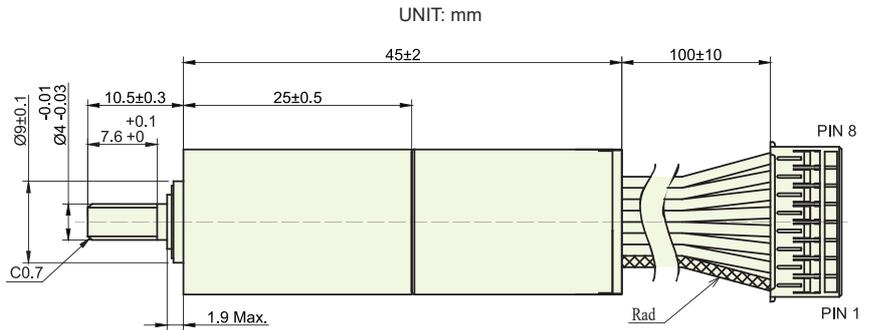
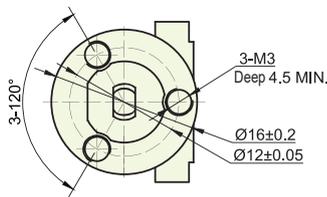
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | Hall "1"        |
| 2   | Hall "2"        |
| 3   | Hall "3"        |
| 4   | Hall "GND"      |
| 5   | Hall "+V"       |
| 6   | PHASE "U" COIL  |
| 7   | PHASE "V" COIL  |
| 8   | PHASE "W" COIL  |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

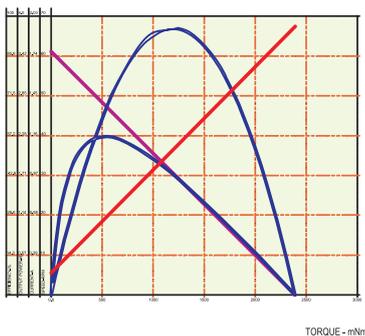


## Specifications 特性参数

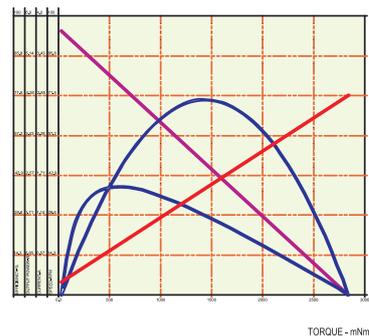
| MODEL             | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min   | A       | r/min                 | A       | mNm    | W      | mNm    | A       |
| PLN1625G-0848-R50 | 8V~15V          | 8.5V  | 61      | 0.155   | 48                    | 0.546   | 529.5  | 2.6    | 2393.6 | 1.924   |
| PLN1625G-1074-R50 | 8V~15V          | 10V   | 92      | 0.172   | 74                    | 0.692   | 336.7  | 2.6    | 1690.5 | 2.781   |

## Performance Curves 性能曲线

PLN1625G-0848-R50 8.5V



PLN1625G-1074-R50 10V



# PLN2418G-R50

## 直流无刷减速电机 Micro BLDC Geared Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 2W~5W  
WEIGHT: 45g (APPROX)

### Typical Application 典型应用

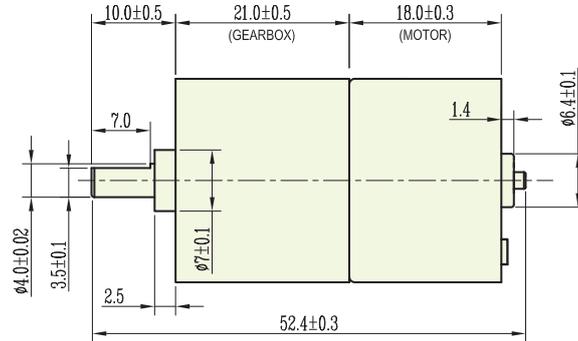
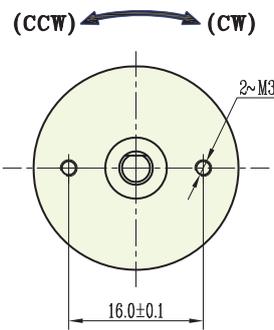
- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (Power tool)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

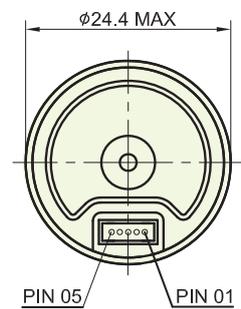
| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION



UNIT: mm

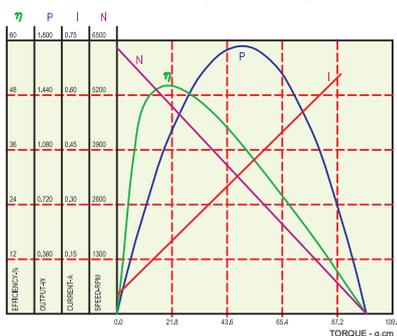


## Specifications 特性参数

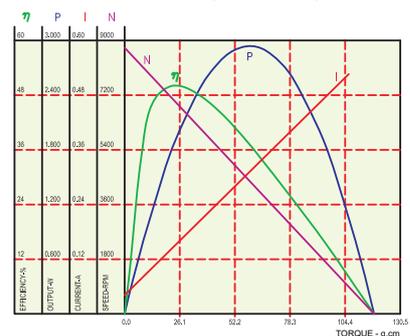
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN2418G-0664-R50 | 5V~9V           | 6 V   | 90        | 0.14    | 64                    | 0.55    | 0.18   | 1.75   | 0.89   | 2.16    |
| PLN2418G-1296-R50 | 8V~16V          | 12 V  | 53        | 0.05    | 96                    | 0.19    | 0.21   | 1.19   | 0.98   | 0.74    |
| PLN2418G-2469-R50 | 8V~26V          | 24 V  | 89        | 0.045   | 69                    | 0.16    | 0.22   | 2.04   | 0.99   | 0.59    |

## Performance Curves 性能曲线

PLN2418G-0664-R50(Bare Motor) 12V



PLN2418G-2469-R50(Bare Motor) 24V



# PLN2430G-R50

## 直流无刷减速电机 Micro BLDC Geared Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 1W~8W  
WEIGHT: 120g (APPROX)

### Typical Application 典型应用

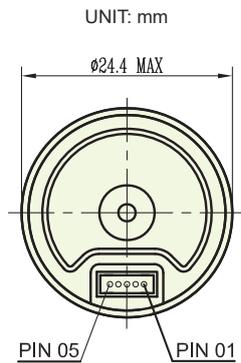
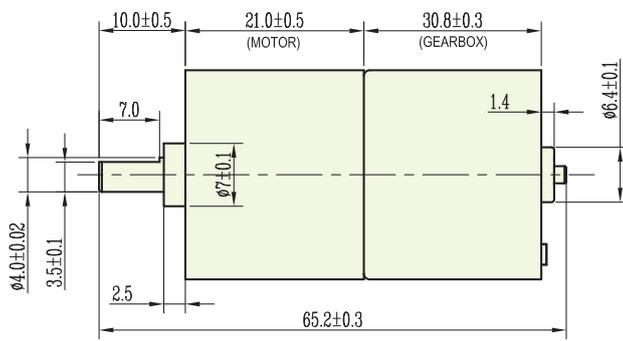
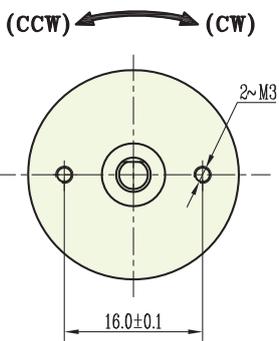
- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 电动工具 (Power tool)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

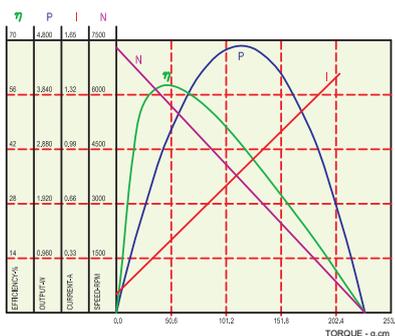


## Specifications 特性参数

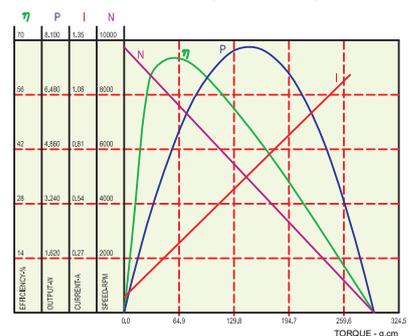
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN2430G-0959-R50 | 5V~12V          | 9 V   | 76        | 0.13    | 59                    | 0.442   | 0.29   | 2.371  | 1.33   | 1.546   |
| PLN2430G-1298-R50 | 8V~16V          | 12 V  | 123       | 0.12    | 98                    | 0.438   | 0.24   | 3.174  | 1.14   | 1.636   |
| PLN2430G-2496-R50 | 8V~26V          | 24 V  | 122       | 0.09    | 96                    | 0.369   | 0.41   | 5.37   | 1.95   | 1.322   |

## Performance Curves 性能曲线

PLN2430G-1298-R50(Bare Motor) 12V



PLN2430G-2469-R50(Bare Motor) 24V



# PLN2838G-R50

## 直流无刷减速电机 Micro BLDC Geared Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 1W~15W  
WEIGHT: 160g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

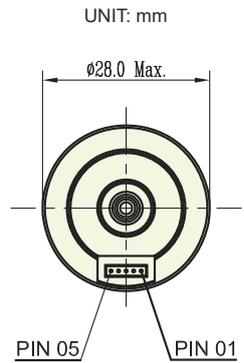
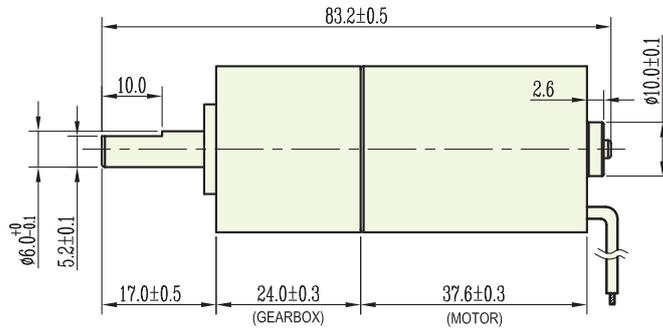
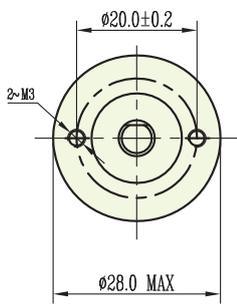
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← (CW)

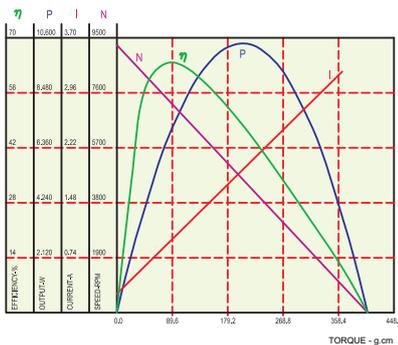


### Specifications 特性参数

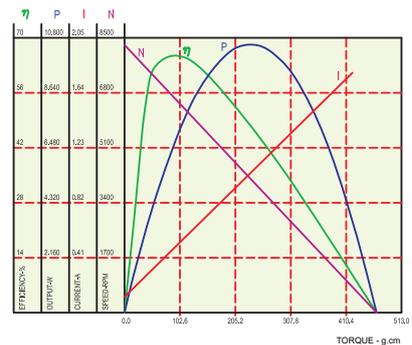
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN2838G-0754-R50 | 6V~12V          | 7.4 V | 67        | 0.19    | 54                    | 0.798   | 0.51   | 3.752  | 2.67   | 3.392   |
| PLN2838G-1298-R50 | 8V~16V          | 12 V  | 115       | 0.23    | 92                    | 0.918   | 0.54   | 6.772  | 2.69   | 3.689   |
| PLN2838G-2468-R50 | 8V~26V          | 24 V  | 82        | 0.08    | 68                    | 0.411   | 0.65   | 6.082  | 3.85   | 2.028   |

### Performance Curves 性能曲线

PLN2838G-1298-R50(Bare Motor) 12V



PLN2838G-2468-R50(Bare Motor) 24V



# PLN2847G-R50

## 直流无刷减速电机 Micro BLDC Geared Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 5W~25W  
WEIGHT: 200g (APPROX)

### Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

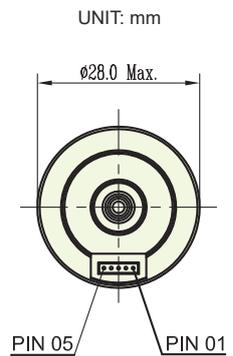
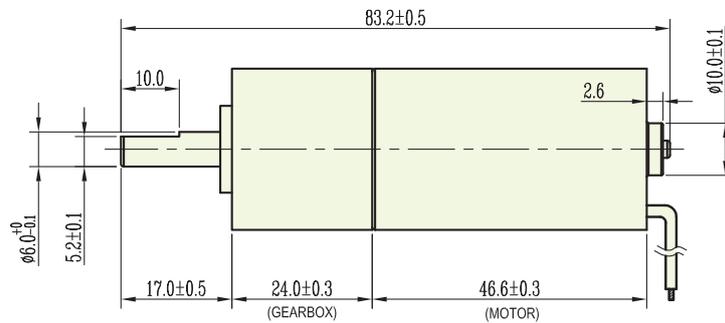
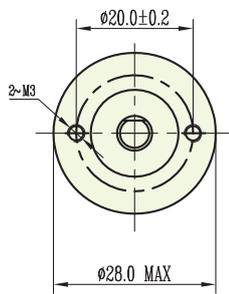
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← → (CW)

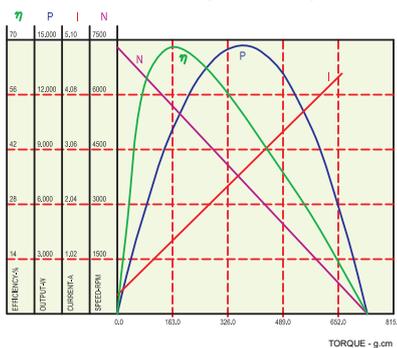


## Specifications 特性参数

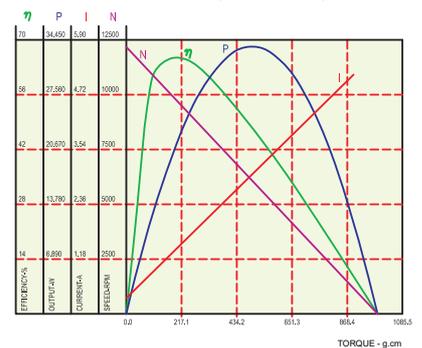
| MODEL             | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min   | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN2847G-1261-R50 | 6V~12V          | 12 V  | 72      | 0.17    | 61                    | 0.903   | 0.92   | 7.64   | 6.12   | 5.059   |
| PLN2847G-1811-R50 | 8V~16V          | 18 V  | 135     | 0.20    | 113                   | 1.087   | 0.89   | 13.81  | 5.55   | 5.746   |
| PLN2847G-2487-R50 | 8V~26V          | 24 V  | 103     | 0.21    | 87                    | 1.113   | 1.56   | 18.50  | 9.77   | 5.852   |

## Performance Curves 性能曲线

PLN2847G-1261-R50(Bare Motor) 12V



PLN2847G-2487-R50(Bare Motor) 24V



# PLN3626G-R50

## 直流无刷减速电机 Micro BLDC Geared Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 2W~15W  
WEIGHT: 220g (APPROX)

Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

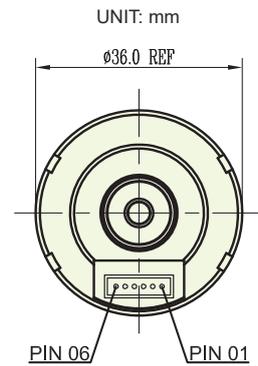
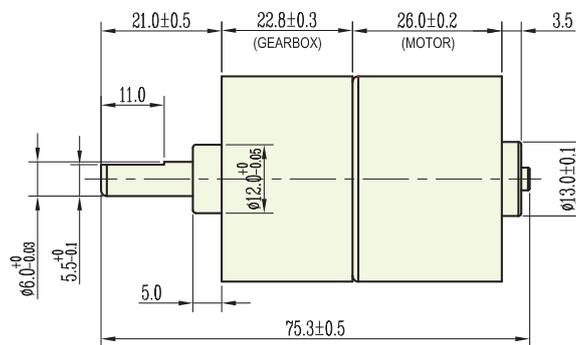
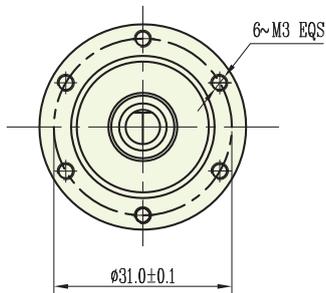
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← (CW)

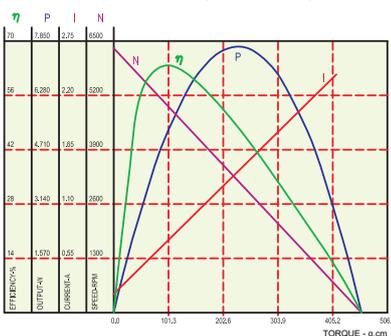


### Specifications 特性参数

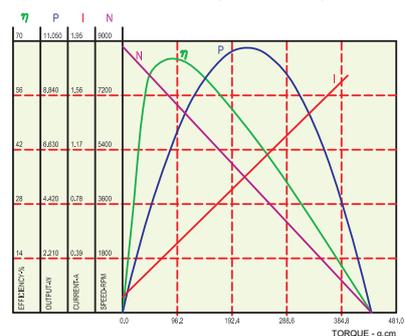
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN3626G-1249-R50 | 8V~16V          | 12 V  | 60        | 0.15    | 49                    | 0.638   | 0.72   | 4.814  | 3.79   | 2.721   |
| PLN3626G-1875-R50 | 8V~26V          | 18 V  | 93        | 0.124   | 75                    | 0.504   | 0.55   | 5.621  | 2.88   | 2.121   |
| PLN3626G-1190-R50 | 8V~26V          | 24 V  | 111       | 0.112   | 90                    | 0.456   | 0.55   | 6.774  | 2.91   | 1.926   |

### Performance Curves 性能曲线

PLN3626G-1249-R50(Bare Motor) 12V



PLN3626G-1190-R50(Bare Motor) 24V



# PLN3630G-R50

## 直流无刷减速电机 Brushless DC Gear Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 2W~18W  
WEIGHT: 260g (APPROX)

### Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

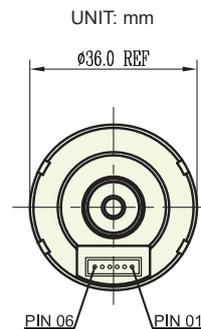
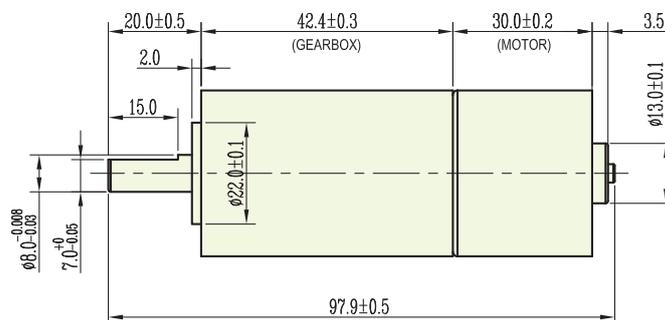
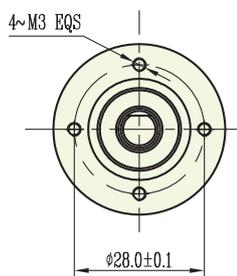
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

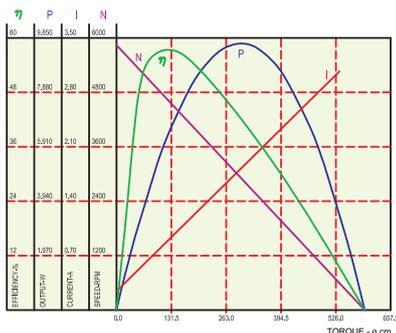


## Specifications 特性参数

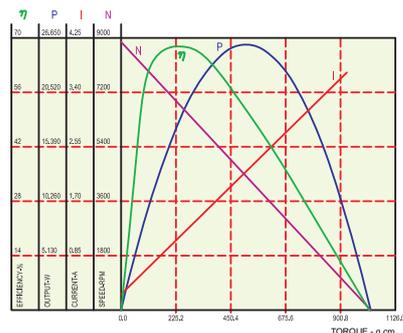
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN3630G-1249-R50 | 8V~16V          | 12 V  | 58        | 0.249   | 49                    | 0.638   | 1.03   | 6.51   | 4.93   | 3.45    |
| PLN3630G-1877-R50 | 8V~26V          | 18 V  | 94        | 0.209   | 77                    | 0.957   | 1.11   | 11.58  | 6.11   | 4.37    |
| PLN3630G-2412-R50 | 8V~26V          | 24 V  | 148       | 0.184   | 122                   | 0.872   | 0.86   | 14.45  | 5.06   | 4.23    |

## Performance Curves 性能曲线

PLN3630G-1249-R50(Bare Motor) 12V



PLN3630G-2412-R50(Bare Motor) 24V





# PLN3640G-R50

## 直流无刷减速电机 Brushless DC Gear Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 5W~30W  
WEIGHT: 300g (APPROX)

Typical Application 典型应用

- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

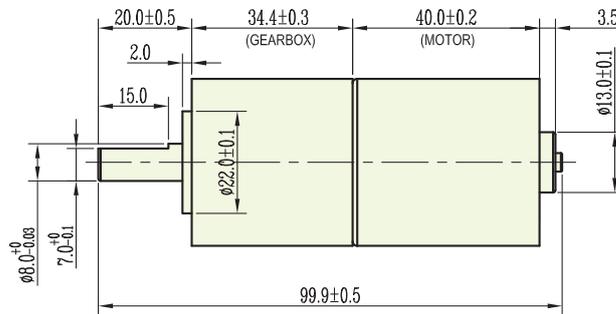
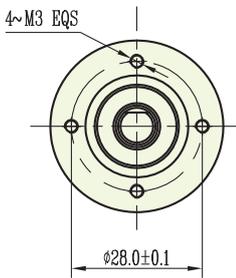
Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

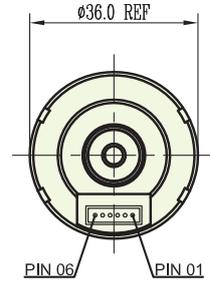
### Outline Dimension 外形图

#### DIRECTION OF ROTATION

(CCW) ← (CW)



UNIT: mm

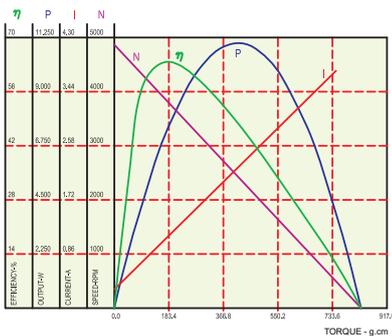


### Specifications 特性参数

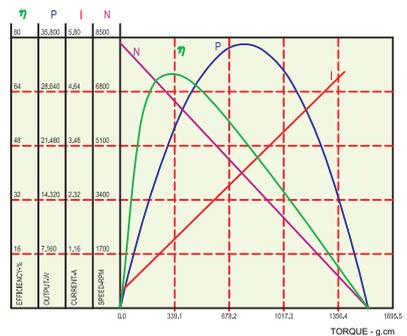
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN3640G-4840-R50 | 8V~16V          | 12 V  | 48        | 0.16    | 40                    | 0.818   | 1.09   | 6.028  | 6.88   | 4.271   |
| PLN3640G-1812-R50 | 8V~26V          | 18 V  | 141       | 0.19    | 120                   | 1.071   | 0.79   | 13.055 | 5.29   | 6.066   |
| PLN3640G-2485-R50 | 8V~26V          | 24 V  | 103       | 0.247   | 85                    | 1.186   | 1.73   | 20.205 | 10.17  | 5.769   |

### Performance Curves 性能曲线

PLN3640G-1240-R50(Bare Motor) 12V



PLN3640G-2485-R50(Bare Motor) 24V





# PLN3650G-R50

## 直流无刷减速电机 Brushless DC Gear Motor

INNER ROTOR SERIES  
OUTPUT: APPROX 5W~40W  
WEIGHT: 300g (APPROX)

### Typical Application 典型应用

- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

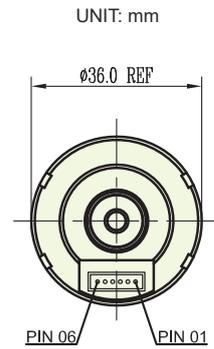
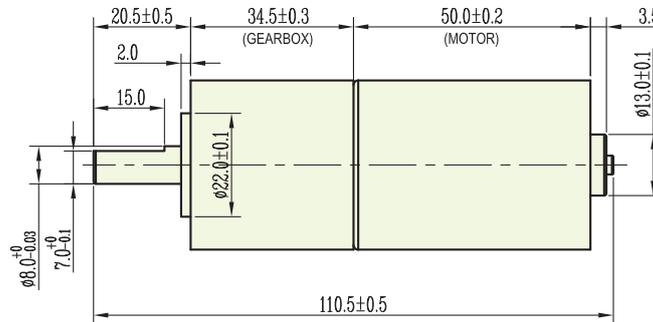
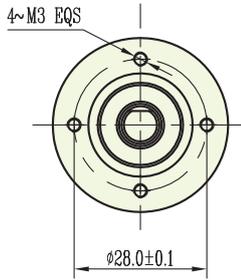
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← (CW)

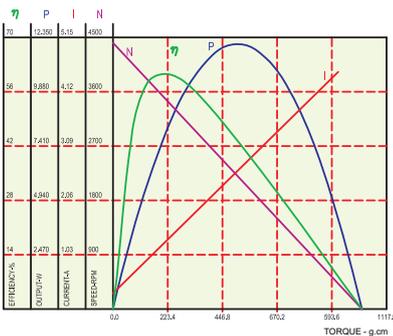


## Specifications 特性参数

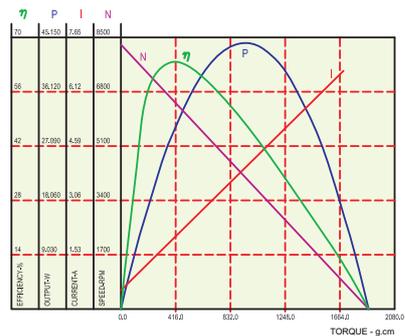
| MODEL             | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min   | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN3650G-1235-R50 | 8V~16V          | 12 V  | 43      | 0.28    | 35                    | 1.197   | 1.58   | 7.586  | 8.37   | 5.104   |
| PLN3650G-1893-R50 | 8V~26V          | 18 V  | 111     | 0.3     | 93                    | 1.552   | 1.37   | 17.43  | 8.09   | 7.537   |
| PLN3650G-2411-R50 | 8V~26V          | 24 V  | 140     | 0.4     | 114                   | 1.794   | 1.78   | 27.77  | 9.36   | 7.628   |

## Performance Curves 性能曲线

PLN3650G-1235-R50(Bare Motor) 12V



PLN3650G-2411-R50(Bare Motor) 24V



# PLN3657G-R50

## 直流无刷减速电机 Brushless DC Gear Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 5W~50W  
WEIGHT: 350g (APPROX)

### Typical Application 典型应用

- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

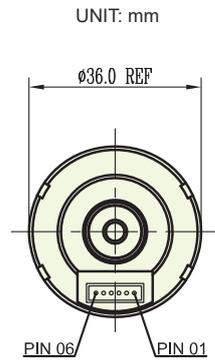
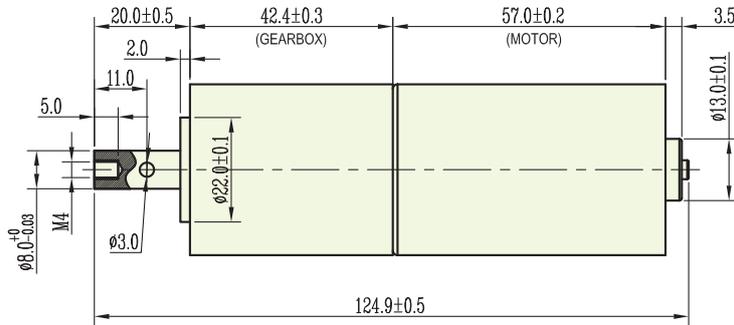
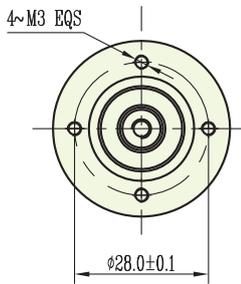
### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

### DIRECTION OF ROTATION

(CCW) ← → (CW)



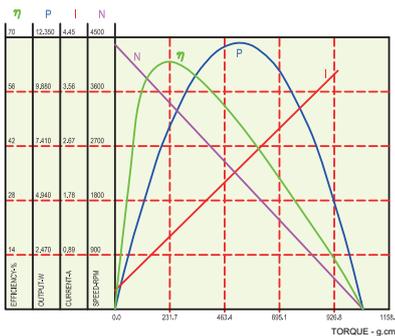
UNIT: mm

## Specifications 特性参数

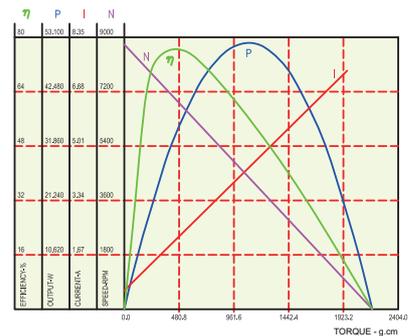
| MODEL             | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min   | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN3657G-1243-R50 | 8V~16V          | 12 V  | 52      | 0.19    | 43                    | 0.904   | 1.54   | 6.963  | 7.26   | 4.405   |
| PLN3657G-1810-R50 | 8V~26V          | 18 V  | 127     | 0.22    | 108                   | 1.174   | 1.05   | 14.85  | 6.98   | 6.604   |
| PLN3657G-2472-R50 | 8V~26V          | 24 V  | 86      | 0.28    | 72                    | 1.572   | 3.02   | 28.53  | 18.85  | 8.342   |

## Performance Curves 性能曲线

PLN3657G-1243-R50(Bare Motor) 12V



PLN3657G-1243-R50(Bare Motor) 24V



# PLN4235G-R50

## 直流无刷减速电机 Brushless DC Gear Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 5W~35W  
WEIGHT: 300g (APPROX)

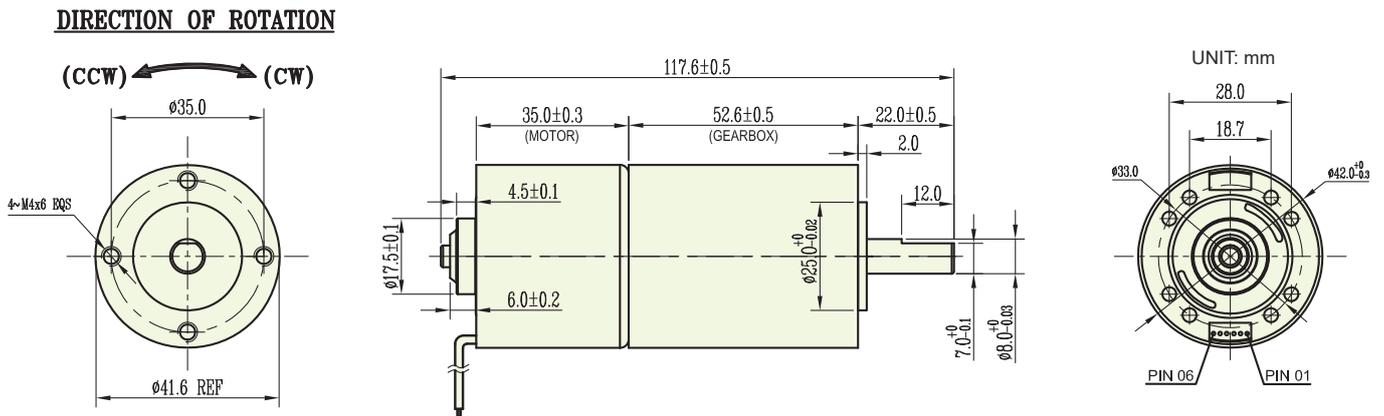
### Typical Application 典型应用

- 电动工具 (Power Tools)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

### Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

## Outline Dimension 外形图

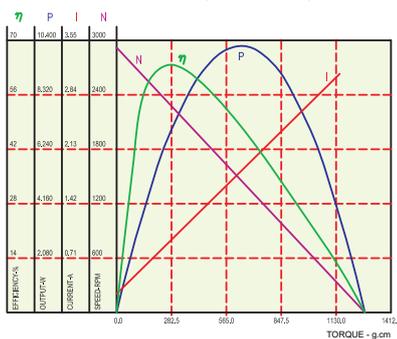


## Specifications 特性参数

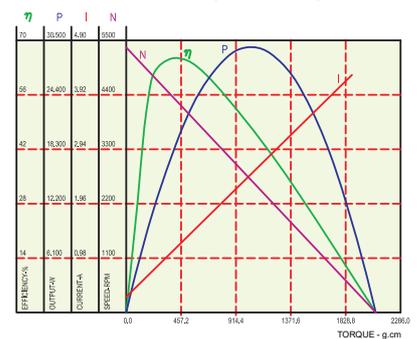
| MODEL             | VOLTAGE         |       | NO - LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|-----------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED     | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min     | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN4235G-1222-R50 | 8V~16V          | 12 V  | 28        | 0.21    | 22                    | 0.9     | 2.22   | 6.63   | 10.25  | 3.529   |
| PLN4235G-1821-R50 | 8V~26V          | 18 V  | 26        | 0.25    | 21                    | 1.15    | 4.95   | 13.85  | 24.96  | 5.123   |
| PLN4235G-2435-R50 | 8V~26V          | 24 V  | 43        | 0.30    | 35                    | 1.22    | 4.18   | 19.5   | 20.56  | 4.871   |

## Performance Curves 性能曲线

PLN4235G-1222-R50(Bare Motor) 12V



PLN4235G-2435-R50(Bare Motor) 24V



# PLN4260G-R50

## 直流无刷减速电机 Brushless DC Gear Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 10W~60W  
WEIGHT: 700g (APPROX)

Typical Application 典型应用

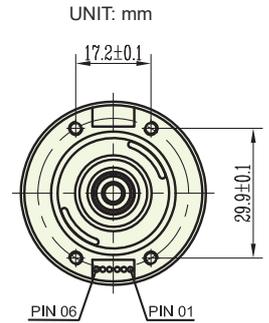
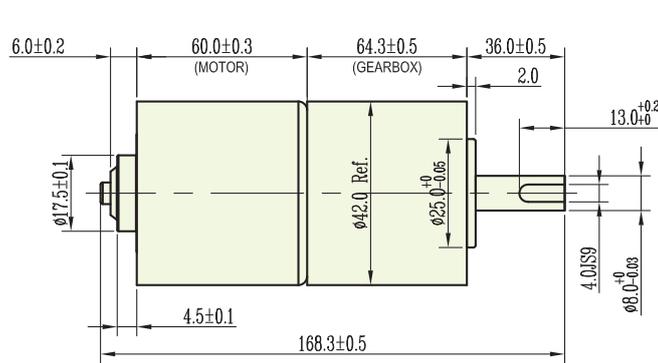
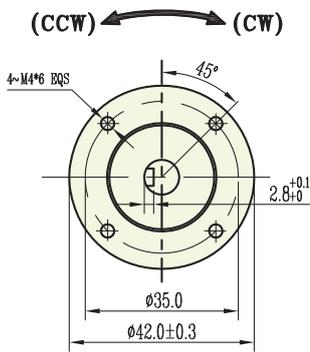
- 机械设备 (Industry Apparatus)
- 家用电器 (Home Application)
- 个人护理 (Personal Care)
- 商业设备 (Business Equipment)
- 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

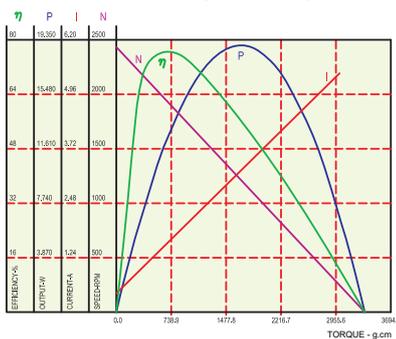


### Specifications 特性参数

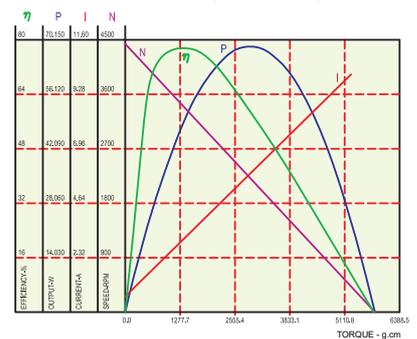
| MODEL             | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min   | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN4260G-1226-R50 | 8V~15V          | 12 V  | 33      | 0.19    | 26                    | 0.78    | 3.2    | 12.91  | 16.3   | 3.25    |
| PLN4260G-1824-R50 | 8V~26V          | 18 V  | 36      | 0.35    | 24                    | 2.51    | 7.4    | 24.32  | 43.6   | 6.02    |
| PLN4260G-2413-R50 | 8V~26V          | 24 V  | 170     | 0.32    | 131                   | 2.56    | 2.6    | 35.01  | 6.4    | 6.22    |

### Performance Curves 性能曲线

PLN4260G-1226-R50(Bare Motor) 12V



PLN4260G-2413-R50(Bare Motor) 24V



# PLN4275G-R50

## 直流无刷减速电机 Brushless DC Gear Motor



INNER ROTOR SERIES  
OUTPUT: APPROX 10W~90W  
WEIGHT: 500g (APPROX)

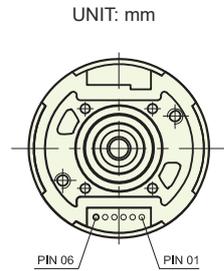
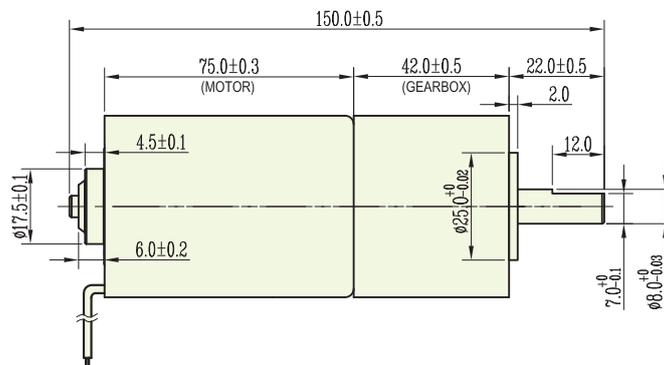
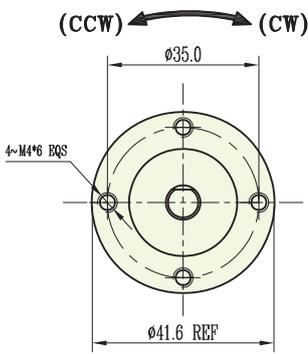
- Typical Application 典型应用
- 电动工具 (Power Tools)
  - 家用电器 (Home Application)
  - 个人护理 (Personal Care)
  - 商业设备 (Business Equipment)
  - 医疗器械 (Medical Device)

Motor Terminals 电机端口

| NO. | PIN ARRANGEMENT |
|-----|-----------------|
| 1   | VCC             |
| 2   | FG              |
| 3   | CW/CCW          |
| 4   | GND             |
| 5   | PWM             |
| 6   | BRAKE           |

### Outline Dimension 外形图

#### DIRECTION OF ROTATION

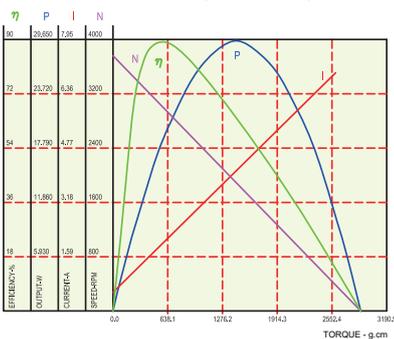


### Specifications 特性参数

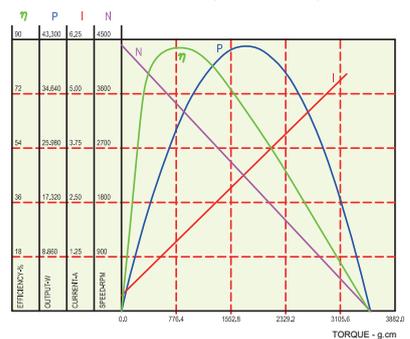
| MODEL             | VOLTAGE         |       | NO-LOAD |         | AT MAXIMUM EFFICIENCY |         |        |        | STALL  |         |
|-------------------|-----------------|-------|---------|---------|-----------------------|---------|--------|--------|--------|---------|
|                   | OPERATING RANGE | RATED | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE | OUTPUT | TORQUE | CURRENT |
|                   |                 |       | r/min   | A       | r/min                 | A       | N.m    | W      | N.m    | A       |
| PLN4275G-1261-R50 | 8V~16V          | 12 V  | 72      | 0.25    | 61                    | 1.35    | 1.76   | 11.2   | 11.06  | 7.02    |
| PLN4275G-1892-R50 | 8V~26V          | 18 V  | 108     | 0.32    | 92                    | 1.75    | 2.28   | 22.1   | 15.32  | 9.87    |
| PLN4275G-2410-R50 | 8V~26V          | 24 V  | 120     | 0.20    | 102                   | 1.10    | 1.84   | 19.8   | 12.39  | 6.24    |

### Performance Curves 性能曲线

PLN4275G-1261-R50(Bare Motor) 12V



PLN4275G-2410-R50(Bare Motor) 24V





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