



TECHNOLOGY DATA SHEET & SPECIFICATIONS

MODEL: LB2-P200W3C-H

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 350mA

Applications

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

Device Selection Guide

| LED Part No. | Chip | | Lens Color |
|---------------|----------|---------------|-------------|
| | Material | Emitted Color | |
| LB2-P200W3C-H | InGaN | Warm White | Water clear |

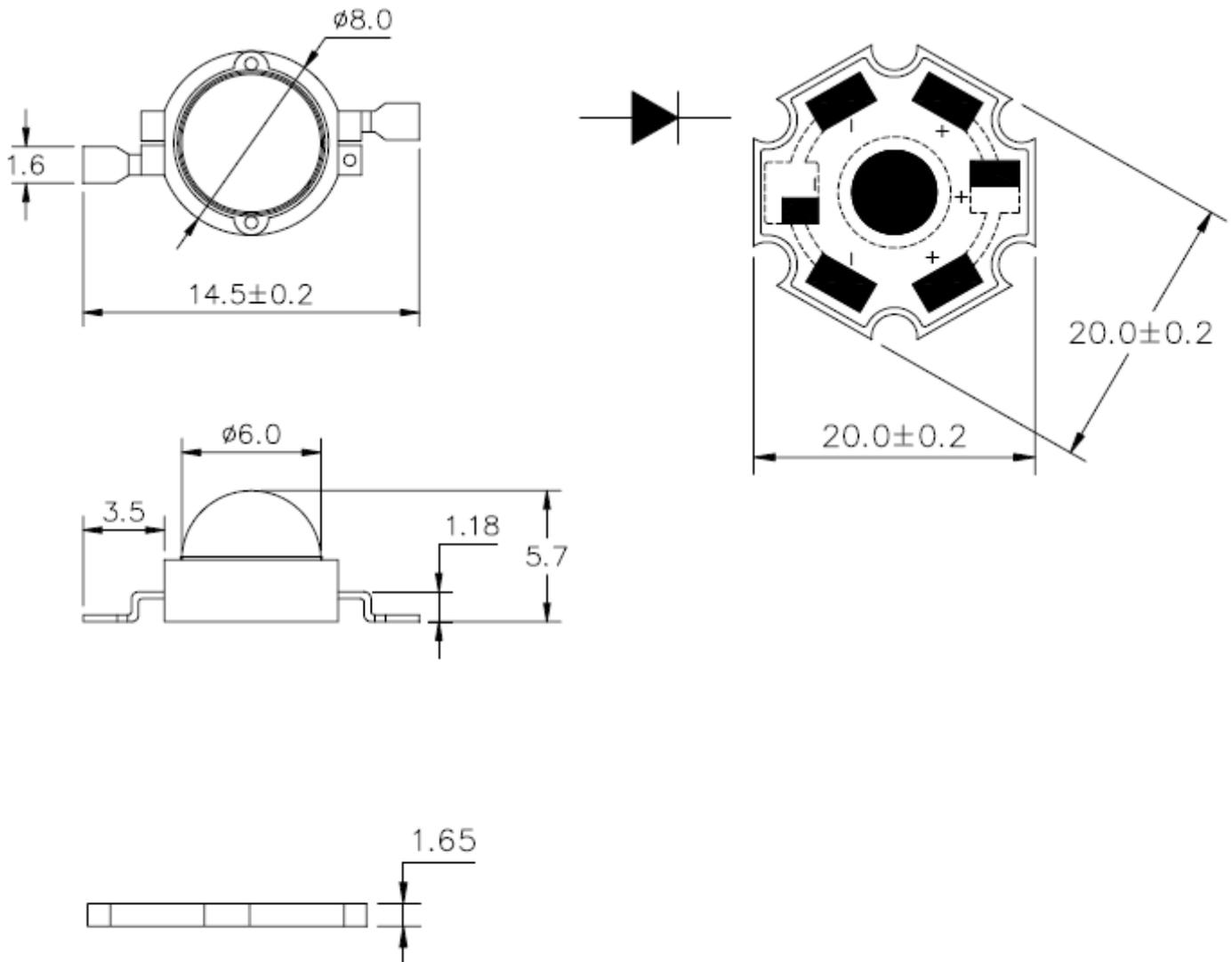
Electro-Optical Characteristics (Ta=25℃)

| Parameter | Symbol | Min. | Max. | Unit | Test Condition |
|--------------------|----------------|------|------|------|-----------------------|
| Luminous Intensity | FLux | 120 | 130 | lm | I _F =350mA |
| Viewing Angle | 2θ1/2 | 110 | 120 | Deg | I _F =350mA |
| Color Temperature | CT | 2700 | 3500 | K | I _F =350mA |
| Forward Voltage | V _F | 3.5 | 4.0 | V | I _F =350mA |
| Reverse Current | I _R | 50 | 100 | μA | V _R =5V |

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Package Dimensions



Notes:

- . Other dimensions are in millimeters, tolerance is 0.25mm except being specified
- . Product picture & dimensions are for reference only. Detailed information is in accordant with the final product.



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APPLICATION NOTES

一. Heat dissipation

Because at present semiconductor light-emitting diode wafer technology restricting, LED Photoelectricity change efficiency remains to be improved, especially high-power LED , is higher because of it's power, have 60% the above electric energy to release to becoming a thermal energy (with the development of semiconductor technology approximately, the photoelectricity conversion efficiency meeting improves) gradually, be demanding a terminal when applying the high-power LED product the customer right now, need to do a good job in heat dissipation, to ensure that the high-power LED product works regularly.

My department submits suggestion about heat dissipation aspect according to product characteristic property and long range aging test data experience, For your reference only.

1 The cooling fin demands.

Exterior and material quality: If the finished product seals off a request no highly, may aluminum product or copper product cooling fin that convection , suggestion adopt to have fin movie happened directly with the external world air environment.

2 Effective heat dissipation superficial areas:

I attend to 50-60 squares recommending the effective heat dissipation of cooling fin superficial area sum \geq to 1 W high-power LED white light (colour is other basically identical) centimeter. 150 squares recommending the effective heat dissipation of cooling fin superficial area sum \geq to 3 W products centimeter, more, the high power looks at condition and test result increasing by , ensures that the cooling fin temperature does not exceed 60 to the full \sim C

3 Connection methods:

The high-power LED base board and the cooling fin ensure that two contact surfaces neat , get in touch with when linking up, please fine, for the union degree reinforcing two contact surfaces, (3.0 W/m.k , heat conduction silicon greases suggesting that the base board bottom or the cooling fin surface scribbles in LED applying a layer of heat conduction silicon grease heat conduction silicon grease heat conduction modulus \geq) require that Tu applies homogeneously , closes just the right amount again with screw pressure fixation.

二: Static electricity protects:

LED belongs to a semiconductor device , static electricity is face to face comparatively sensitive , especially with regard to white , green , blue, purple LED needs to do a good job in preventing static electricity from coming into being and removing static electricity

1. Electrostatic creation:

○Friction: But part for again , be OK to produce static electricity after the object in the daily life, any two being unlike material quality is contacted, produce electrostatic the most common method , be the electricity rubbing a life. The material insulation is the better , the easier to rub the life electricity. The object besides, being unlike matter any two kinds touches the queen parting for again , also can



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produce static electricity.

②Response

Can flow in its surface liberty specifically for electric conduction material Er Yan , because of the electron , change , only be capable to do in whose surface creation electric charge , if in placing the person in one electric field since the isomorphism is repulsive , the opposite sex attracts each other , the positiveness and negativeness ion is therefore likely.

③Conduction

Can flow in its surface liberty specifically for electric conduction material Er Yan , because of the electron, if with electrified object meet] touch, with electric charge happened changing.

2. Static electricity damage to LED

① But because of the heat that moment electric field or electric current produces, make LED part be wounded, behavior is that leakage of electricity stream is prompt increase by , still can work, brightness is reduced (white light will may change colour) , life-span is derided.

②The insulating barrier destroying LED's because of the electric field or electric current, makes a component there be no the [law job (destroy completely) , shows for dead light.

3. Static electricity protects and removes measure

Needing to be ready for guard against and remove static electricity measure , have mainly to the employee that entire working procedure (giving birth to a child , testing , packing and so on) possessions and LED touch straightly:

①Workshop laying guards against the static electricity floor is ready for ground connection together.

②The working table is that the platform ground connection guarding against the static electricity working table , producing machine is fine

③The operator is penetrated guarding against static electricity being convinced, as well as guarding against the static electricity hand ring , glove or foot ring

④Wind machine , welding electric iron applying an ion are ready for ground connection measure

⑤Package is adopt to guard against static electricity material

三. Weld

Pay attention to the flatiron choosing the constant temperature time welding, please, the welding temperature is 260 ~C , the time that the flatiron and the LED pad once touch does not exceed 3 S (Pay attention to electric iron time welding definitely ask ground connection , operation personnel to be going to wear the static electricity hand ring or to blow an ion wind machine)

Four drive a circuit abiding by the diode volt-ampere characteristic property curve because of high-power LED , corresponding drive electric current drift is very big , easy to damage the light pearl if drive voltage floats, therefore, suggest that the customer uses more stable constant current to drive power source or IC, but not adopt a constant voltage to drive power source or IC.



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Notes

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