

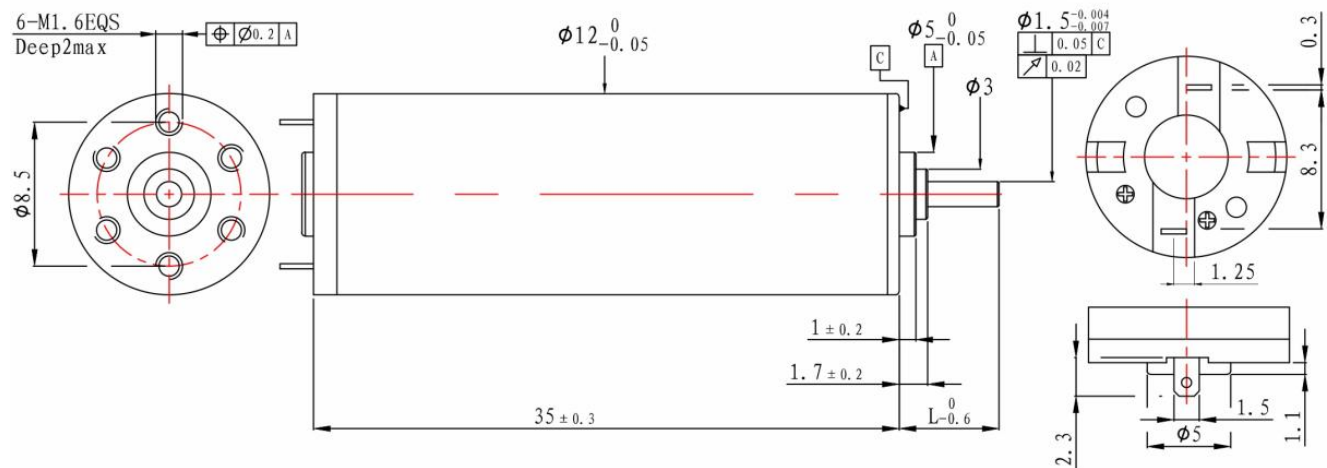
BDCM Series

Coreless Precious Metal Brushed DC Motor



BDCM1235 Motor Data1-3W

Motor Model	Unit	BDCM1235-01	BDCM1235-02	BDCM1235-03	BDCM1235-04
Value at Rated voltage					
At Nominal					
1. Nominal voltage	V/DC	3.7	6	12	24
2. Nominal speed	rpm	8500	9350	10350	10000
3. Nominal current	A	0.56	0.4	0.15	0.08
4. Nominal torque	mNm	1.8	1.91	1.26	1.28
Free Load					
5. No-load speed	rpm	10000	11000	11500	10000
6. No-load current	mA	40	30	20	20
At Max. Efficiency					
7. Max. efficiency	%	79.8	79.3	76.7	66.8
8. Speed	rpm	8750	9625	10350	9000
9. Current	A	0.473	0.339	0.148	0.078
10. Torque	mNm	1.5	1.6	1.3	1.3
At Max. Output power					
11. Max.output power	W	3.2	3.7	3.8	3.4
12. Speed	rpm	5000	5500	5750	5000
13. Current	A	1.8	1.3	0.7	0.3
14. Torque	mNm	6.0	6.4	6.3	6.4
At Stall					
15. Stall current	A	3.5	2.5	1.3	0.60
16. Stall torque	mNm	12.1	12.7	12.6	12.8
Motor Constants					
17. Terminal resistance	Ω	1.06	2.4	9.23	40
18. Terminal inductance	mH	0.025	0.006	0.312	1.250
19. Torque constant	mNm/A	3.45	5.08	9.66	21.42
20. Speed constant	rpm/V	2702.7	1883.3	958.3	416.7
21. Speed/torque constant	rpm/mNm	827.5	865.4	915.7	778.2
22. Mechanical time constant	ms	10.5	9.44	7.62	7.38
23. Rotor inertia	gcm ²	0.594	0.53	0.545	0.454
24. Number of pole pairs	1				
25. Number of phase	5				
26. Weight of motor	g	17			
27. Typical noise level	dB	≤38			

Motor Drawing (mm)**Φ12*L35mm****Technical Specifications**

- 1. Axial play:** 0.05–0.15 mm
- 2. Sintered metal bearing load limits:**
 - Max. axial load (dynamic): 0.8 N
 - Max. radial load (5 mm from flange): 0.5 N
 - Max. press-fit force (static): 35 N
- 3. Radial play:** ≤ 0.012 mm
- 4. Ambient temperature range:** -20 to +80°C
- 5. Relative humidity:** <90% RH (25°C)
- 6. Highest rotor temperature:** 85°C

Values listed in the table are nominal.

Motor terminal definition

- 1. +** Vcc
- 2. -** GND

Optional Parts

- 1. Planetary gearbox**

