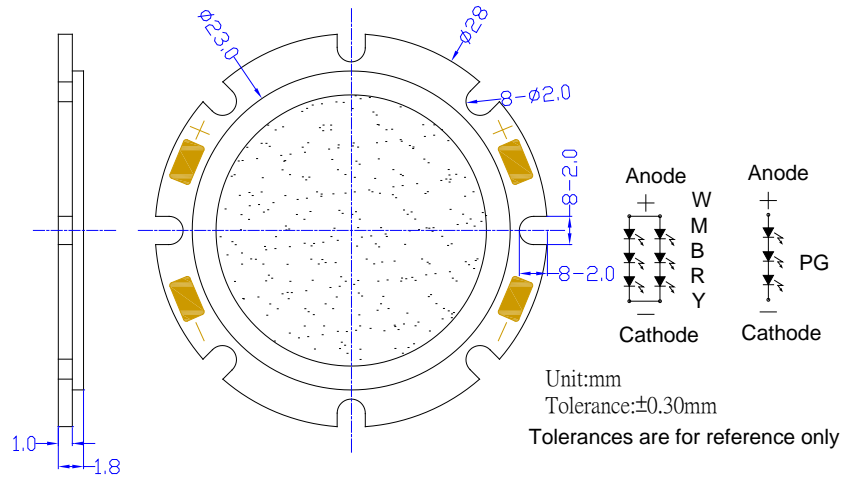


■ Features

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

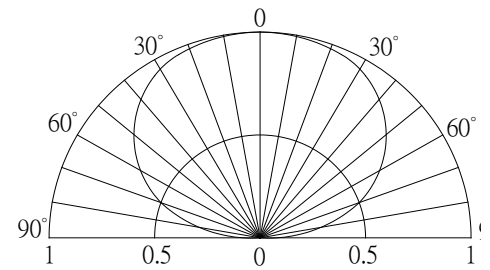
■ Applications

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

■ Outline Dimension

■ Absolute Maximum Rating

(Ta=25°C)

| 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 | T _{opr} | -30 ~ +85 | | °C |
| Storage Temperature | T _{stg} | -40~ +100 | | °C |
| Lead Soldering Temperature | T _{sol} | 260°C5sec | | - |

■ 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)

| Part Number | Color | | V _F (V) | | | I _R (μA) | Φ v(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 (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 | |

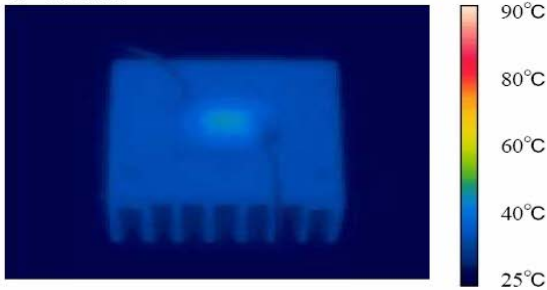
Above tested LED device is attached with adhesive sheet to the heatsink.

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

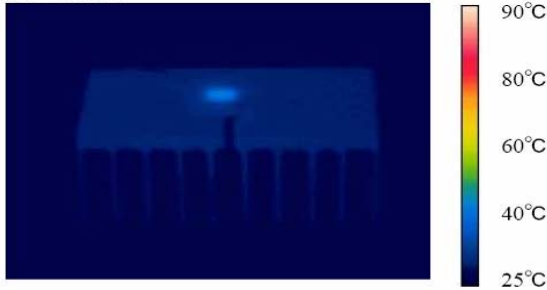
<Fig.2> Board A (surface area=10,300mm²)

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

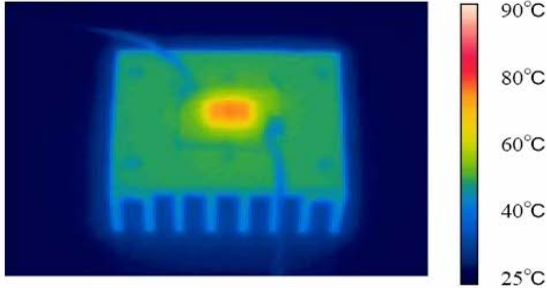
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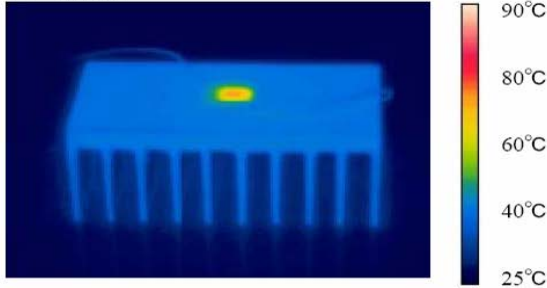
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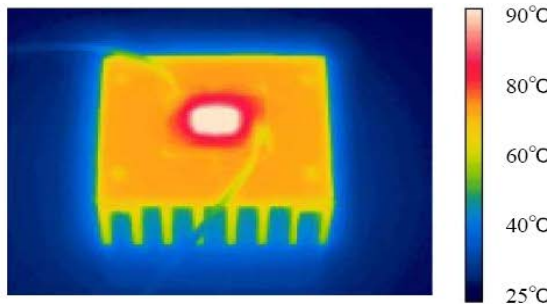
IF=400mA



IF=400mA



IF=600mA



IF=600mA

