

# GM3506 Encoder Specifications Standard

## Appearance requirements

NO.	Project	Requirement	Remarks
1	Motor diameter (mm)	$\Phi 40 \pm 0.05 \text{mm}$	Factory Inspection Items
2	Motor length (mm)	$25.8 \pm 0.2$ (With encoder) mm	Factory Inspection Items
3	Motor slot/pole number	24N/22P	Factory Inspection Items
4	Axial outer diameter (mm)	$\Phi 12 - 0.008 / - 0.012$ mm	Factory Inspection Items
5	Inner diameter of shaft (mm)	$8.6 + 0.05 / 0$ mm	Factory Inspection Items
6	wire length (mm)	$610 \pm 3$ mm Without Plug	Factory Inspection Items
7	The color of the line	24# black silicone terminal wire	Factory Inspection Items
8	weight (g)	$72 \pm 0.2 \text{g}$	Factory Inspection Items
9	plug	2.5 Spacing black DuPont head	Factory Inspection Items
10	Axial clearance (virtual position)	0	Factory Inspection Items

## Performance Requirement

NO.	Project		Requirement	Remarks
1	No-load	voltage (V)	16V	KV box
		current (A)	$0.17 \pm 0.05$ A	Factory Inspection Items
		speed (RPM)	2149~2375 RPM	Factory Inspection Items
2	Load	voltage (V)	12	Factory Inspection Items
		current (A)	1	Factory Inspection Items
		torsion ( $G \bullet cm$ )	600-1000	Factory Inspection Items
3	Number of windings (T)		The temperature is $0.21 \times 1-34T$ and the Y connection is used	
4	Wired internal resistance of finished product (mΩ)		$5.6\Omega \pm 5\%$ (The resistance will change with the ambient temperature. If the resistance exceeds the standard range due to environmental changes, the standard should be signed again)	Factory Inspection Items
5	high voltage test		DC500V 1mA 2 Seconds	Factory Inspection Items
6	The rotor housing jumps		$\leq 0.1 \text{mm}$	Process sampling items
7	Translation (shaft extension view)		Clockwise (unified test wiring)	Factory Inspection Items
8	High temperature test		60°C Keep 100 hours, and the motor can work normally after 24 hours at room temperature	Process sampling items

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9	Cold test	-20°C Keep for 100 hours, and the motor can work normally after 24 hours at room temperature	Process sampling items
10	maximum power	$\leq 25W$	
11	Use voltage range	2-3S (calculated according to lithium battery 3.7-4.2V/S)	Constant power
12	service environment	Temperature: -20~60°C, humidity: 10~90%RH	Normal temperature and humidity