D28mm Tops 6W COB LED

SLQ6WCOBx

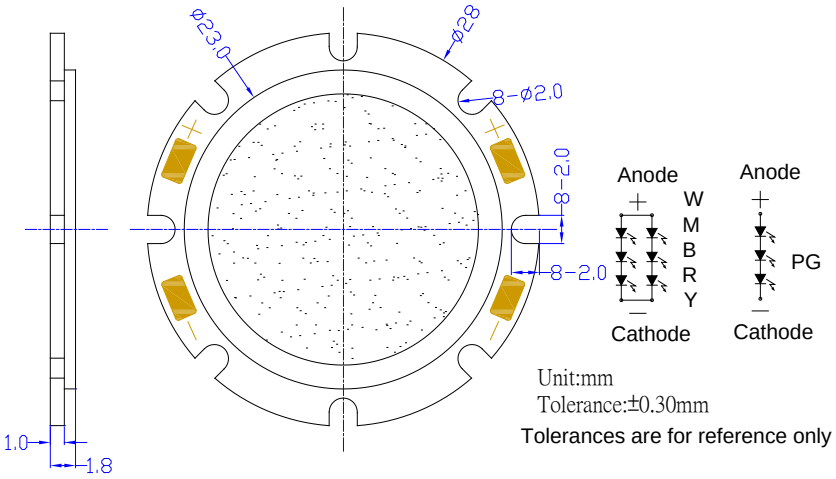
■ Features

- High-power LED
- Long lifetime operation
- Typical viewing angle : 140deg
- RoHS compliant
- Possible to attach to heat sink directly without using print circuit board.

■ Applications

- Indoor & outdoor lighting
- Light Bulb
- Reading lamps
- Display cases, furniture illumination, marker
- Architectural illumination
- Spotlights

■Outline Dimension



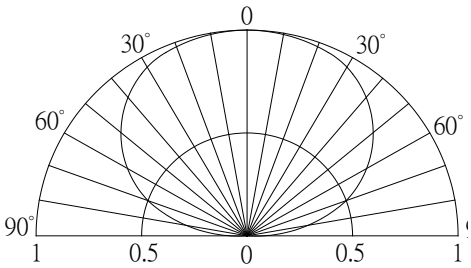
Unit:mm
Tolerance:±0.30mm
Tolerances are for reference only

■Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Value		Unit
		W/M/B/G	R/Y	
DC Forward Current *1	I_F	700	700	mA
Pulse Forward Current*2	I_{FP}	1200	1200	mA
Reverse Voltage	V_R	15	15	V
Power Dissipation*1	P_D	8,400	5,880	mW
Operating Temperature	Topr	-30 ~ +85		℃
Storage Temperature	Tstg	-40~ +100		℃
Lead Soldering Temperature	Tsol	260℃/5sec		-

*1, Power dissipation and forward current are the value when the module temperature is set lower than the rating by using an adequate heat sink.
*2, Pulse width Max.10ms Duty ratio max 1/10

■Directivity



■Electrical -Optical Characteristics (Ta=25℃)

Part Number	Color			V_F (V)			I_R(μA)	Φv(lm)*			λD(nm)*			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				I_F=600mA			V_R=5V	I_F=600mA						
SLQ6WCOBB	White	W		9.6	10.2	12.0	20	420	450	-	X=0.31, Y=0.33			140
SLQ6WCOBBC	Warm White	M		9.6	10.2	12.0	20	370	400		X=0.44, Y=0.41			140
SLQ6WCOBAZ	Blue	B		9.6	10.2	12.0	20	60	80	-	465	470	475	140
SLQ6WCOBVP	Pure Green	G		9.6	10.2	12.0	20	300	360	-	520	525	530	140
SLQ6WCOBAM	Yellow	Y		6.0	7.2	8.4	20	220	270	-	585	590	595	140
SLQ6WCOBR	Red	R		6.0	7.2	8.4	20	220	270	-	620	625	630	140

Note: Don't drive at rated current more than 5s without heat sink for High Power series.
* Tolerance of chromaticity coordinates is ±10% , *Tolerance of Domi Wavelength is ±1nm * Tolerance of Luminous Flux is ±20%

■Heat design

The following pictures show some measurements of mounted 5W Led on the heat sink for each board A and B (See Fig 1) with using thermograph to make an observation about heat distribution. Each boards is tested at various current conditions.
As a result, LED needs larger heat sink as much as possible to reduce its own case temperature.

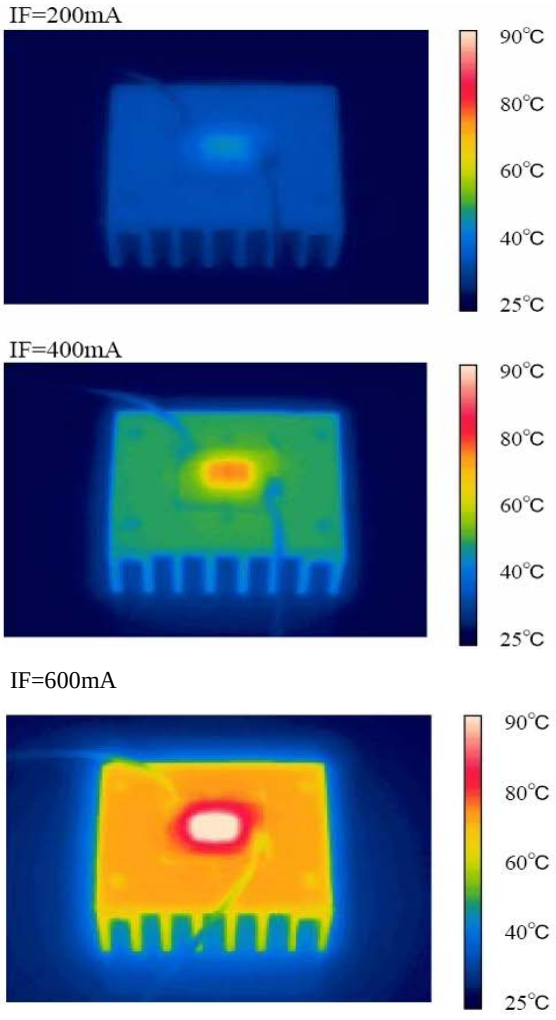
Fig. 1 Configuration pattern examples for board assembly

Board	LED power	Material	Surface area (㎟) Min.
A	5W	Al	20,600
B	10W	Al	41,200
C	25W	Al	103,000
D	50W	Al	206,000
E	100W	Al	412,000
F	200W	Al	824,000
G	300W	Al	1236,000

Above tested LED device is attached with adhesive sheet to the heatsink.

For reference's sake, Tj absolute maximum rating is defined at 115℃ as a prerequisite on design process of 5W LED.

<Fig.2> Board A (surface area=10,300㎟)



<Fig.3> Board B (surface area=20,600㎟)