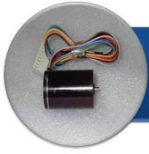
**BL1630****Report for Brushless Motor Testing Data Sheet**

Series No: BL1630(1632)- - - P 2

No.	Testing Item		Tested Values				Unit
1	Nominal voltage	U_N	5	9	12	24	V
2	Terminal resistance, phase to phase	R	8.7	8.2	7.8	62	Ω
3	Output power	P_{2max}	0.65	2.21	4.15	1.76	W
4	Efficiency	η_{max}	60	59	60	41	%
5	No-load speed	n_o	5200	10000	14500	12010	rpm
6	No-load current	I_o	0.03	0.06	0.08	0.05	A
7	Stall torque	M_H	4.74	8.43	10.93	5.60	mNm
8	Friction torque	MF	0.26	0.49	0.60	0.83	mNm
9	Speed constant	k_n	1097.28	1175.36	1274.61	574.64	rpm/V
10	Back-EMF constant	k_E	0.91	0.85	0.78	1.74	mV/rpm
11	Torque constant	k_M	8.70	8.12	7.49	16.62	mNm/A
12	Current constant	k_I	0.11	0.12	0.13	0.06	A/mNm
13	Slope of n-M curve	$\Delta n/\Delta M$	1096.94	1186.28	1327.03	2143.95	rpm/mNm
14	Mechanical time constant	τ_m	6.43	6.96	7.78	12.57	ms
15	Rotor inertia	J	0.56	0.56	0.56	0.56	gcm ²
16	Angular acceleration	α_{max}	84.65	150.53	195.12	100.03	10 ³ rad/s ²
17	Sensor		Sensorless	Sensorless	SL&HS	Hall Sensor	
18	Driver		DR1802	DR1802	DR1802&DR3006	DR3006	
19	Weight		27.5				g
20	Operating temperature range		-30~+85				
21	Commutation		Electronically commutation				
22	Ball Bearing		EZO & NMB				
23	Housing material		Aluminum, black anodized				
24	Magnet material		Sintered Nd-Fe-B				
25	Direction of rotation		Electronically reversible				
The Operating Data For η_{max} of Customer's Specifications							
26	Output Power	P_{2opt}	0.38	1.32	2.44	1.28	W
27	Efficiency	η_{opt}	60	59	60	41	%
28	Speed	n_{opt}	3267	6213	9120	5662	rpm
29	Load Current	I_{opt}	0.13	0.25	0.34	0.13	A
30	Operating Torque	M_{opt}	1.11	2.03	2.56	2.16	mNm

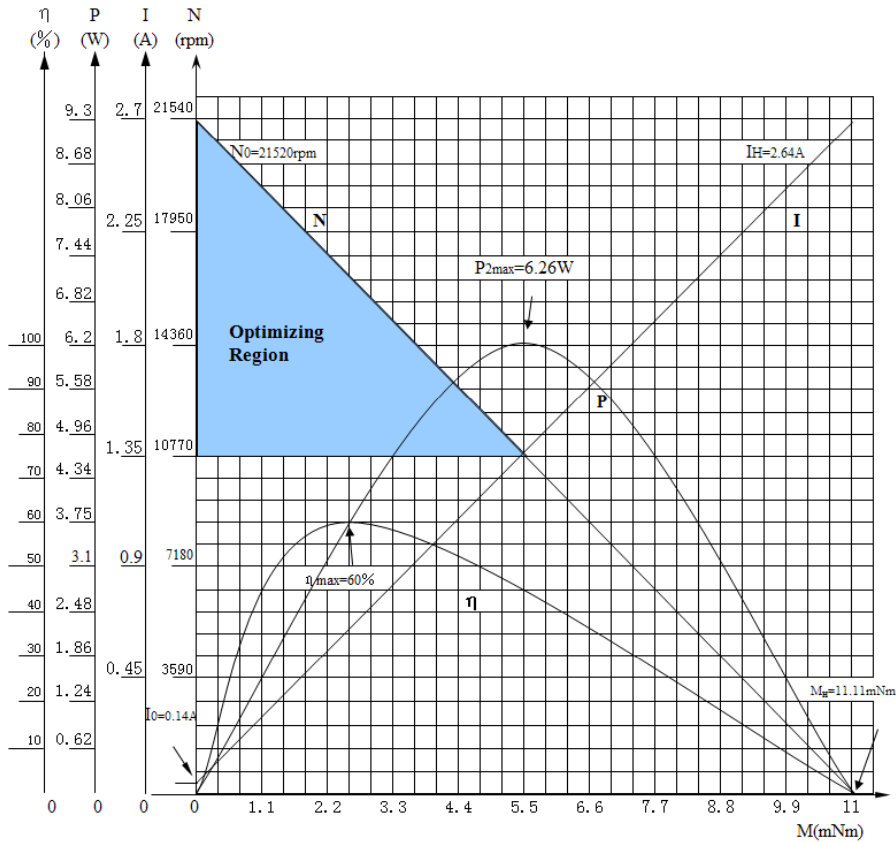
Note:

- (1) The I_o is pure current of motor in this data sheet that means it not included the driver's current..
- (2) This type of motor can be assemble for planetary Gearbox which type of IG16 and made from Shayang Ye Co., Taiwan, and please to see Gearbox' s sheet attached if you have need it.



BL1630

Operating Curve



Note:(1)The I_0 is pure current of motor in this curve drawing that means it not included the driver's current.

(2)We have suggested there has a optimizing region for this motor's operating as hatched in drawing.

Drawing

