

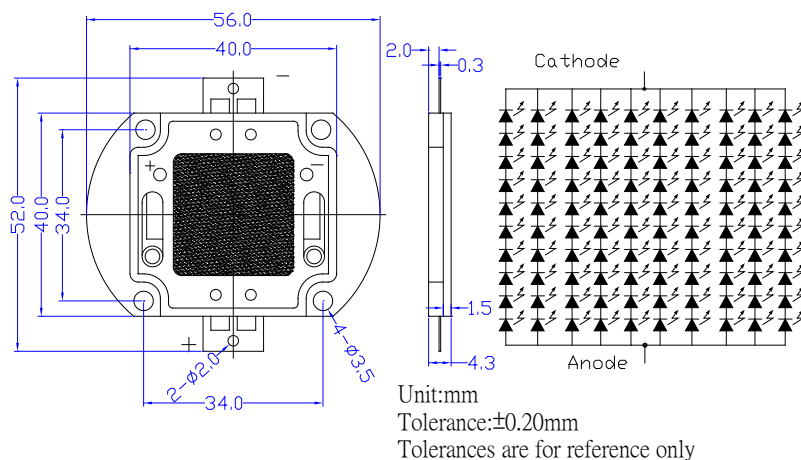
■ Features

- 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

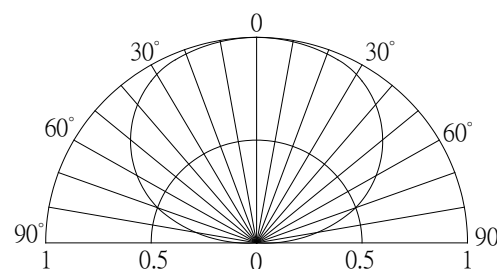


■ Absolute Maximum Rating

(Ta=25°C)

Item	Symbol	Value	Unit
DC Forward Current *1	I _F	7,000	mA
Pulse Forward Current*2	I _{FP}	10,000	mA
Reverse Voltage	V _R	50	V
Power Dissipation*1	P _D	315,000	mW
Operating Temperature	T _{opr}	-30 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T _{sol}	260°C/5sec	-

■ Directivity



*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

■ Electrical -Optical Characteristics

(Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
DC Forward Voltage*	V _F	I _F =6000mA	35	38	45	V
DC Reverse Current	I _R	V _R =50V	-	-	100	μA
Luminous Flux*	Φ _v	I _F =6000mA	10800	13000	-	lm
Color Temperature	CCT	I _F =6000mA	-	3000	-	K
Chromaticity	x	I _F =6000mA	-	0.45	-	
Coordinates*	y	I _F =6000mA	-	0.41	-	
50% Power Angle	2θ _{1/2}	I _F =6000mA	-	140	-	deg

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

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

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

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



OptoSupply

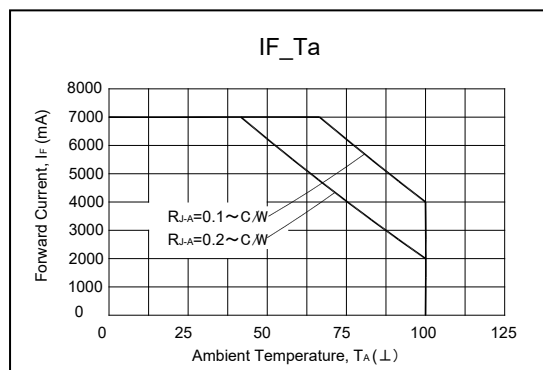
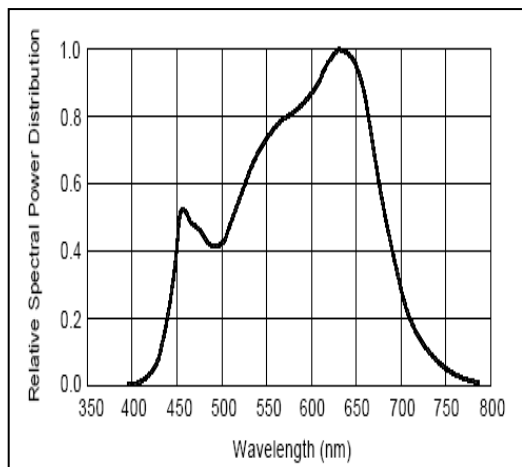
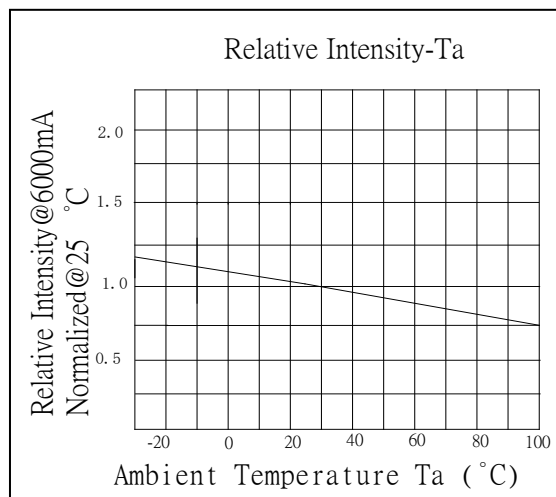
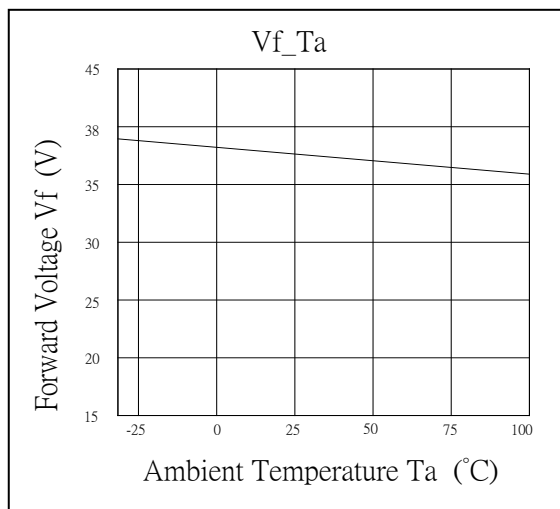
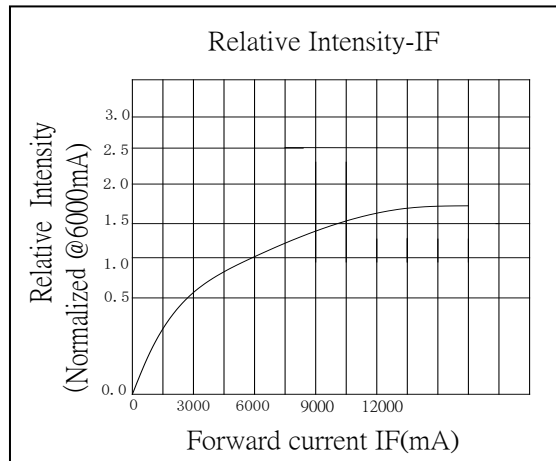
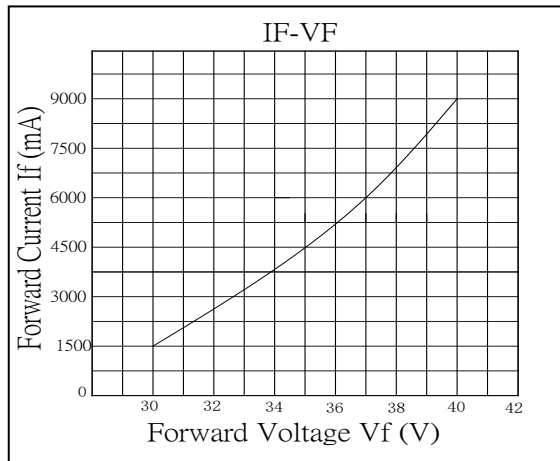
Light It Up

Tops 200 (300) Power Warm White LED

OSM5XAHEE1E

InGaN LED

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES



LED & Application Technologies



■ 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.

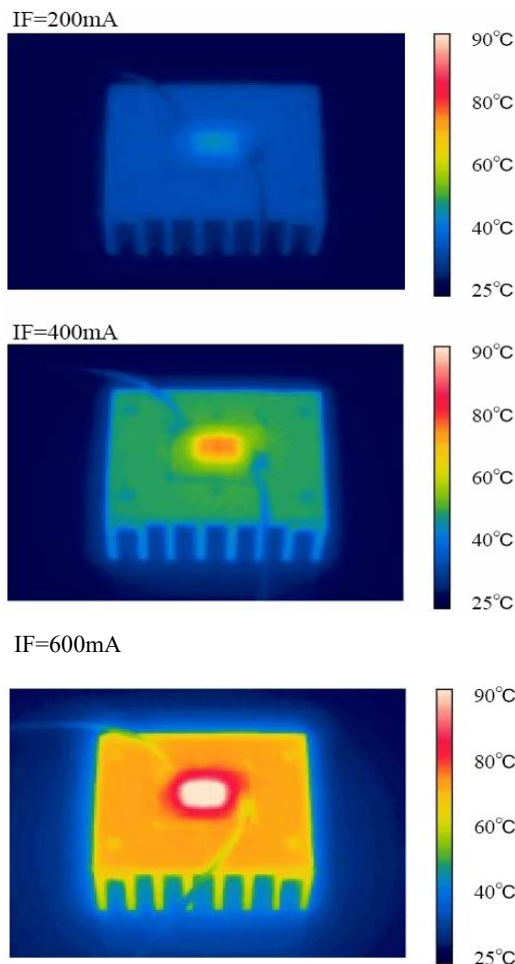
Fig. 1 Configuration pattern examples for board assembly

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

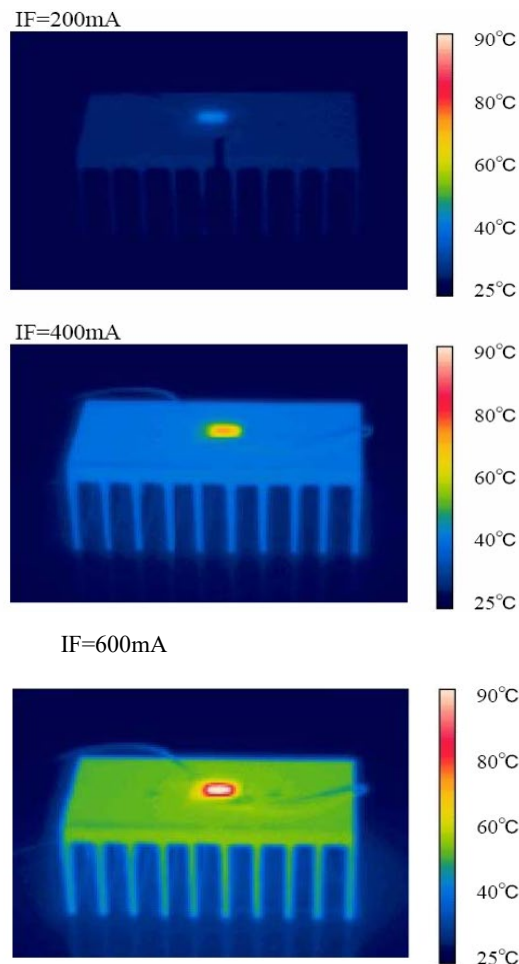
Above tested LED device is attached with adhesive sheet to the heatsink.

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

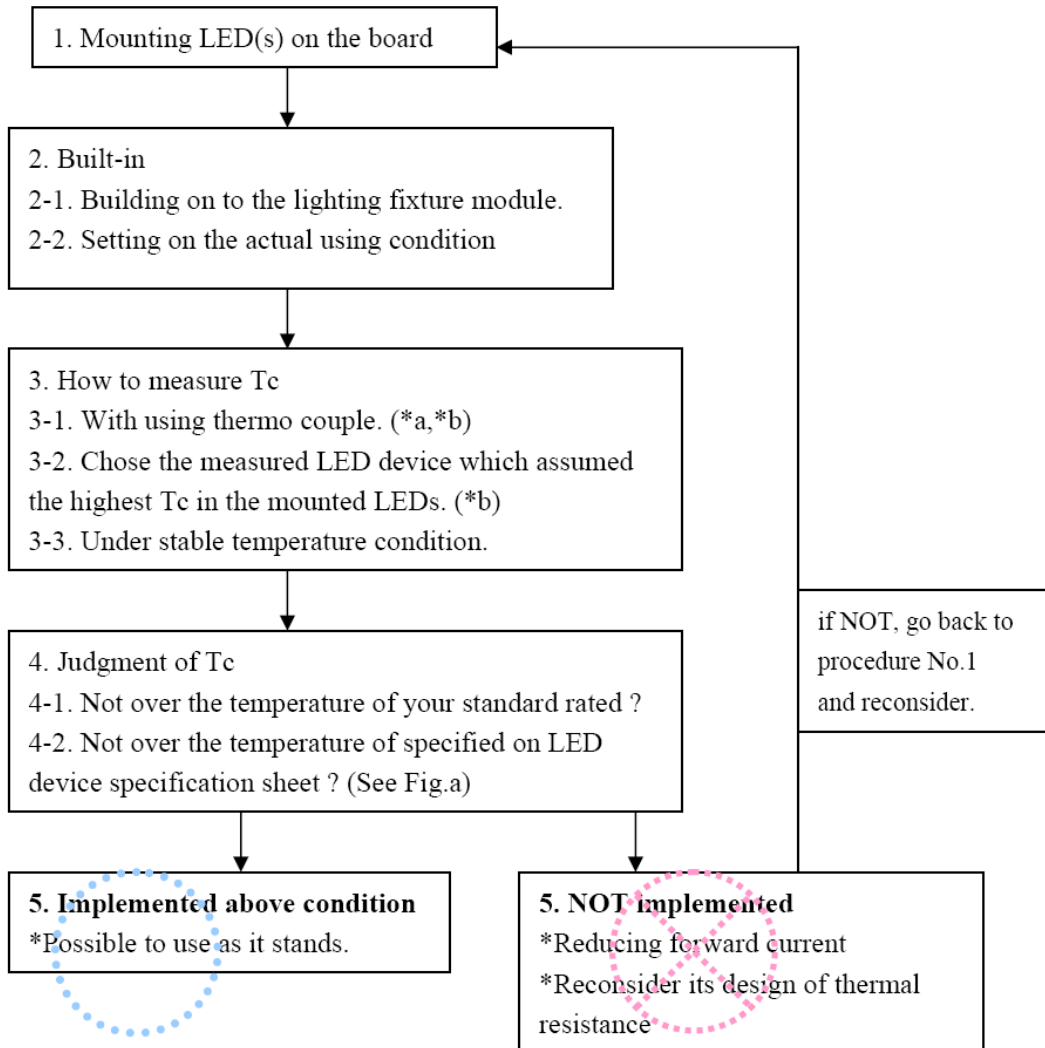
<Fig.2> Board A (surface area=10,300mm²)



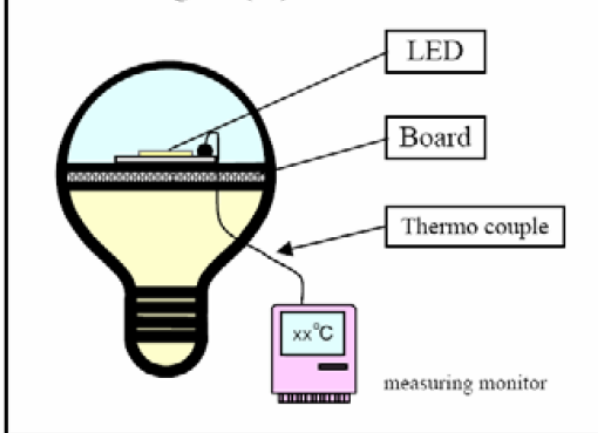
<Fig.3> Board B (surface area=20,600mm²)



■Heat Design→ Design Flow Chart



Use in the singular (*a)



Use in the plural (*b)

