◆Features：

- Package Size：2.8(L) ×3.5(W) ×0.8(T)mm
- Silicone Packed
- Suitable for different working environment
- Super long lifetime：50000HRs
- Anti UV
- White colors are available in(2300K- 25000K)
- Wide viewing angle (2θ 1/2 =120 °)

◆Applications：

- Mobile phone flash
- Automotive interior lighting
- Automotive forward lighting
- Architectural lighting
- LCD TV / Monitor backlight

Applications：

- Traffic signals
- Task lighting Decorative/
- Pathway lighting
- Remote/Solar powered lighting
- Household appliances

Device Selection Guide

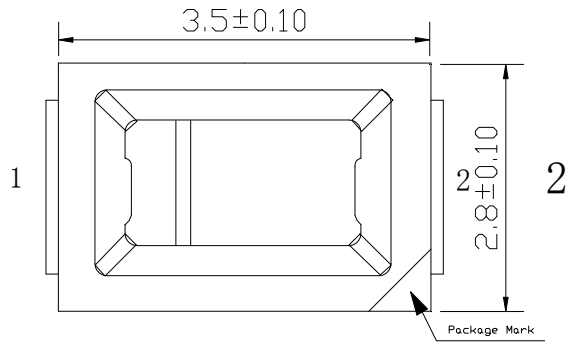
ITEM 项目	MATERIALS 物料
Resin 胶体	Silicon 硅胶
Bonding wire 焊线	25 Em Au
Lens color 胶体颜色	Water Clear 水清透明
Dice 晶片	InGaN

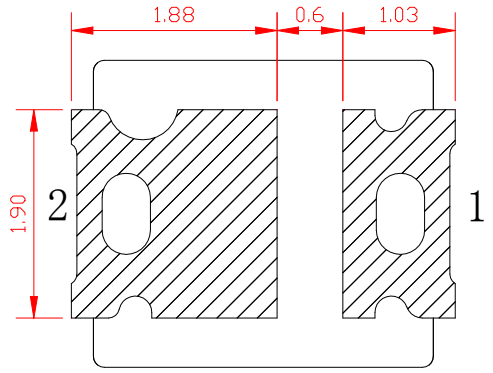
REFLECTOR COATING TYPE HIGH-PERFORMANCE

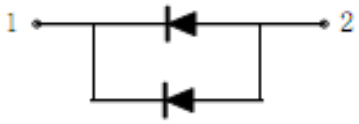
LEDs
High Performance SMD Single-Color Top LEDs

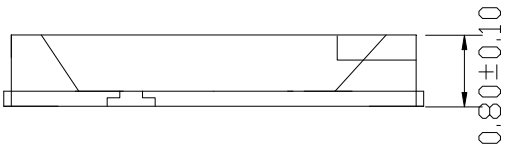
1 Dimensions

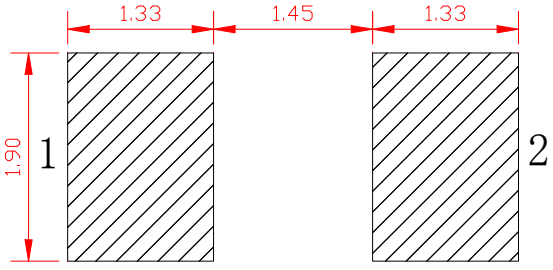
(Units):(mm)











Soldering Pad

NOTES：

1、 All dimensions are in millimeters (inches)；

2、Tolerances are 0.2mm (0.008inch) unless otherwise noted

2. Electrical / Optical characteristics

(1)Absolute Maximum Ratings (TA=25±5° C)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	IF	60	mA
Pulse Forward Current	IFP	150	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	300	mW
Operating Temperature	Topr	-40° C To +85° C	°C
Storage Temperature	Tstg	-40° C To +85° C	°C
Soldering Temperature	Tsld	Reflow Soldering: 260° C Hand Soldering : 300° C	for 10sec. for 3sec.

IFP Conditions : 1/10 Duty Cycle, 0.1 msec Pulse Width.

(2)Initial Electrical/Optical Characteristics (TA=25±5° C)

Symbol	Item	Units	Min.	Typ.	Max.	Test Conditions
VF	Forward Voltage	V	2.0	---	2.4	IF=60mA
IR	Reverse Current	uA	-	---	5	VR=5V
2θ½	Viewing Angle	°	-	120°	-	IF=60mA
Ø	Luminous flux	lm	6	---	8	IF=60mA
IV	Light intensity	mcd	2000	---	2200	IF=60mA
WLD	Dominant wavelength	nm	620	---	630	IF=60mA

备注：

电压标准分档 0.2V/档

(IF=60mA, Ta=25℃)

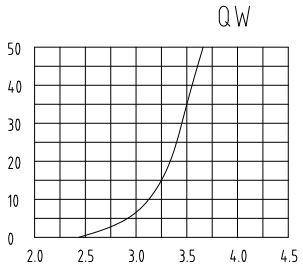
Tolerance of measurement of Vf is ±0.05 V

Luminous Intensity Measurement allowance is ±0.2lm

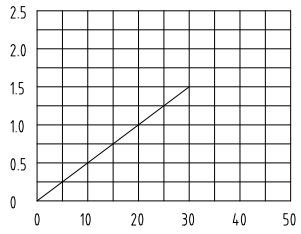
Light intensity Measurement allowance is ±100mcd

Dominant wavelength Measurement allowance is ± 0.5nm.

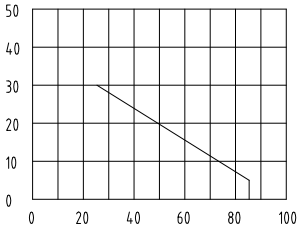
3.Characteristic curve



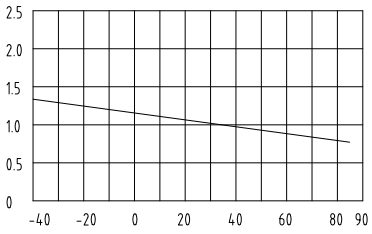
FORWARD CURRENT VS FORWARD VOLTAGE
正向电流和正向电压的关系曲线图



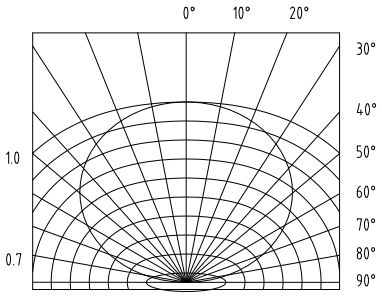
LUMINOUS INTENSITY VS FORWARD CURRENT
亮度和正向电流关系曲线图



FORWARD CURRENT VS DERATING CURVE
正向电流递减曲线图



LUMINOUS INTENSITY VS AMBIENT TEMPERATURE
亮度与环境温度关系曲线图



SAPTIAL DISTRIBUTION
发光角度图解

4 RELIABILITY

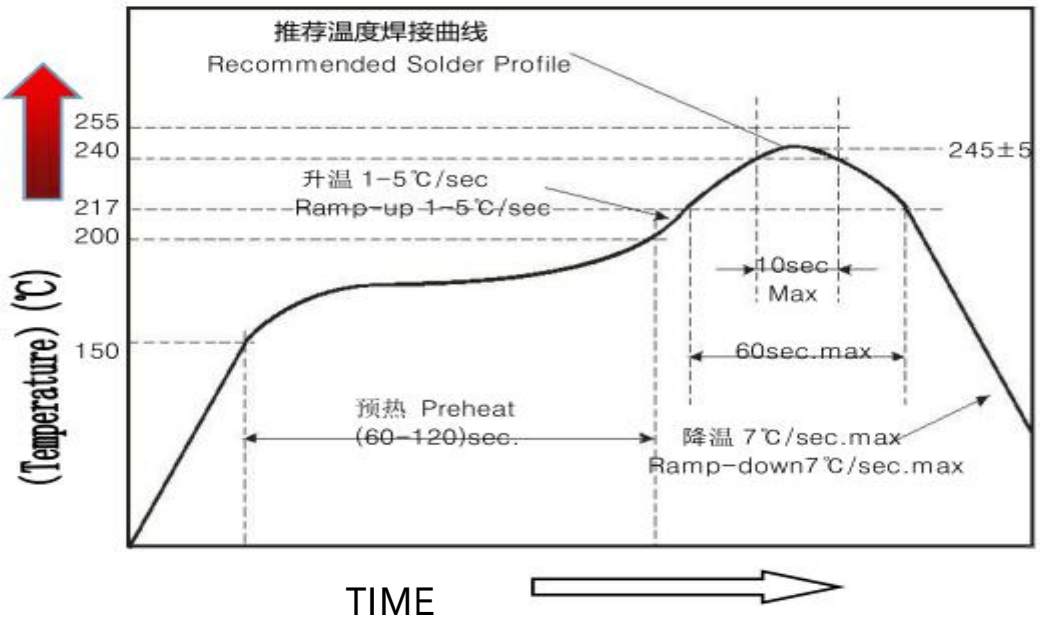
(1) Test Items and Results

NO	Pilot projects	Guieline	Test conditions	Duration	QTY of samples	Acceptance level (number of failures /total number of samples
1	temperature cycle		-40℃～25℃～100℃～25℃ 30minute 5minute 30minute 5minute	循环 100 回合	50	0/50
2	Thermal shock		-40℃～100℃ 15minute 15minute	cycle 500 round	50	0/50
3	high temperature storage		T_a=100℃	1000 HOUR	50	0/50
4	low temperature storage		T_a=-40℃	1000 HOUR	50	0/50
5	Normal temperature life test		T_a=25±5℃ I_F=60mA	1000 HOUR	50	0/50
6	High temperature and high humidity life test		T_a=60℃ RH=85% I_F=60mA	1000 HOUR	50	0/50
7	Solderability (reflow soldering)		T_{sol} =235℃±5℃, 5 Second use flux	Solder once, 5 seconds	10	0/10
8	Solder Resistance (Reflow Soldering)		T_{sol}=260℃, 10 Second preprocessing : 35℃95% RH 96 Hour	Weld twice, 10 seconds each time	10	0/10
NOT	If the above test items are different from the customer's test requirements or special customers have special requirements, they can be tested according to the customer's requirements according to the actual situation. If the customer does not require, they can be tested according to our test standards.					

（Useful hint）：

1、A soldering iron of less than 20W is recommended to be used in Hand Soldering.Please keepthe temperature fo the soldering iron under 360℃ while soldering.Each terminal fo the LED is to go for less than 3 second and for one time only.
Be careful because the damage of the product is often started at the time of the hand soldering.

2.Reflow Soldering:Use the conditions shown in the under Figure of Pb-Free Reflow Soldering



- **Reflow soldering only allowed to do once**
- **Stress on the LEDs should be avoided during heating in soldering process**
- **After soldering,do not deal with the product before its temperature drop down to room Temperature.**

Precautions(1)

1. Storage

● Moisture proof and anti-electrostatic package with moisture absorbent material is used, to keep moisture to aminimum.

● Before opening the package, the product should be kept at 30℃ or less and humidity less than 60% RH, and beused within a year.

● After opening the package, the product should be stored at 30℃ or less and humidity less than 10%RH, and besoldered within 24 hours (1day). It is recommended that the product be operated at the workshop condition of 30℃ or less and humidity less than 60%RH.

● If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (70±5)℃ for 24 hours

2. Static Electricity

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristic such as the forward voltage becomes lower, or the LEDs do not light at the low current. even not light.

All devices, equipment and machinery must be properly grounded. At the same time, it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs.

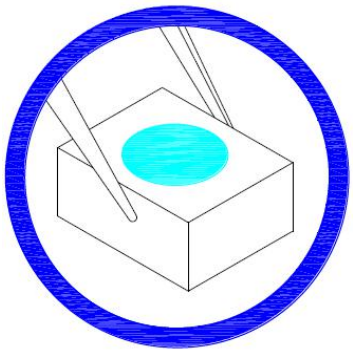
Precautions (2)

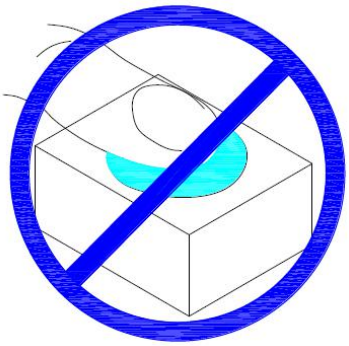
3. Vulcanization

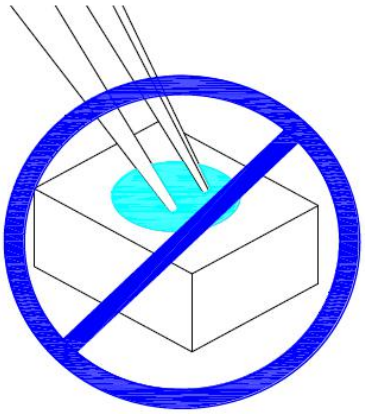
LED curing is due to sulfur being in bracket and the +1 price of silver in the chemical reaction generated Ag2S in the process. It will lead to the capacity of reflecting of silver layer reducing, light color temperature drift and serious decline ,seriously affecting the performance of the product.So we should take corresponding measures to avioding vulcanization, such as to avoid using sulphur volatile substances and keeping away from high sulphur content of the material.

Handling Precautions

1、 Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.







2. Do not stack together assembled PCBs containing LEDs.

3. Not suitable to operate in acidic envi-ronment,PH<7
Impact may scratch the silicone lens or damage the internal circuitry