

## High Power LED 30 Watt

Red, Green & Blue

### **Features**

- Substrate: Aluminum Plate
- Chip size: 40mil x 40mil
- High intensity, Long life-span



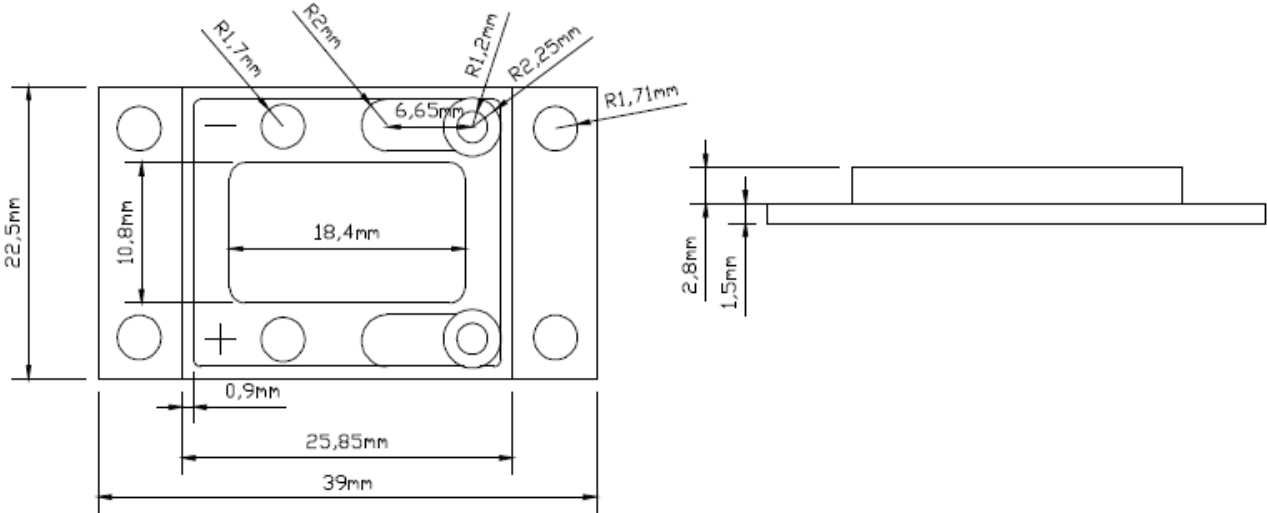
### **Usage Notes:**

- Surge will damage the LED
- When using LED, it must use a protective resistor in series with DC current

### **Applications**

- Decoration lights
- Architectural lighting
- Beacon light
- Up-lights and Down-lights
- LCD Backlights
- General lighting
- Ceiling lights
- Garden lighting

# Package Dimensions



## Product Thermal Application Information

Our PCB is usual use for installation and connection during application, but the ability of heat dissipation is not enough. If lighted, our high power stars will need better another type heat dissipation equipment. So we recommend the working time is not over 5-10 seconds without any heat dissipation equipment. When using, the temperature of heat dissipation equipment had better be low at 60 °C. Thermal grease should be evenly speeded with a thickness <100um. When assembling on metal-core printed circuit boards (MCPCB) or heatsink carrier.

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. This data-sheet only valid for six months.

## Device Selection Guide

Emitted Color	Lens Color
Red	Water clear
Blue	Water clear
Green	Water clear

### Absolute Maximum Rating (T<sub>a</sub>=25°C)

Parameter	Symbol	Red	Blue/Green	Unit
Reverse Voltage	V <sub>R</sub>	24	24	V
Forward Current	I <sub>F</sub>	2000	1600	mA
Power Dissipation	P <sub>D</sub>	27	30	W
Peak Forward Current (Duty 1/10 @ 1KHz)	I <sub>FP</sub>	4000	3000	mA
ESD Sensitivity		2000	2000	V
Operating Temperature	Topr	-35~+60	-35~+60	°C
Storage Temperature	Tstg	-35~+60	-35~+60	°C
Soldering Temperature	Tsol	300 ( for 5 second )	300 ( for 5 second )	°C

### Electro-Optical Characteristics (T<sub>a</sub>=25°C)

Parameter	Color	Symbol	Min.	Max.	Unit
Luminous Intensity	Red	FLux	800	1500	lm
	Blue		250	450	
	Green		2000	2400	
Viewing Angle	Red	2θ <sub>1/2</sub>	100	110	Deg
	Blue				
	Green				
Peak Emission Wavelength	Red	λ <sub>p</sub>	620	630	nm
Forward Voltage	Red	V <sub>F</sub>	12	15	V
	Blue		17	22	
	Green		17	22	

### Reliability test items and conditions :

NO	ITEM	Test Conditions	Test hours/cycle	Sample Q'ty	Ac/Re
1	Solder Heat	High Temperature / High Humidity	5 sec	30 pcs	0/1
2	Temperature Cycle	-40°C 30min -25°C 5min -105°C 30min -25°C 5min	100 cycle	30 pcs	0/1
3	Thermal Shock	-40°C 5min -105°C 5min	20 cycles	30 pcs	0/1
4	High Temperature Storage	Temp : 85°C	1000 hrs	30 pcs	0/1
5	Low Temperature Storage	Temp : -35°C	1000 hrs	30 pcs	0/1
6	DC Operating Life	IF=350mA	1000 hrs	30 pcs	0/1
7	High Temperature / High Humidity	Ta=60°C R.H 90%	1000 hrs	30 pcs	0/1

## APPLICATION NOTES

### · soldering

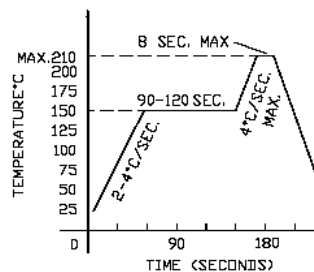
#### 1. Manual soldering by soldering iron

The use of a soldering iron of less than 25w recommended and the

#### 2. reflow soldering

- a. The temperature profile as shown in Fig.3 is recommended for soldering SMD LED by the reflow furnace.
- b. Care must be taken that the products be handled after their temperature has dropped down to the normal room temperature after soldering.

Recommended Reflow Soldering Profile.



#### 3. Post solder cleaning

When cleaning after soldering is needed the following conditions must be adhered to.

1. Cleaning solvents Freon TF or equivalent or alcohol.
2. Ultrasonic 300 W Max.

#### 4. Others

- a. Care must be taken not to cause stress to the epoxy resin portion of power LEDs while it is exposed to the high temperature.
- b. Care must be taken not to rub the epoxy resin portion of Power LEDs with a hard or sharp edged article such as the sand blast and the metal hook as the epoxy resin is rather soft and liable to be damaged.