СВЕТОДИОДЫ BEELED - ТЕХНИЧЕСКОЕ ОПИСАНИЕ

MODEL：3W HIGH POWER LED

Features

- Substrate: Aluminum Plate
- 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 about 700mA
- 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 40 ℃

Applications

- Automotive indicator light
- decoration and lighting
- electric torch etc

Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
LB-P200W2C-H3	InGaN	White	Water clear
LB-P200W3C-H3	InGaN	Warm White	Water clear

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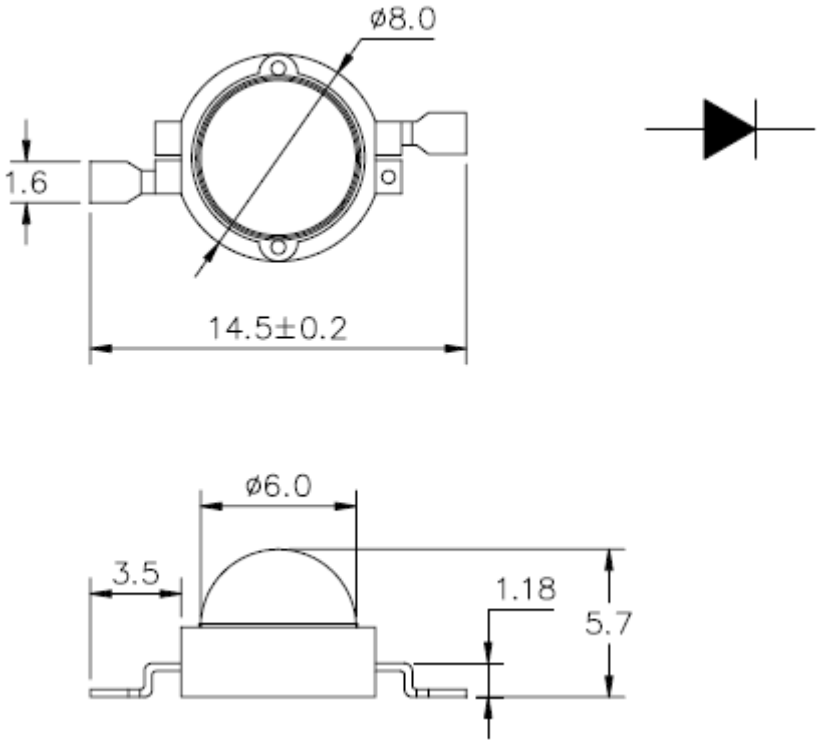
Package Dimensions



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.

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Absolute Maximum Rating (T_a=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	700	mA
Power Dissipation	P_D	3	W
Peak Forward Current (Duty 1/10 @ 1KHz)	I_{FP}	1000	mA
Operating Temperature	Topr	-40～+85	℃
Storage Temperature	Tstg	-40～+85	℃
Soldering Temperature	Tsol	260 (for 5 second)	℃

Electro-Optical Characteristics (T_a=25℃)

Parameter	Color	Symbol	Min.	Max.	Unit	Test Condition
Luminous Intensity	White	FLux	160	200	lm	I_F=700mA
	Warm White		110	130		
Viewing Angle	White	2θ1/2	---	110	Deg	I_F=700mA
	Warm White					
Peak Emission Wavelength	White	λp	6000-7000K		nm	I_F=700mA
	Warm White		2700-3300K			
Forward Voltage	White	V_F	3.5	4.0	V	I_F=700mA
	Warm White		3.5	4.0		
Reverse Current		I_R	50	100	μA	V_R=5V

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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℃ 30min -25℃ 5min -105℃ 30min -25℃ 5min	100 cycle	30 pcs	0/1
3	Thermal Shock	-40℃ 5min -105℃ 5min	20 cycles	30 pcs	0/1
4	High Temperature Storage	Temp：85℃	1000 hrs	30 pcs	0/1
5	Low Temperature Storage	Temp：-35℃	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℃ R.H 90%	1000 hrs	30 pcs	0/1

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APPLICATION NOTES

• **soldering**

1. Manual soldering by soldering iron

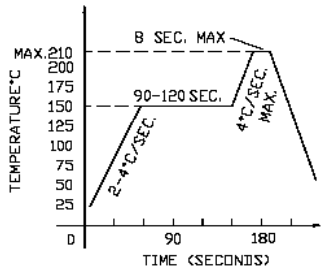
   The use of a soldering iron of less than 25w recommended and the

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.) Temperature 50℃ Max. for 30 second or 30℃ Max. for 3 minutes.
   3.) 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.