

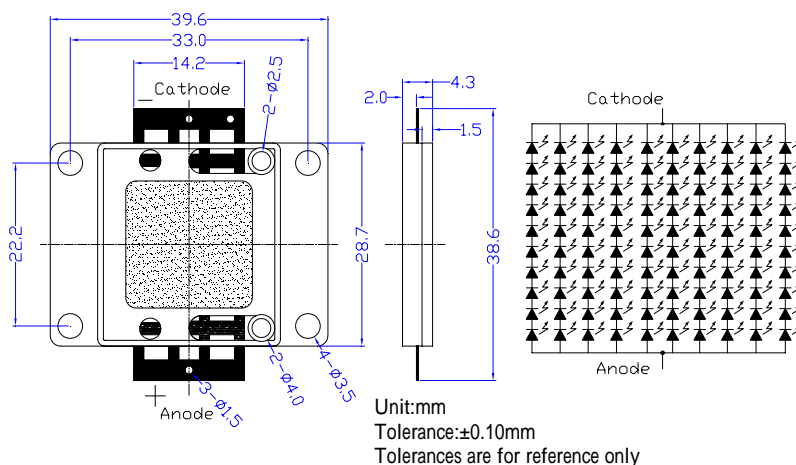
■ Features

- 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
- Stage lighting
- Reading lamps
- Display cases, furniture illumination, marker
- Architectural illumination
- Spotlights

■ Outline Dimension



■ Absolute Maximum Rating

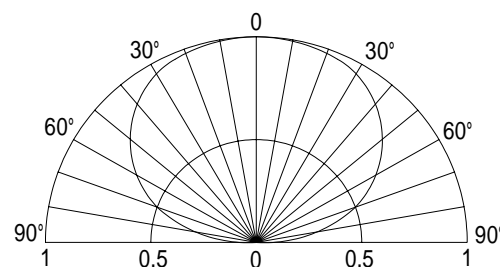
(Ta=25 °C)

Item	Symbol	Value	Unit
DC Forward Current *1	I_F	2,000	mA
Pulse Forward Current*2	I_{FP}	2,500	mA
Reverse Voltage	V_R	50	V
Power Dissipation*1	P_D	76,000	mW
Operating Temperature	T_{opr}	-30 ~ +85	
Storage Temperature	T_{stg}	-40 ~ +100	
Lead Soldering Temperature	T_{sol}	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 °C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
DC Forward Voltage	V_F	$I_F=1500mA$	29	34	38	V
DC Reverse Current	I_R	$V_R=50V$	-	-	100	μA
Luminous Flux	Φ_v	$I_F=1500mA$	2000	2500	-	lm
Color Temperature	CCT	$I_F=1500mA$	-	3000	-	K
Chromaticity Coordinates*	x	$I_F=1500mA$	-	0.45	-	
	y	$I_F=1500mA$	-	0.41	-	
50% Power Angle	$2\theta_{1/2}$	$I_F=1500mA$	-	140	-	deg

Note: Don't drive at rated current more than 5s without heat sink for High Power series.

* Tolerance of chromaticity coordinates is $\pm 10\%$, * Tolerance of Luminous Flux is $\pm 20\%$

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.

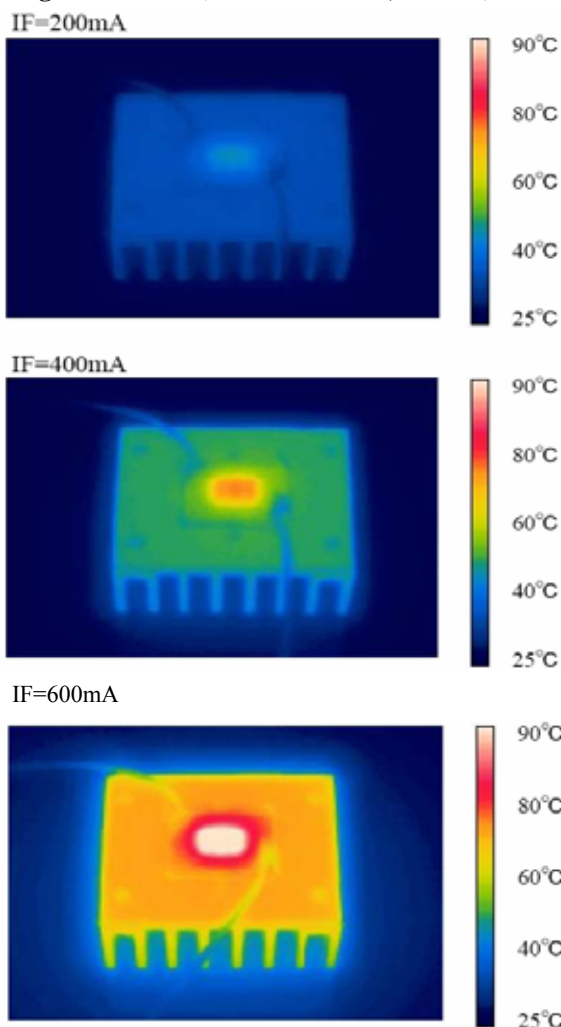
Fig. 1 Configuration pattern examples for board assembly

Board	LED power	Material	Surface area (mm ²) 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

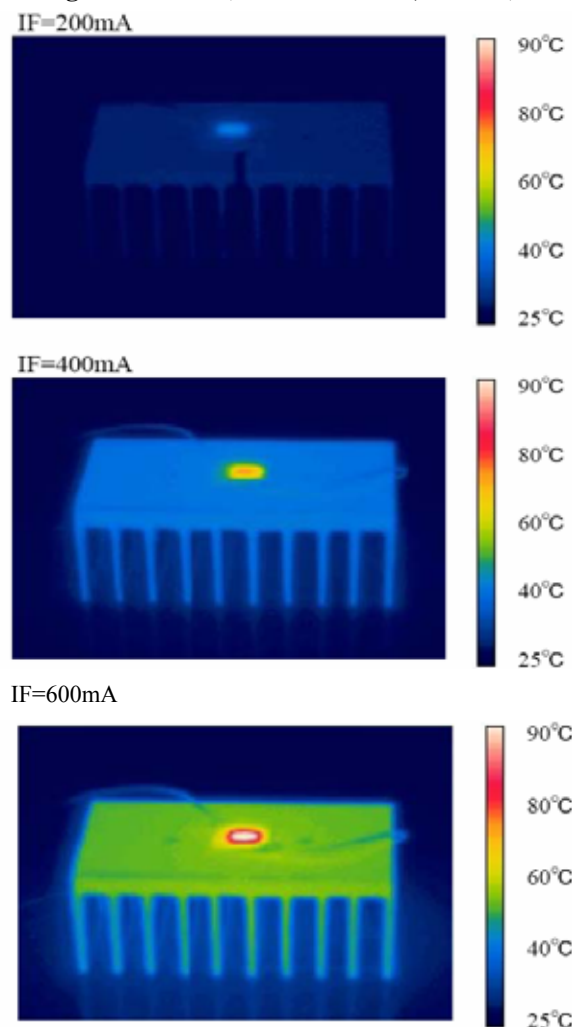
Above tested LED device is attached with adhesive sheet to the heatsink.

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=10,300mm²)



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



Heat design → Design flow chart

