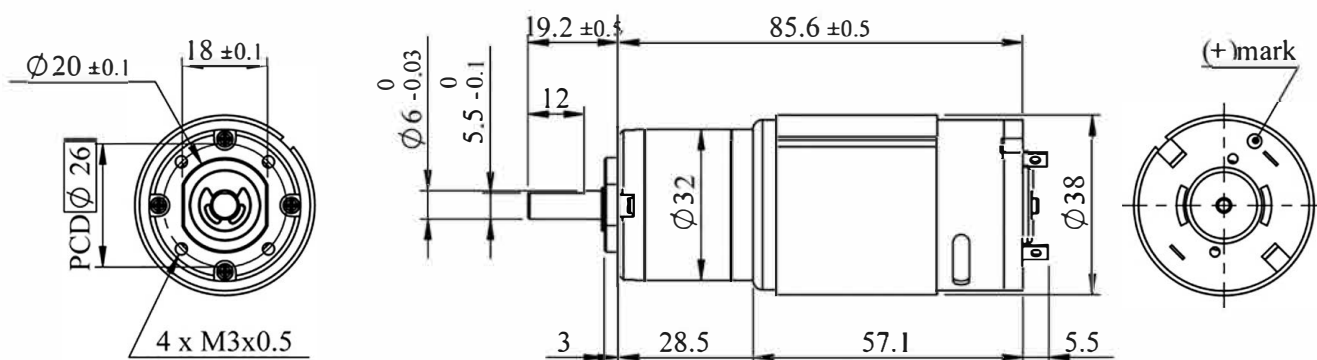


#### DIRECTION OF ROTATION



## SPECIFICATIONS

### DC Planetary Gear Brush Motor



(unit:mm)

#### A. Operating Conditions:

|   |                         |      |        |   |                       |            |    |
|---|-------------------------|------|--------|---|-----------------------|------------|----|
| 1 | Operating Voltage Range | 6~12 | VDC    | 4 | Operating Temperature | -10~+60    | °C |
| 2 | Rated Voltage           | 12   | VDC    | 5 | Storage Temperature   | -30~+85    | °C |
| 3 | Rated Load              | 4.5  | kgf-cm | 6 | Test Position         | Horizontal | ~  |

#### B. Electrical Characteristics:

|   |                      |        |        |    |                          |          |     |
|---|----------------------|--------|--------|----|--------------------------|----------|-----|
| 1 | Max. No-load Current | 0.52   | A      | 6  | Max. Stall Current       | 20       | A   |
| 2 | No-load Speed        | 313±31 | rpm    | 7  | Insulation Resist.(500V) | 20       | MΩ  |
| 3 | Rated-load Current   | 2.0    | A      | 8  | Dielectric Strength      | 250      | VAC |
| 4 | Rated-load Speed     | 276±28 | rpm    | 9  | Motor Brush Type         | Graphite | ~   |
| 5 | Min. Stall Torque    | 30     | kgf-cm | 10 | Output Power at Max.Eff. | 13       | W   |

#### C. Mechanical Characteristics:

|   |                          |           |        |    |                        |           |       |
|---|--------------------------|-----------|--------|----|------------------------|-----------|-------|
| 1 | Gear Type                | Planetary | ~      | 7  | Max. Shaft Radial Load | 3.5       | kgf   |
| 2 | Gear Ratio               | 121/3249  | ~      | 8  | Max. Shaft Runout      | 0.05      | mm    |
| 3 | Gear Material            | Metal     | ~      | 9  | Max. Shaft End Play    | 0.30      | mm    |
| 4 | Rated Tolerance Torque   | 10        | kgf-cm | 10 | Bearing Type           | Dual Ball | ~     |
| 5 | Moment. Tolerance Torque | 20        | kgf-cm | 11 | Net Weight             | 330±20    | grams |
| 6 | Max. Shaft Axial Load    | 2.5       | kgf    |    |                        |           |       |