



**BL7584IE**

**Report for Brushless Motor Testing Data Sheet**

**Series No: BL7584- IE- - P 4**

No.	Testing Item		Tested Values				Unit
1	Nominal voltage	$U_N$	24				V
2	Terminal resistance, phase to phase	$R$	2.1				$\Omega$
3	Output power	$P_{2max}$	63.39				W
4	Efficiency	$\eta_{max}$	65				%
5	No-load speed	$n_o$	5880				rpm
6	No-load current	$I_o$	0.44				A
7	Stall torque	$M_H$	411.81				mNm
8	Friction torque	$MF$	16.49				mNm
9	Speed constant	$k_n$	254.81				rpm/V
10	Back-EMF constant	$k_E$	3.92				mV/rpm
11	Torque constant	$k_M$	37.48				mNm/A
12	Current constant	$k_I$	0.03				A/mNm
13	Slope of n-M curve	$\Delta n/\Delta M$	14.28				rpm/mNm
14	Mechanical time constant	$\tau_m$	85.05				ms
15	Rotor inertia	$J$	568.82				gcm <sup>2</sup>
16	Angular acceleration	$\alpha_{max}$	7.24				10 <sup>3</sup> rad/s <sup>2</sup>
17	Sensor		Hall Sensor				
18	Driver		DR24				
19	Weight		1250				g
20	Operating temperature range		-30~+85				
21	Commutation		Electronically commutation				
22	Ball Bearing		NMB				
23	Housing material		Aluminum, black anodized				
24	Magnet material		Sintered Nd-Fe-B				
25	Direction of rotation		Electronically reversible				
<b>The Operating Data For <math>\eta_{max}</math> of Customer's Specifications</b>							
26	Output Power	$P_{2opt}$	40.57				W
27	Efficiency	$\eta_{opt}$	65				%
28	Speed	$n_{opt}$	4703				rpm
29	Load Current	$I_{opt}$	2.64				A
30	Operating Torque	$M_{opt}$	82.40				mNm

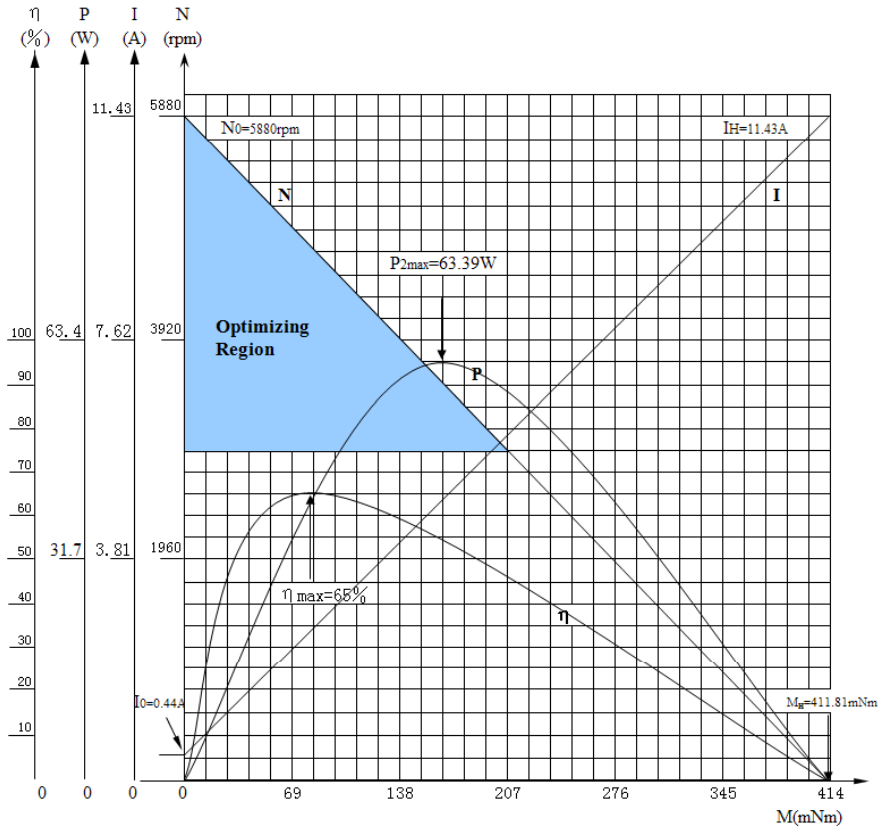
**Note:**

The  $I_o$  is pure current of motor in this data sheet that means it not included the driver's current.



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## 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

