

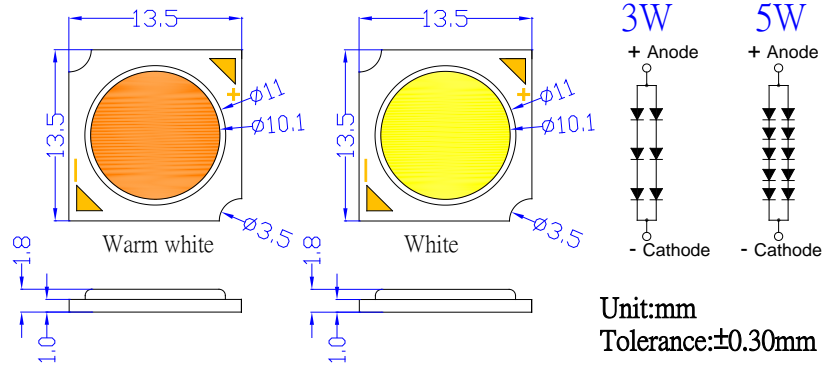
■Features

- Highest Luminous Flux
- Super Energy Efficiency
- Long Lifetime Operation
- Superior UV Resistance

■Applications

- Small Area Illuminations
- Back Lighting
- Other Lighting
- Indoor Lighting

■Outline Dimension



Unit:mm
Tolerance:±0.30mm

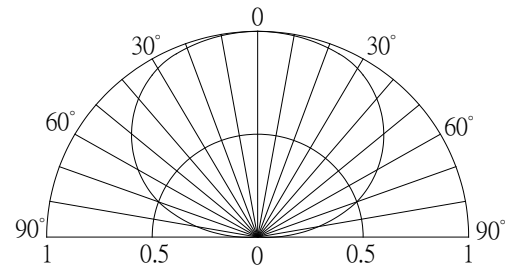
■Absolute Maximum Rating

(Ta=25°C)

Item	Symbo l	Value		Unit
		3W	5W	
DC Forward Current	I _F	400	400	mA
Pulse Forward Current*	I _{FP}	600	600	mA
Reverse Voltage	V _R	15	25	V
Power Dissipation	P _D	4,560	7600	mW
Operating Temperature	Topr	-40 ~ +85		°C
Storage Temperature	Tstg	-40~ +85		°C
Lead Soldering Temperature	Tsol	260°C/5sec		-

*Pulse width Max 0.1ms, Duty ratio max 1/10

■Directivity



■Electrical -Optical Characteristics

(Ta=25°C)

3W	Part Number	Color		V _F (V)			I _R (μA)	Φ v(lm)*			CCT(K)			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				I _F =300mA			V _R =15V	I _F =300mA						
	SLQ3WCOBB1313	White	W	9	10.2	11.4	20	260	300	-	5500-7500			140
		Warm White	M	9	10.2	11.4	20	230	260	-	2800-3200			140

5W	Part Number	Color		V _F (V)			I _R (μA)	Φ v(lm)*			CCT(K)			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				I _F =300mA			V _R =25V	I _F =300mA						
	SLQ5WCOBB1313	White	W	15	17	19	20	460	500	-	5500-7500			140
		Warm White	M	15	17	19	20	430	460	-	2800-3200			140

Note: *1 Tolerance of measurements of chromaticity coordinate is ±10%

*2 Tolerance of measurements of luminous intensity is ±15%

*3 Tolerance of measurements of forward voltage is±0.1V

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 (mm ²) Min.
A	5W	Al	10,300
B	10W	Al	20,600
C	25W	Al	51,500
D	50W	Al	103,000
E	100W	Al	206,000
F	200W	Al	412,000
G	300W	Al	618,000

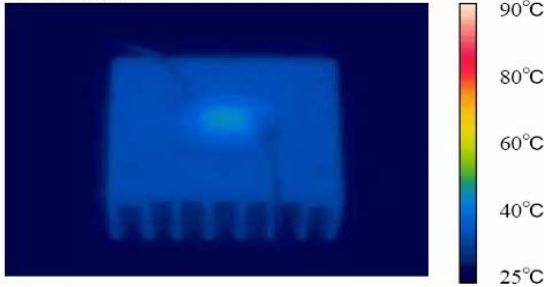
Above tested LED device is attached with adhesive sheet to the heatsink.

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

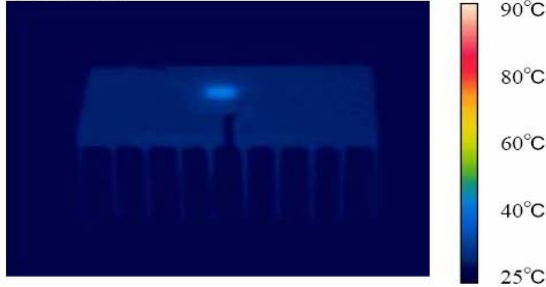
<Fig.2> Board A (surface area=10,300mm²)

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

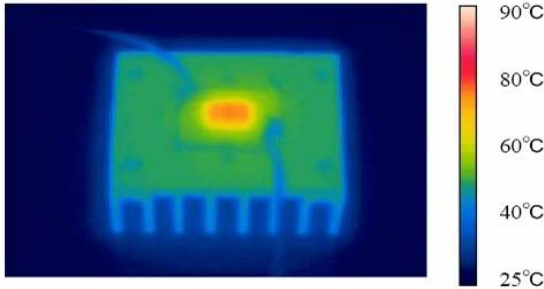
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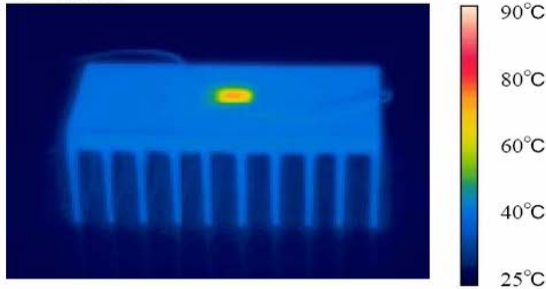
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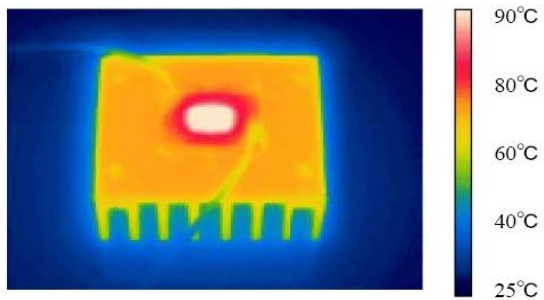
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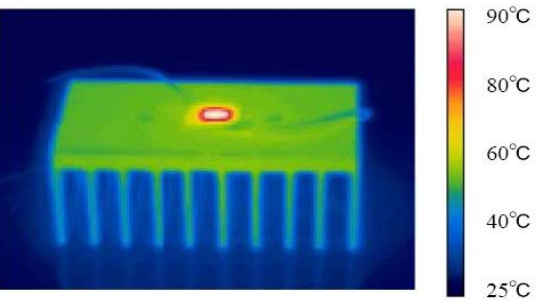
IF=400mA



IF=600mA



IF=600mA



■ Heat design → Design flow chart

