

## 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 750mA



## Applications

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

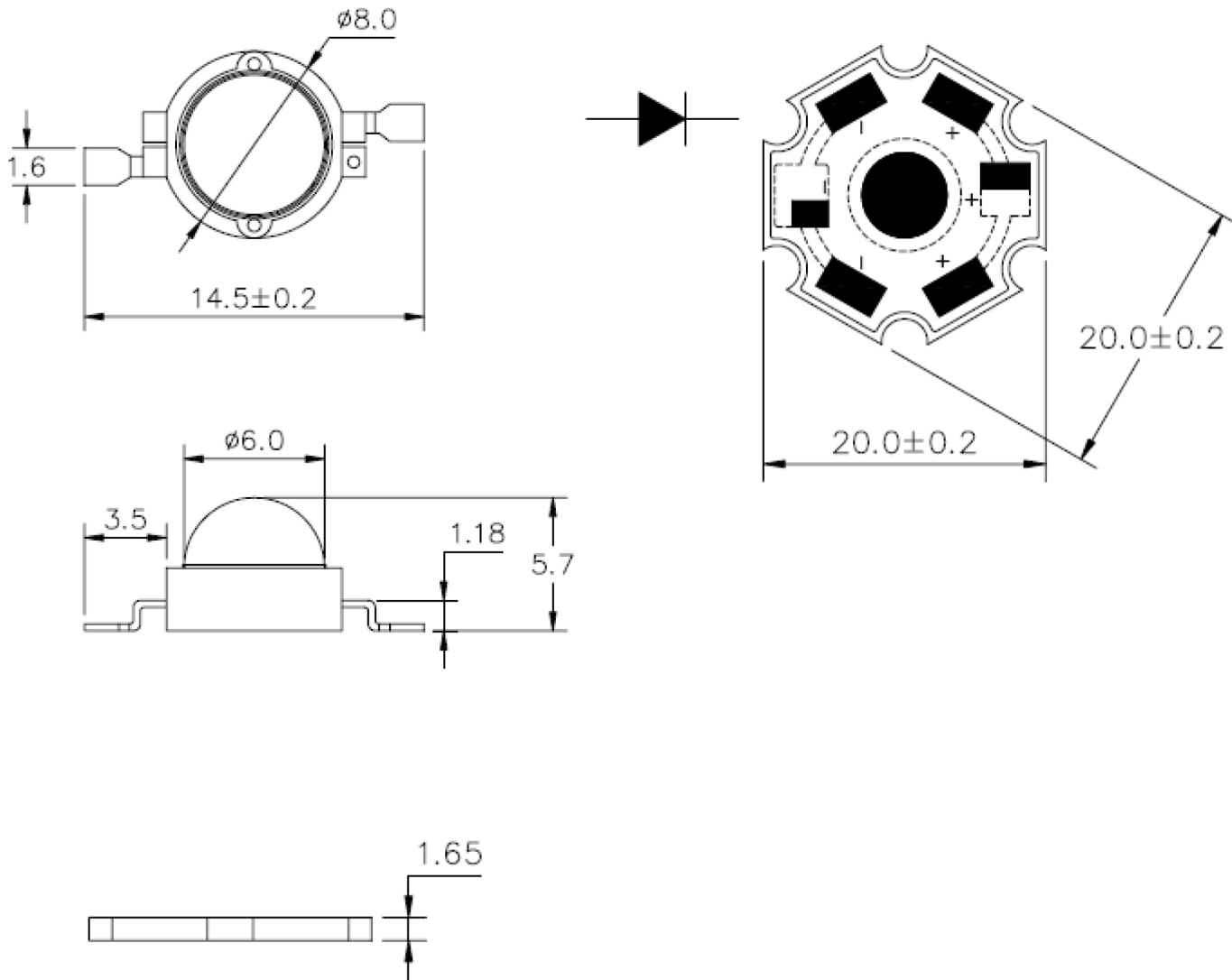
## Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
	InGaN	White	Water clear

## Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Max.	Unit	Test Condition
Luminous Intensity	FLux	160	200	lm	I <sub>F</sub> =750mA
Viewing Angle	2θ1/2	110	120	Deg	I <sub>F</sub> =750mA
Color Temperature	CT	6000	7000	K	I <sub>F</sub> =750mA
Forward Voltage	V <sub>F</sub>	3.5	4.0	V	I <sub>F</sub> =750mA
Reverse Current	I <sub>R</sub>	50	100	μA	V <sub>R</sub> =5V

## 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:

- ①Friction: 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

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.

## Notes

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