

BDCM Series

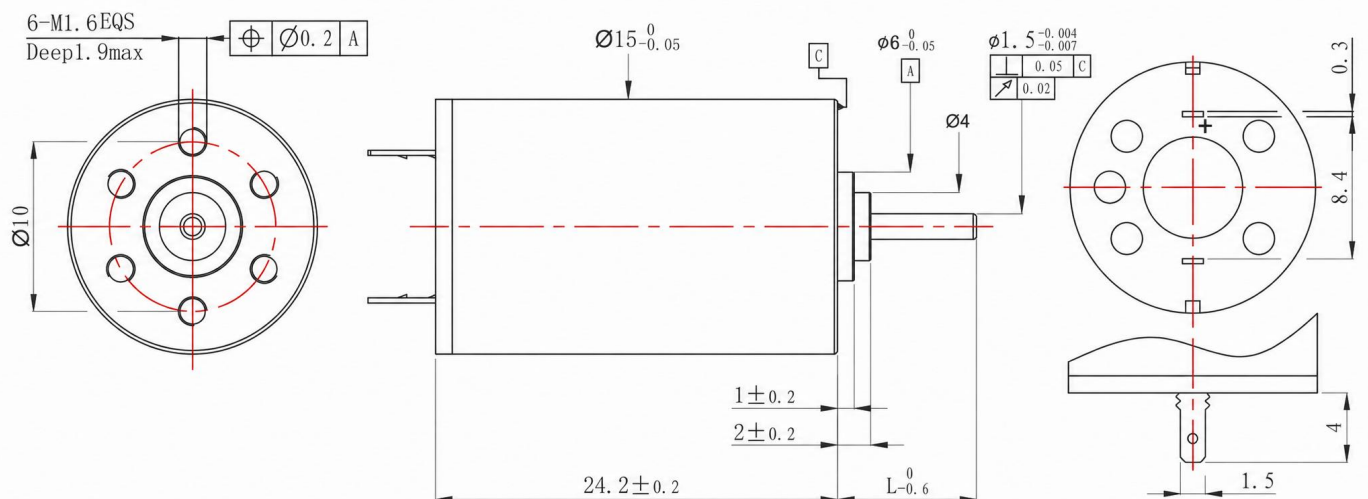
Coreless Precious Metal Brushed DC Motor



BDCM1524 Motor Data

2-4W

Motor Model	Unit	BDCM1524-01	BDCM1524-02	BDCM1524-03	BDCM1524-04
Value at Rated voltage					
At Nominal					
1. Nominal voltage	V/DC	3	6	12	24
2. Nominal speed	rpm	8560	9840	9440	7600
3. Nominal current	A	0.6	0.4	0.2	0.1
4. Nominal torque	mNm	1.6	1.8	1.7	1.4
Free Load					
5. No-load speed	rpm	10700	12300	11800	9500
6. No-load current	mA	40	20	11	4
At Max. Efficiency					
7. Max. efficiency	%	78.2	81.0	79.3	78.2
8. Speed	rpm	9577	11193	10561	8503
9. Current	A	0.30	0.20	0.10	0.03
10. Torque	mNm	0.8	0.8	0.9	0.7
At Max. Output power					
11. Max.output power	W	2.2	2.9	2.7	1.8
12. Speed	rpm	5350	6150	5900	4750
13. Current	A	1.5	1.0	0.5	0.2
14. Torque	mNm	3.9	4.6	4.4	3.5
At Stall					
15. Stall current	A	3.0	2.0	0.9	0.3
16. Stall torque	mNm	7.8	9.1	8.7	7.0
Motor Constants					
17. Terminal resistance	Ω	1.00	3.00	13.04	80.00
18. Terminal inductance	mH	0.02	0.05	0.23	1.05
19. Torque constant	mNm/A	2.64	4.61	9.60	23.80
20. Speed constant	rpm/V	3566.7	2050.0	983.3	395.8
21. Speed/torque constant	rpm/mNm	1368.4	1347.1	1352.9	1348.3
22. Mechanical time constant	ms	11.0	10.1	11.9	11.9
23. Rotor inertia	gcm ²	0.77	0.72	0.84	0.84
24. Number of pole pairs		1			
25. Number of phase		5			
26. Weight of motor	g	22			
27. Typical noise level	dB	≤40			

Motor Drawing (mm)**Φ15*L24mm****Technical Specifications**

1. Axial play: 0.05-0.15 mm
2. Sintered metal bearing load limits:
 - Max. axial load (dynamic): 0.3 N
 - Max. radial load (5 mm from flange): 1.2 N
 - Max. press-fit force (static): 20 N
3. Radial play: ≤ 0.012 mm
4. Ambient temperature range: -20 to +80°C
5. Relative humidity: <90% RH at 25°C
6. Highest rotor temperature: 85°C

Motor terminal definition

1. + Vcc
2. - GND

Optional Parts

1. Planetary gearbox

