

晶能光电(江西)有限公司

产品规格书

产品名称: 高亮高显闪光灯

产品型号: FE08C

客 户: OPPO

客户料号: _____

版 本 号: 2.0

日 期: 2017-07-03

客户承认栏

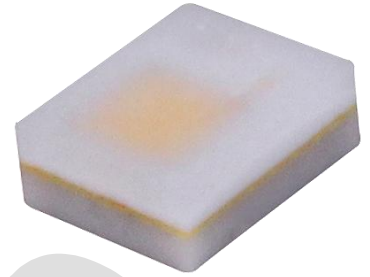
客户承认栏		

制定: _____ 审核: _____ 品管: _____

工厂地址:江西省南昌市高新区艾溪湖北路 699 号

1. Features

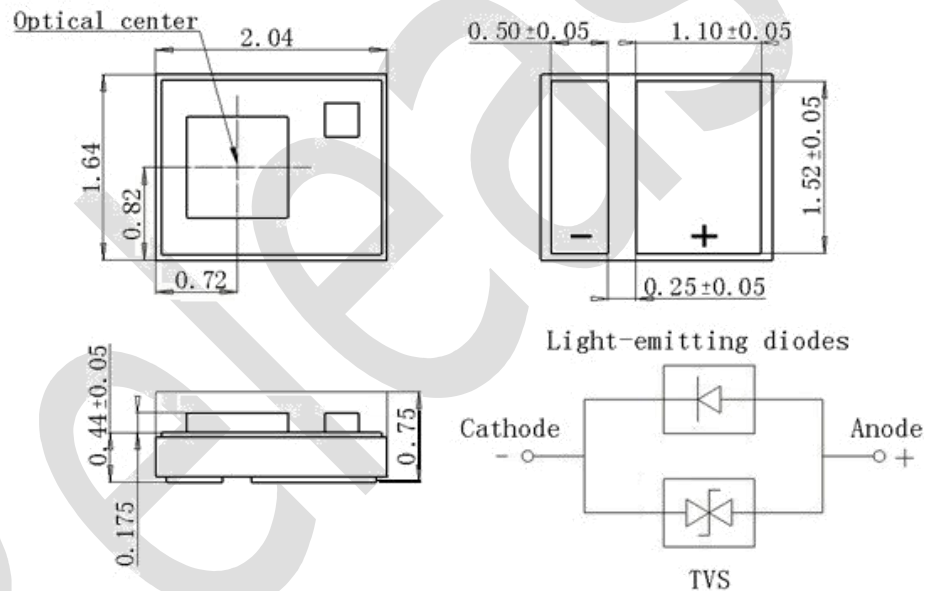
- Small footprint package, High brightness, High efficiency
- Very small emitter size: 2.04 mm × 1.64 mm
- ESD protection up to 8 KV
- Typical color temperature: 4500 K
- Soldering method: SMT
- Typical luminous flux: 280 lm@1000 mA
- PACKAGE: 3000 PCS /reel



2. Application

- Mobile phone flash
- Automotive
- General lighting

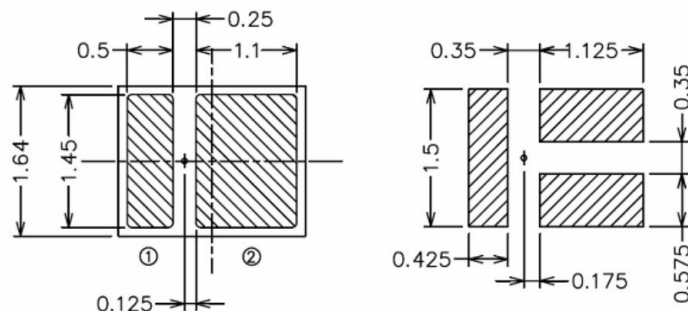
3. Dimensions



Notes:

- All dimensions are in millimeters
- Size is not marked in accordance with tolerance $\pm 0.1\text{mm}$ and dimension tolerances in accordance with drawings

4. Pad Dimensions



5. Electro-Optical Characteristics (T solder pad =25 °C)

Parameter	Min.	Typ.	Max.	Unit	Condition
Luminous Flux	260	280	----	lm	I _F =1000 mA
Forward Voltage	2.9	----	3.6	V	
Color Temperature	4200	4500	4800	K	
Viewing Angle	----	120	----	°	
Color Rendering Index	80	----	----		
MSL	1			----	----

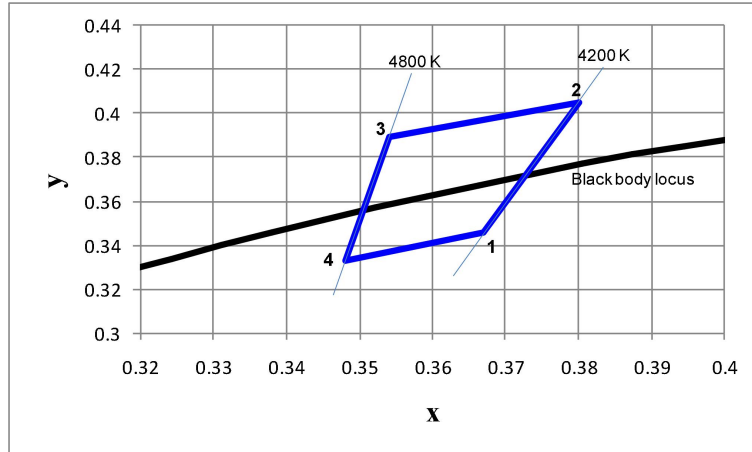
Notes :

- 1.Luminous flux measurement tolerance: ±10%
2. Forward voltage measurement tolerance: ± 0.1V
3. Electric and optical data is tested at 20 ms pulse condition

6. Absolute Maximum Ratings

Parameter	FE08C	Unit
DC (Torch Mode) Forward Current	500	mA
Pulsed (Flash Mode) Forward Current (<500ms ON, 10% duty cycle)	1500	mA
LED Junction Temperature (DC mode)	135	°C
LED Junction Temperature (Pulsed mode)	150	°C
Thermal Resistance	10	°C /W
Reverse Voltage	5	V
Operating Temperature Range	-30 to + 85	°C
Storage Temperature	-40 to +120	°C

7. Color Binning

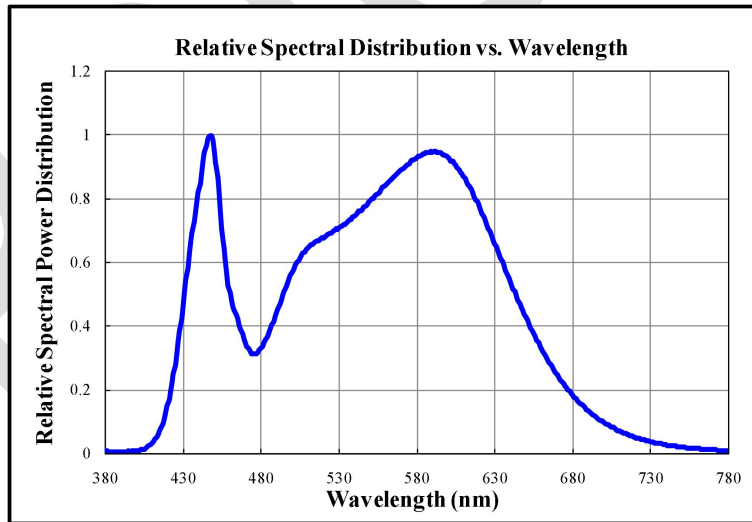


Point #	x	y
1	0.3670	0.3460
2	0.3800	0.4050
3	0.3540	0.3890
4	0.3480	0.3330

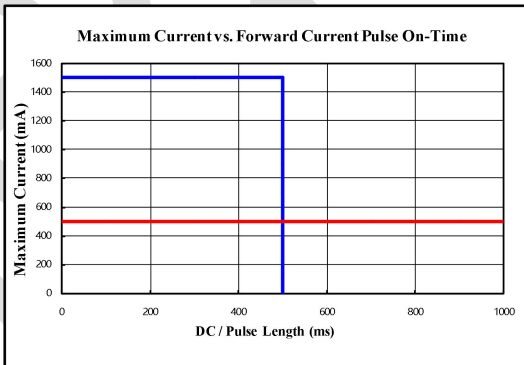
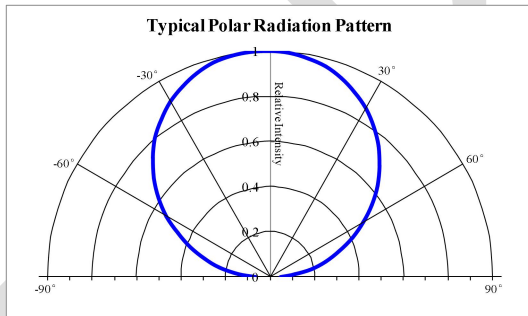
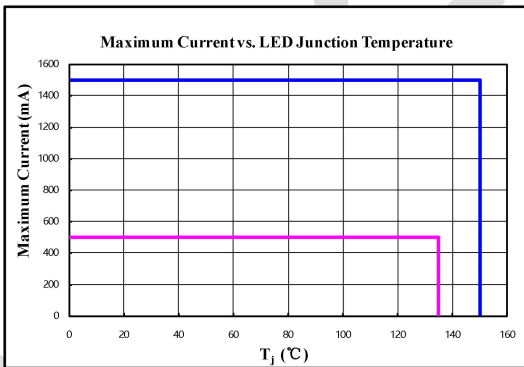
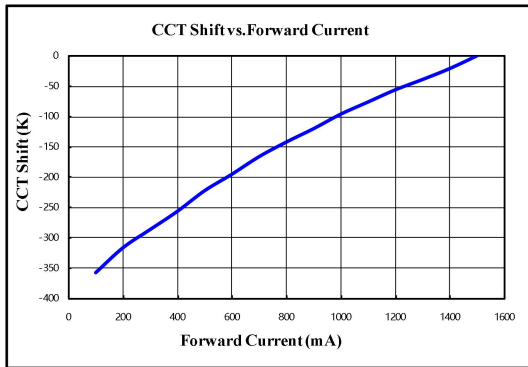
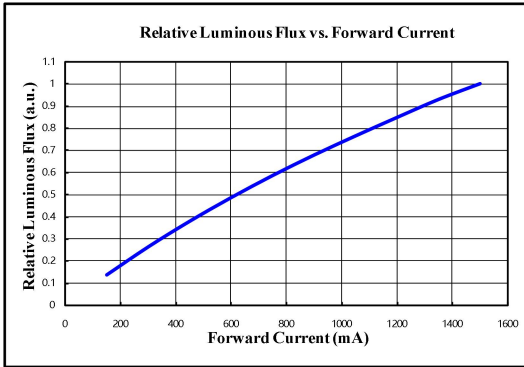
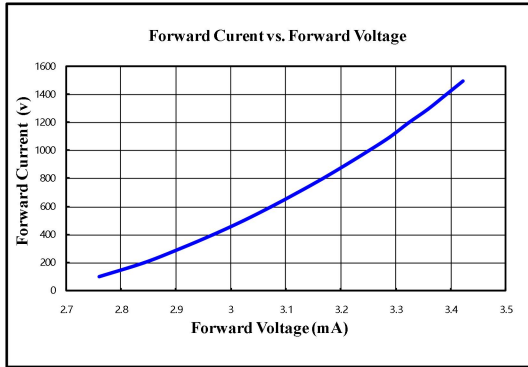
Notes:

1. The chromaticity coordinates (x,y) is derived from the CIE 1931 chromaticity diagram
2. The chromaticity coordinates (x,y) guarantee should be added ± 0.006 tolerance.

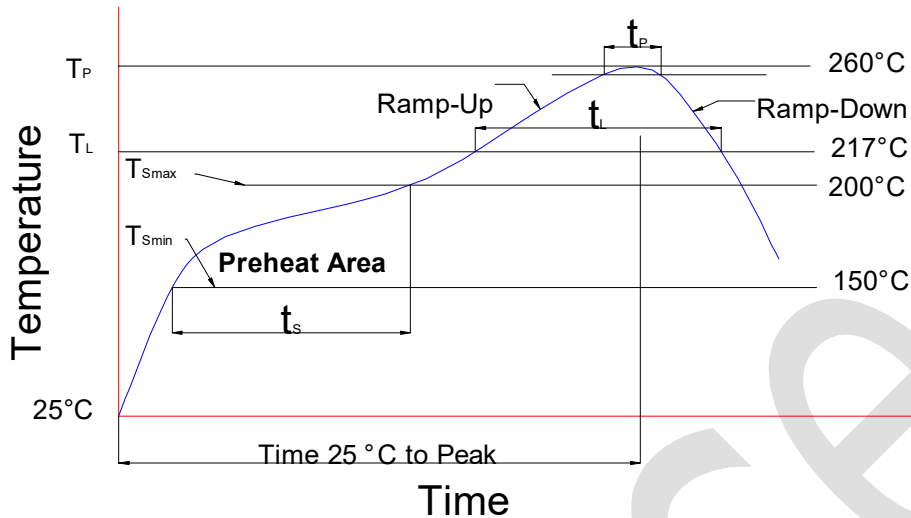
8. Relative Spectral Distribution ($I_f=1000\text{mA}@20\text{ms}$, $T_a=25^\circ$)



9. Typical Electro-Optical Characteristics Curves (T solder pad=25 °C)



10. Reflow soldering characteristics



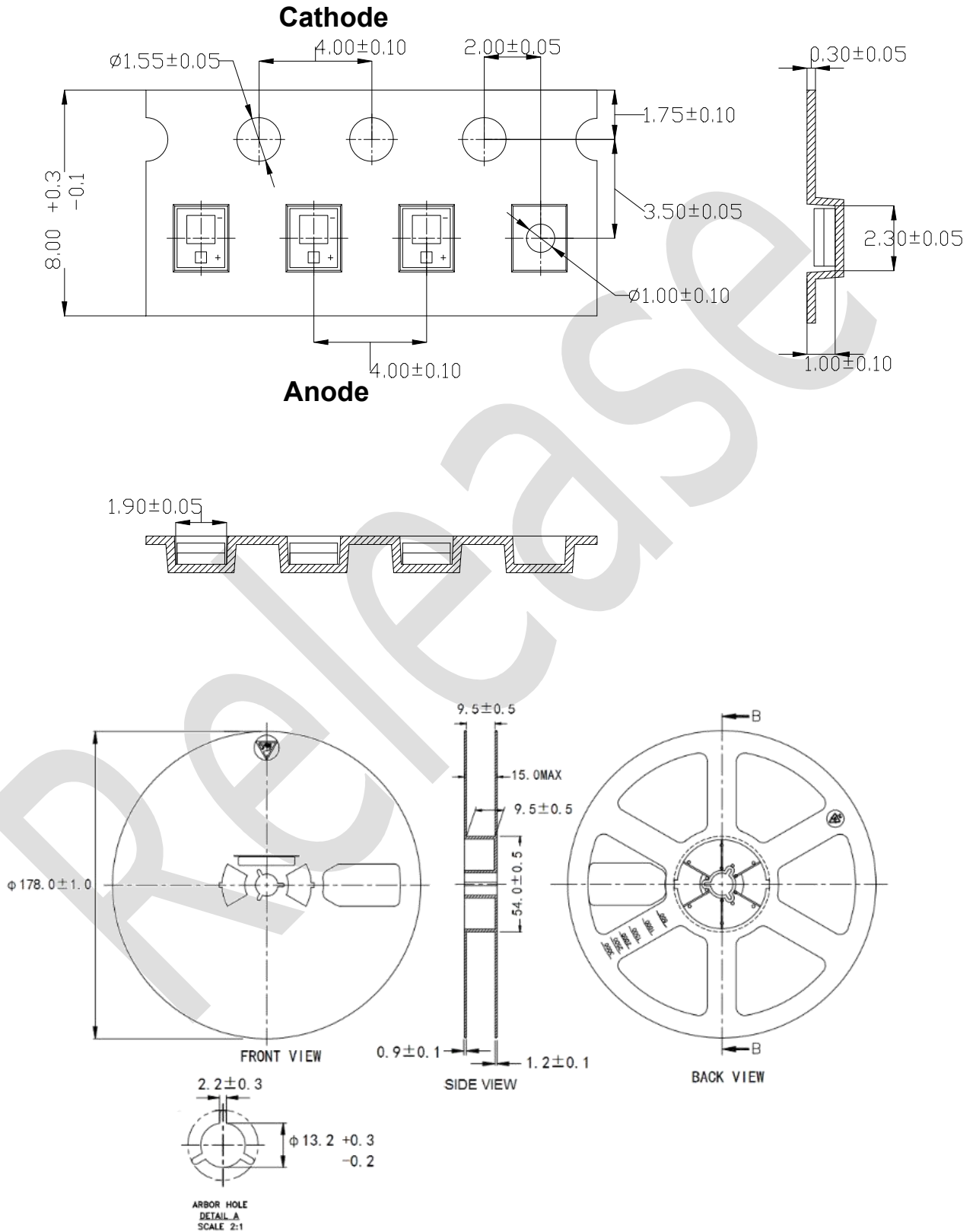
Compatible with the JEDEC-J-STD-020D, using the parameters listed below.

Profile Feature	Lead-Free Solder
Average Ramp-Up Rate (T _{Smax} to T _P)	3 °C/sec max.
Preheat: Temperature Min (T _{Smin})	150
Preheat: Temperature Max (T _{Smax})	200
Preheat: Time (t _{Smin} to t _{Smax})	60-120 secs
Time Maintained Above: Temperature (T _L)	217 °C
Time Maintained Above: Time (t _L)	60-150 secs
Peak/Classification Temperature (T _P)	260 °C
Time Within 5 °C of Actual Peak Temperature (t _p)	5 secs
Ramp-Down Rate	6 °C/sec max.
Time 25 °C to Peak Temperature	8 minutes Max.

Notes:

1. All temperatures refer to topside of the package, measured on the package body surface.
2. The soldering condition referring to J-STD-020D.
3. The Soldering profile could be further referred to different soldering grease material characteristic. The grease vendor will provide this information.
4. A rapid-rate process is not recommended for the LEDs cooling down from the peak temperature.
5. Although the recommended reflow conditions are specified above, the reflow or hand soldering condition at the lowest possible temperature is desirable for the LEDs.
6. Lattice Power cannot make a guarantee on the LEDs which have been already assembled using the dip soldering method.

11.Reel Dimensions



12 .Cleaning

In general, LED does not recommend a wet cleaning process for component as the package is not hermetically sealed.

Due to the open design, all kind of cleaning liquids can infiltrate the package and cause a degradation or a complete failure of the LED.

13. Storage

In order to avoid the adsorption of moisture, it is recommended to solder LEDs as soon as possible after unpacking the sealed envelope.

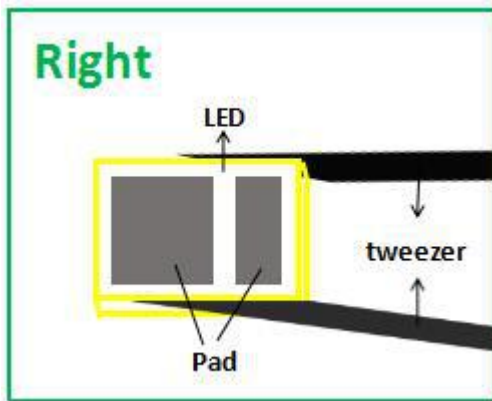
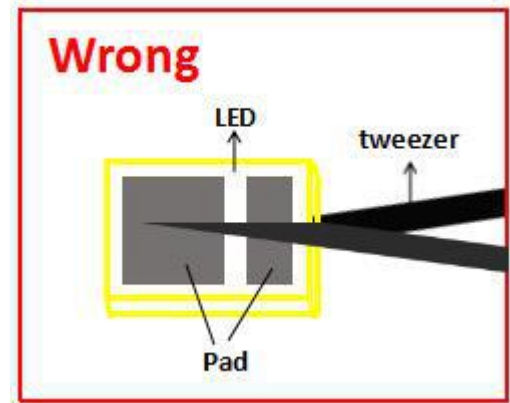
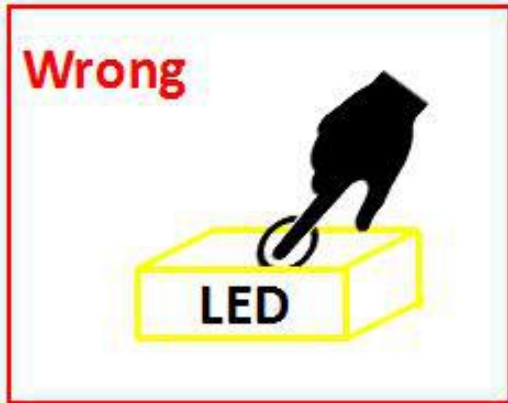
If envelope is still packed, to store it in the environment as following:

- (1) Temperature: 5 °C~30 °C (41 °F) Humidity: RH 60% Max.
- (2) After this bag is opened, devices that will be applied to infrared reflow, vapor-phase reflow, or equivalent soldering process must be:
 - a. Completed within 12 hours
 - b. Stored at less than 30% RH
 - c. need to put the reel patch in 70 °C oven for 12 hours
- (3) Devices require baking before mounting, if (2)a or (2)b is not met.
- (4) If baking is required, devices must be baked under below conditions: 12 hours at 60 °C ± 3 °C

14. Recommend Nozzle Dimensions

Recommend using Teflon material for the nozzle, sharpen steel material pick up tools are refused.

15. Handling Precautions



During the handling, care should be taken as well to ensure no pressure on the top surface of component.

All types of sharp objects (e.g. forceps, fingernail, etc) should be avoided in order to prevent stress to the silicone, since this can lead to damage of the component.