

NFP-GM37-550

6V / 12V / 24V 37mm diameter brushed DC gearmotor



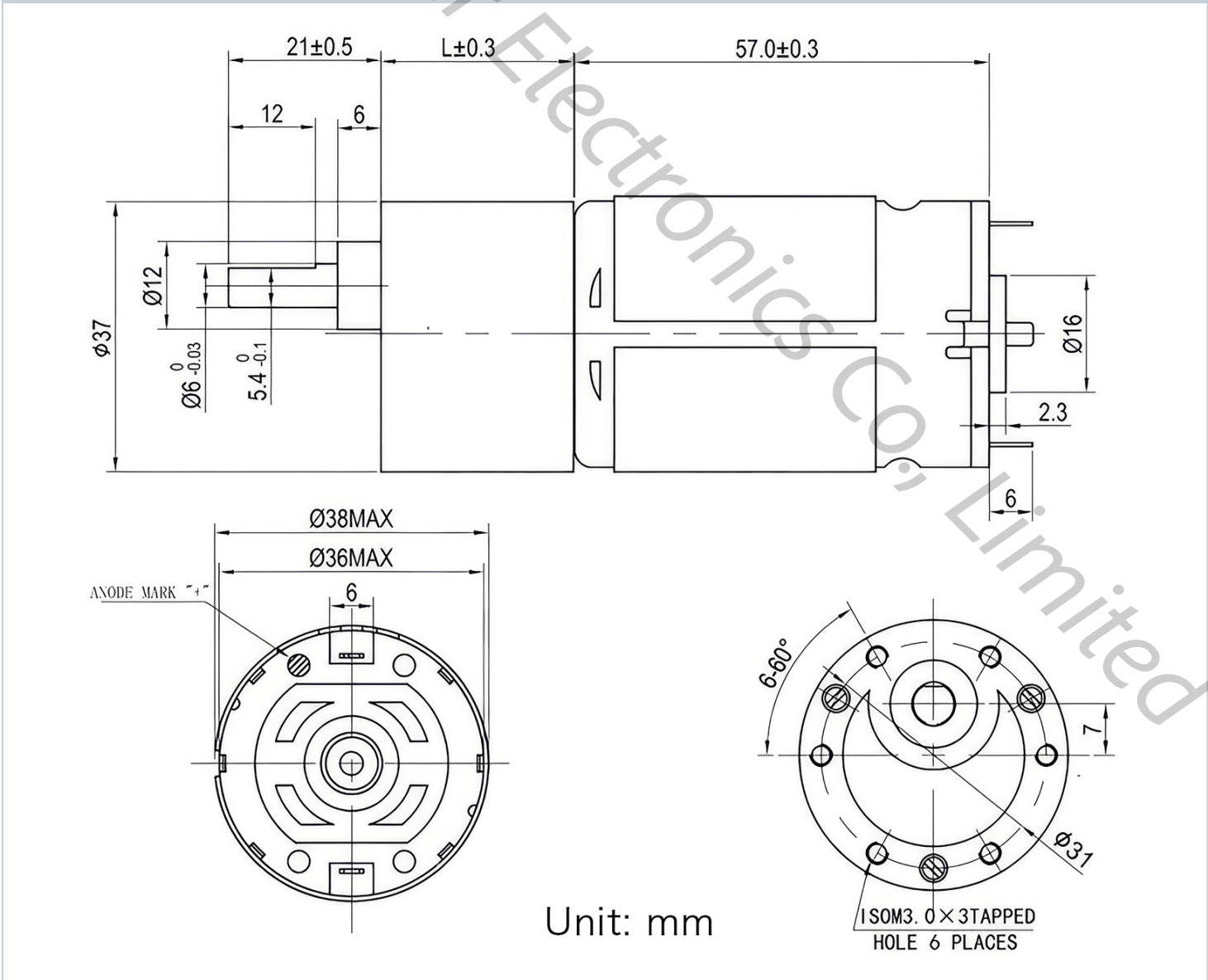
- 1. Compact 37mm metal gearmotor based on a 550-size permanent magnet brushed DC motor.
- 2. Available in 6V, 12V, and 24V windings with 10W to 85W motor options.
- 3. Reduction ratios cover low-speed, high-torque output from 6.3:1 through 810:1.
- 4. Metal gearbox, sintered bearings, and CW/CCW operation support automation and robotics use.
- 5. Custom output shafts and optional encoder configurations are available for speed or position feedback.

37mm GEARBOX DIAMETER	6V-24V VOLTAGE OPTIONS	6.3-810:1 RATIO OPTIONS	10W-85W MOTOR POWER
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PRODUCT OPTIONS

Model	Voltage	Power	Available Reduction Ratios
NFP-GM37-550-0610	6V	10W	6.3:1, 10:1, 18:1, 30:1, 50:1, 90:1, 150:1, 270:1, 450:1, 810:1
NFP-GM37-550-1221	12V	21W	
NFP-GM37-550-1240	12V	40W	
NFP-GM37-550-2485	24V	85W	

OUTLINE DRAWING



Performance Data

Published performance rows for 6V 10W and 12V 21W motor options

NFP-GM37-550-0610 | 6V 10W

No-load speed tolerance: ±15%

Ratio	Gearbox Length	No-load Current	No-load Speed	Rated Current	Rated Speed	Rated Torque	Stall Current
6.3:1	19mm	≤950mA	1,300rpm	≤3.5A	850rpm	98mNm	10A
10:1	19mm	≤950mA	820rpm	≤3.5A	535rpm	147.1mNm	10A
18:1	21.5mm	≤950mA	450rpm	≤3.5A	285rpm	274.5mNm	10A
30:1	21.5mm	≤950mA	275rpm	≤3.5A	180rpm	441.2mNm	10A
50:1	24mm	≤950mA	165rpm	≤3.5A	105rpm	735.3mNm	10A
90:1	24mm	≤950mA	90rpm	≤3.5A	60rpm	1,274.5mNm	10A
150:1	26.5mm	≤950mA	55rpm	≤3.5A	36rpm	2,059mNm	10A
270:1	26.5mm	≤950mA	30rpm	≤3.5A	20rpm	Max 3.4Nm	10A
450:1	29mm	≤950mA	18rpm	≤3.5A	16rpm	Max 3.4Nm	10A

NFP-GM37-550-1221 | 12V 21W

No-load speed tolerance: ±15%

Ratio	Gearbox Length	No-load Current	No-load Speed	Rated Current	Rated Speed	Rated Torque	Stall Current
6.3:1	19mm	≤450mA	1,200rpm	≤3.5A	840rpm	196.1mNm	13A
10:1	19mm	≤450mA	750rpm	≤3.5A	525rpm	294.1mNm	13A
18:1	21.5mm	≤450mA	415rpm	≤3.5A	280rpm	539.2mNm	13A
30:1	21.5mm	≤450mA	250rpm	≤3.5A	175rpm	882.3mNm	13A
50:1	24mm	≤450mA	150rpm	≤3.5A	105rpm	1,470.6mNm	13A
90:1	24mm	≤450mA	83rpm	≤3.5A	58rpm	2,647.1mNm	13A
150:1	26.5mm	≤450mA	50rpm	≤3.5A	35rpm	Max 3.4Nm	13A
270:1	26.5mm	≤450mA	27rpm	≤3.5A	21rpm	Max 3.4Nm	13A
450:1	29mm	≤450mA	16rpm	≤3.5A	12rpm	Max 3.4Nm	13A

NFP-GM37-550-1240 | 12V 40W

No-load speed tolerance: ±15%

Ratio	Gearbox Length	No-load Current	No-load Speed	Rated Current	Rated Speed	Rated Torque	Stall Current
6.3:1	19mm	≤1100mA	2,650rpm	≤6A	1,700rpm	196.1mNm	20A
10:1	19mm	≤1100mA	1,650rpm	≤6A	1,100rpm	294.1mNm	20A
18:1	21.5mm	≤1100mA	875rpm	≤6A	580rpm	539.2mNm	20A
30:1	21.5mm	≤1100mA	550rpm	≤6A	360rpm	882.3mNm	20A
50:1	24mm	≤1100mA	330rpm	≤6A	215rpm	1,470.6mNm	20A
90:1	24mm	≤1100mA	180rpm	≤6A	120rpm	2,647.1mNm	20A
150:1	26.5mm	≤1100mA	110rpm	≤6A	70rpm	Max 3.4Nm	20A
270:1	26.5mm	≤1100mA	60rpm	≤6A	50rpm	Max 3.4Nm	20A
450:1	29mm	≤1100mA	36rpm	≤6A	24rpm	Max 3.4Nm	20A

NFP-GM37-550-2485 | 24V 85W

No-load speed tolerance: ±15%

Ratio	Gearbox Length	No-load Current	No-load Speed	Rated Current	Rated Speed	Rated Torque	Stall Current
6.3:1	19mm	≤650mA	2,400rpm	≤7.5A	1,680rpm	392.2mNm	26A
10:1	19mm	≤650mA	1,500rpm	≤7.5A	1,050rpm	588.2mNm	26A
18:1	21.5mm	≤650mA	830rpm	≤7.5A	560rpm	1,078mNm	26A
30:1	21.5mm	≤650mA	500rpm	≤7.5A	350rpm	1,765mNm	26A
50:1	24mm	≤650mA	300rpm	≤7.5A	210rpm	2,941mNm	26A
90:1	24mm	≤650mA	165rpm	≤7.5A	120rpm	Max 3.4Nm	26A
150:1	26.5mm	≤650mA	100rpm	≤7.5A	75rpm	Max 3.4Nm	26A
270:1	26.5mm	≤650mA	54rpm	≤7.5A	45rpm	Max 3.4Nm	26A
450:1	29mm	≤650mA	32rpm	≤7.5A	25rpm	Max 3.4Nm	26A

NOTES

Motor Type	Brushed permanent magnet DC gear motor
Operation	CW/CCW reversible operation
Maximum Output Torque	Values marked "Max 3.4Nm" indicate the published rated torque limit for those ratio rows.

APPLICATIONS AND SOURCE

TYPICAL APPLICATIONS

Robotics, industrial automation, medical devices, vending equipment, smart lock drives, curtain drives, autonomous equipment, and other compact high-torque mechanisms.