

RoHS

# Specification

Client Name

Client P/N

Product P/N

H5BDCBT/E2 15 Tff1017583.35 T465 481RG481.39 Td()MC

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## Product naming rules

Under Development	
Mass production	

HL-C 2016 K9 W 3 C B (Ra1) -FC-CZ  
 1 2 3 4 5 6 7 8 9 10 11

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11:

Ra70



**ATTENTION**  
 OBSERVE PRECAUTIONS  
 FOR HANDLING  
 ELECTROSTATIC  
 DISCHARGE  
 SENSITIVE  
 DEVICES

## Features

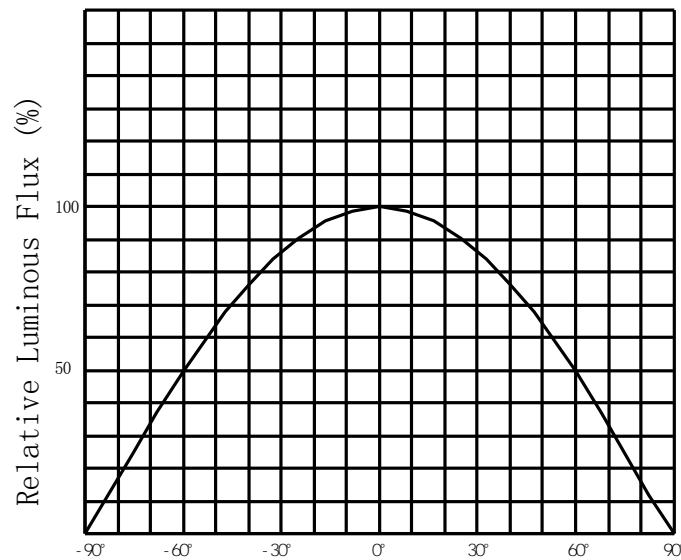
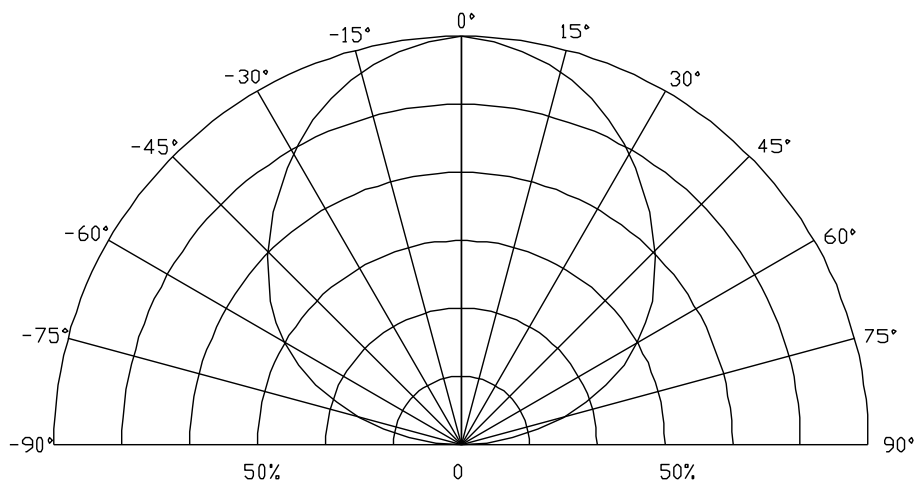
- Long operating life
- High flux
- Low voltage DC operated
- Cool beam, safe to the touch
- Instant light (less than 100ns )
- No UV
- Flip Chip Technology
- RoHS compliant      RoHS
- Thermoelectric separation
- Car use

100ns

## Application range

CARLIGHT 前大灯

## Radiation Pattern



## Specifications

### (1) Absolute Maximum Ratings at Ta=25°C 25°C

1	Parameter	Symbol <sup>5</sup>	Rating	Units
	Input power	Pi		

6

## (2) Optical Characteristics at Ta=25°C

Ta=25°C

Tc (K)			1000mA		Ra)
Center Tc	Min	Max	Min Im	Typ Im	
5630	5310	6020	300	330	70
6020	5665	6530	300	330	
6530	6020	7040	290	320	
7020	6530	7560	280	320	
7560	7040	8210	280	310	

### Notes :

\*1.the products after this specification refer to the parameters prevail, before the release of specification without refer to the above parameters.

2.Tolerance of measurement of forward voltage $\pm 3\%$  Color-rendering index $\pm 2$  luminous flux $\pm 5\%$   
 $\pm 3\%$   $\pm 2$   $\pm 5\%$

The parameters at IF=1000 mA are just for reference,Do not order the request parameters.

IF=1000mA

## (3) Optical Electrical /Thermal Characteristics at Ta=25°

Ta=25°C /

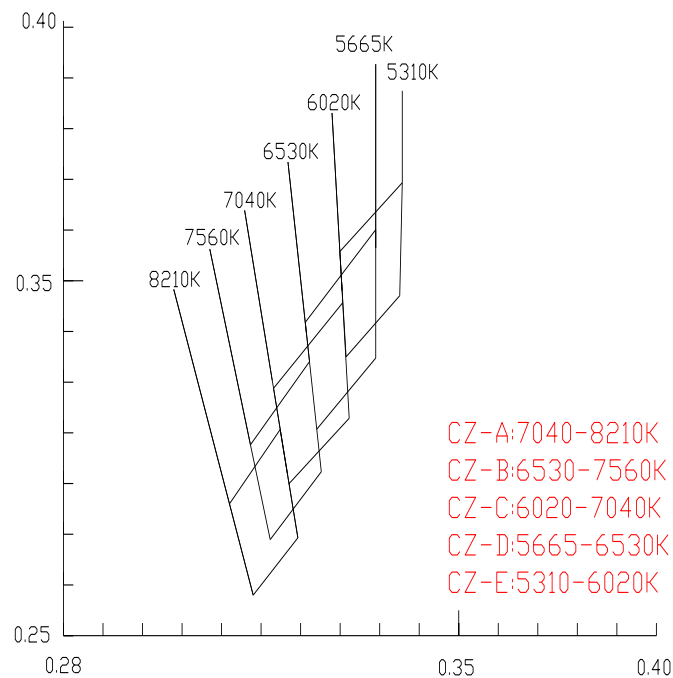
IF (mA)	VF (V)			R j-s (°C/W)	Po W
	min	typ	max		
1000	2.8	3.2	3.6	5.0	3.30
1500	3.0	3.4	3.8	5.0	5.0

## Product bins

### (1) Forward Voltage bins

Min (V)	Max (V)	Min (V)	Max (V)
2.8	3.0	3.4	3.6
3.0	3.2		
3.2	3.4		

### (2) Chromaticity bins



色块	CZ-A		CZ-B		CZ-C		CZ-D		CZ-D			
色温	7040K		6530K		6020K		6020K		7560K			
	x	y	x	y	x	y	x	y	坐标	x	y	
	0.3062	0.2972	0.3177	0.303	0.3289	0.3114	0.3419	0.3197		0.3559	0.2918	
	0.3081	0.3022	0.299	0.3069	0.3099	0.3144	0.3207	0.3215		0.3251	0.2973	
	0.2993	0.3152	0.3124	0.3223	0.3229	0.3289	0.3348	0.3350		0.3469	0.3093	
	0.3203	0.3122	0.334	0.3207	0.3457	0.3292	0.3601	0.3356	0.3692	0.3049		

#### Notes

\*1.Products are tested and binned at a transient forward current(IF) with 1000mA. With the use of different IF, it may probably cause differences in CCT & forward voltage. Generally, with the increase of IF, the CCT will be raised as well.

1000mA

2. Tolerance of  $\pm 0.005$  on x,y coordinates.

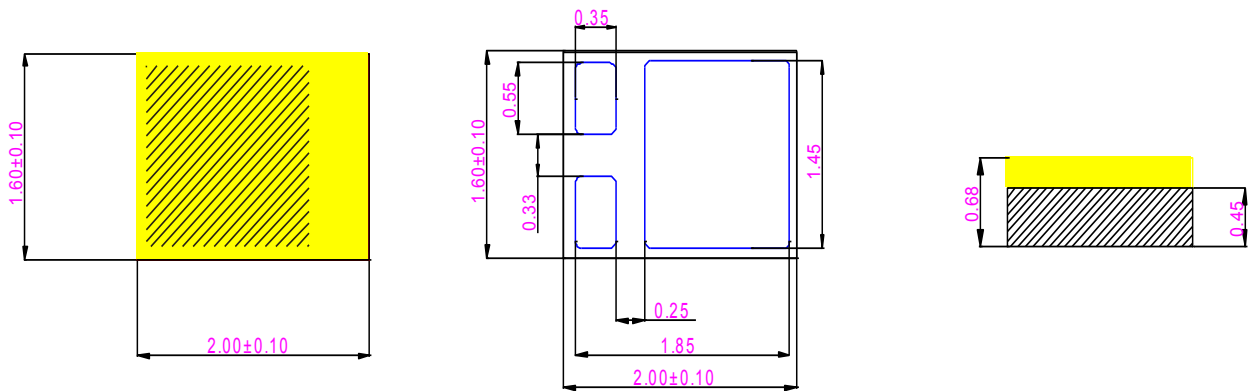
$\pm 0.005$

## Typical Optical/Electrical Characteristics Curves ( $T_a=25$ Unless Otherwise Noted )

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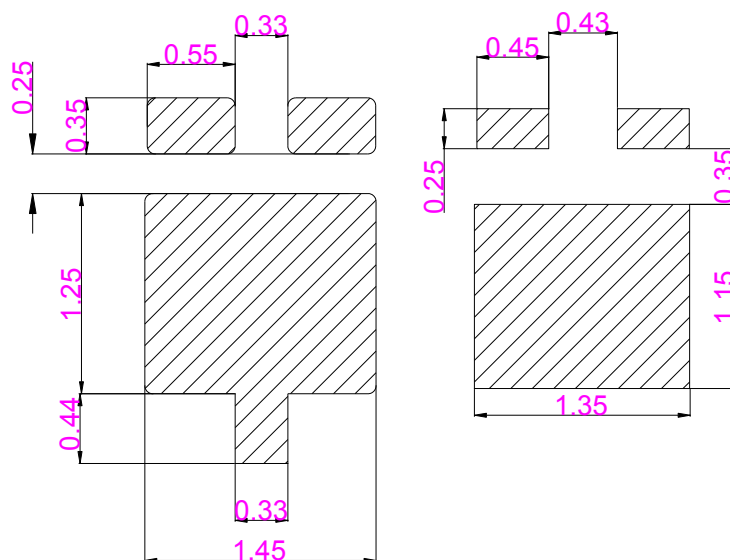
## Package Dimensions



### Notes :

1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.1\text{mm}$  unless otherwise noted.  
 $\pm 0.1$

## Welded plate and steel mesh Dimensions



### Notes :

When the circuit configuration is not affected, suggested the increase in the middle of the copper area, or the connection between the middle and the pad and the negative electrode can improve the cooling performance of the product.

## Label

TYPE: XXXXXXXXX

QTY: XXXXX

VF: Forward voltage rank

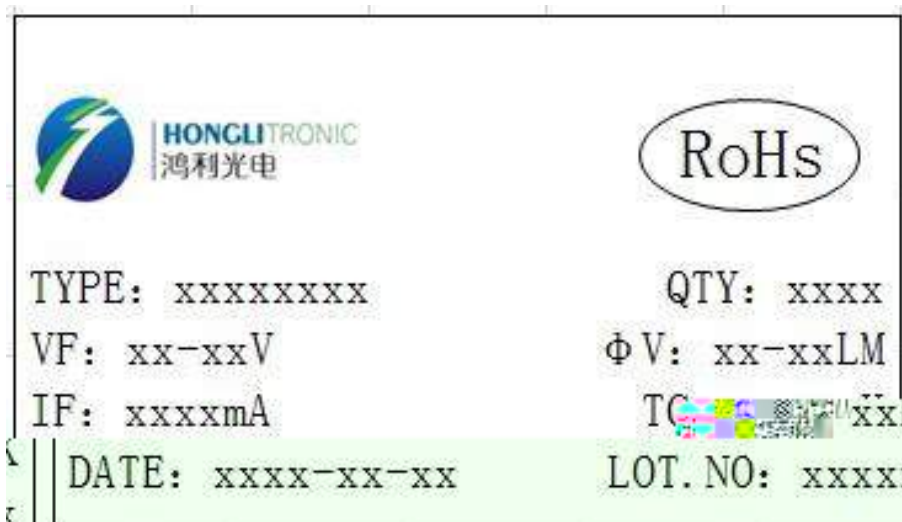
$\Phi$ V: Luminous Flux rank

IF: XXXX

TC: Color temperature

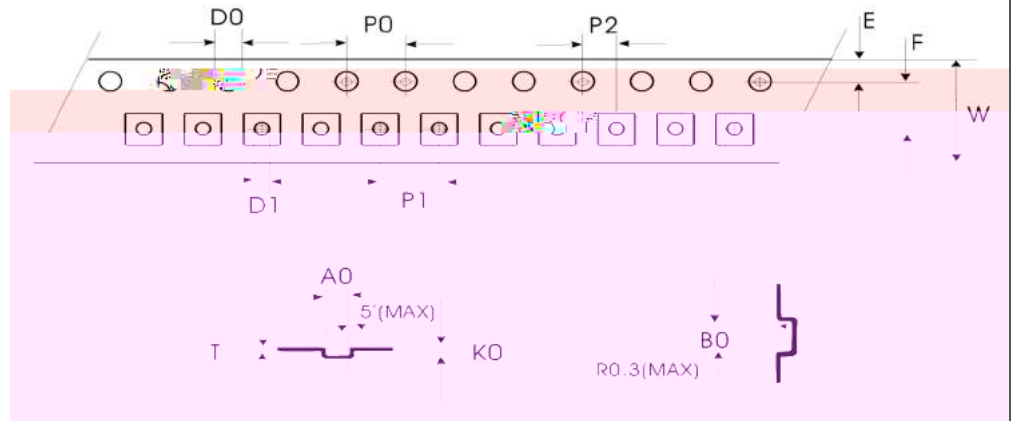
DATE: XXXX

LOT.NO:Lot Number

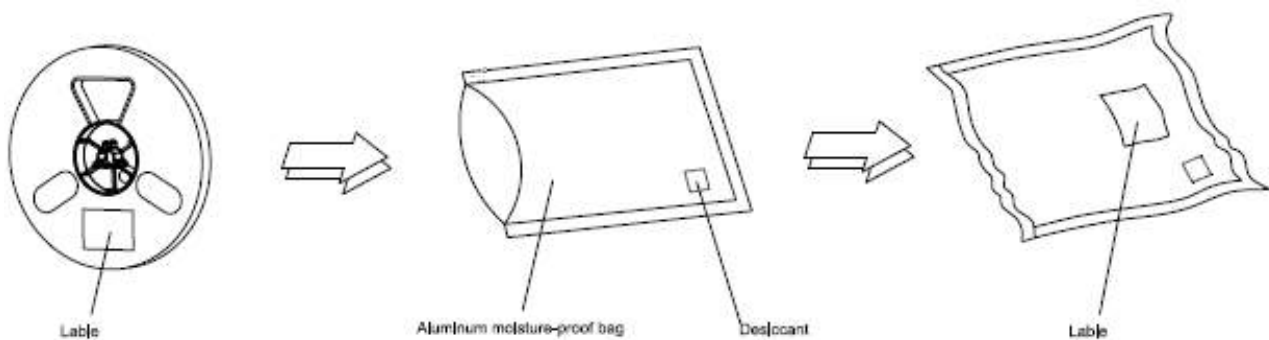


## Tape Specifications(Units:mm)

AO	1.85± 0.1
BO	2.35± 0.1
KO	0.80±



## (2)Moisture resistant packaging



## Reflow soldering instructions

## Use the matters needing attention( )

(storage)

LED	24H	5-30 °C	60%
		60 °C ±5 °C	12H

To avoid moisture, we recommend storage conditions for the unopened LED +5 ~ +30 °C, relative humidity <60%. LED should be used within 168 Hrs. of opening the package. Please make sure to dehumidify and vacuum pack the remaining/ unused LED. Dehumidifying condition: +120 °C ±5 °C, 04 Hrs. Effective age for the sealed led is one year.

(the assembly notes)

1000g	260 °C.
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**Soldering Conditions** This product must be used reflow soldering practices, the maximum temperature of reflow should not exceed 220 °C. Please make sure when soldering, there is no external force on the soldering surface (such as pressure, friction or sharp metal nails, etc.), to avoid gold wire deformation or damage and other abnormalities.

If beyond recommended conditions, we cannot guarantee the LED stability, please do the risk assessment first.

(anti-Static Measures)

Please take adequate measures to prevent electrostatic generation, such as wearing electrostatic ring or anti-static fingerstall etc; any relative products like plant equipment, machinery, carrier and transportation units shall be connected to discharging unit/ ground. After assembly, please make sure to discharge Static Electricity with proper ESD equipment.

(temperature Control)

500V

During assembly, please ensure that a good quality thermal paste is applied and distributed evenly over the surface. While using thermal pad (Heat Sink), make sure LED is firmly tightened and there is no gap between surfaces. The need to ensure the cooling medium dielectric withstand test at least through 500V.

(drive control)

Drive this product at constant current. Output current range specifications should be according to the operational and other conditions, as mentioned in data sheet. Before using a constant voltage source or altered specifications, other than recommended, please consider risk factors.

(other)

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--- ( Cl<sub>2</sub>, H<sub>2</sub>S NH<sub>3</sub> SO<sub>x</sub> NO<sub>x</sub>

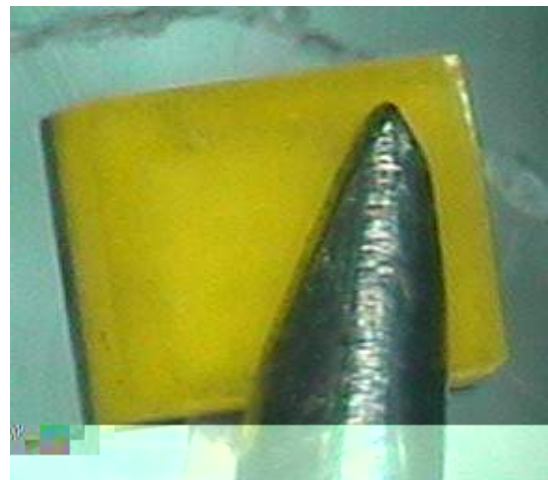
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Product is not suitable to use in following conditions;

- Direct or indirect wet / damp conditions, such as rain, etc;
- in contact with sea water and erosive materials;
- Exposed to corrosive gases (e.g., Cl<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, SO<sub>x</sub>, NO<sub>x</sub>, etc.);
- Exposed to dust, liquids or oils;



OK



NG