



Data Sheet

Customer Name :					
Customer NO :					
Product Name :			CL-SFC535DBW- 10K-02		
Product Type :					
Date Prepared :					
Development	Approved	Marketing Dept	Confirmed by	Approved	Purchasing Dept
Judge outcome			Judge outcome		

Features

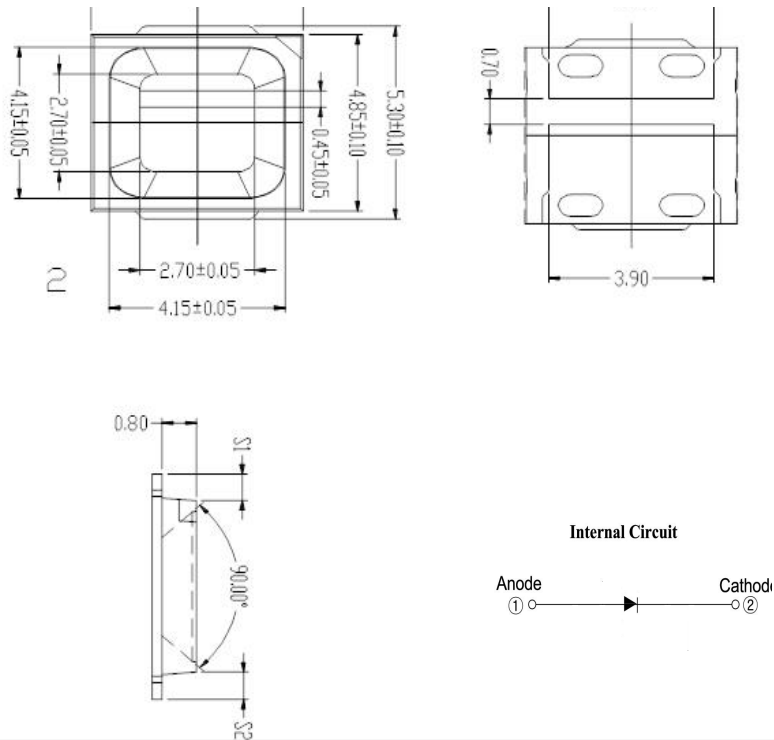
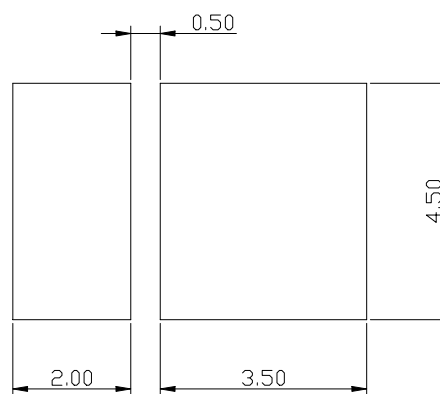
- Package Size: 5.4(L) × 5.0(W) × 0.8(T)mm
- Silicone Packed
- Suitable for different working environment
- Super long lifetime: 50000HRs
- Anti UV
- White colors are available in(2300K- 25000K)
- Wide viewing angle ($2\theta = 120^\circ$)

Applications

- Indoor lighting: Fluorescent lamp, tube
- Commercial illumination and displays: Advertising words, light box
- LCD Backlighting
- Decorative lighting: light strip
- Automotive interior auxiliary lighting
- Other illumination and displays

Device Selection Guide

ITEM	MATERIALS
Resin	Silicor
Bonding wire	25 Em Au
Lens color	Water Clear
Dice	InGaN

Package Dimensions

Recommended Soldering Patter

NOTES:

- 1、 All dimensions are in millimeters (inches);
- 2、 Tolerances are 0.2mm (0.008inch) unless otherwise noted

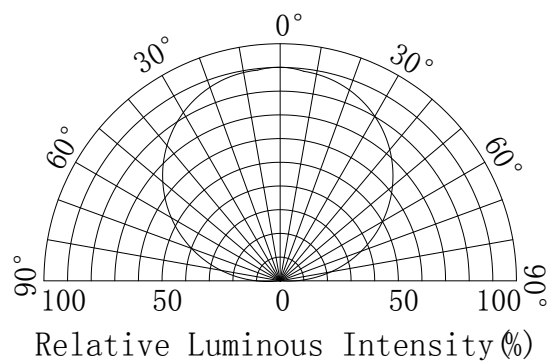
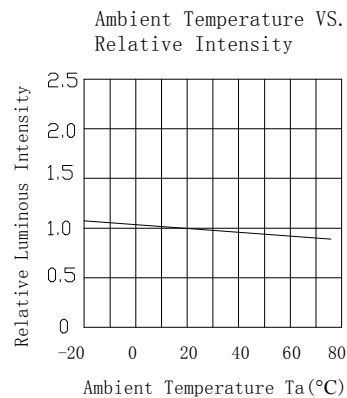
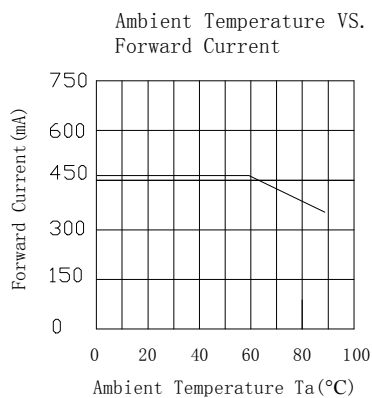
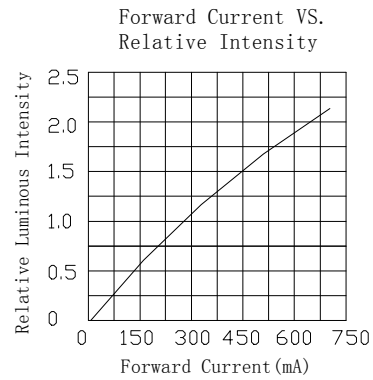
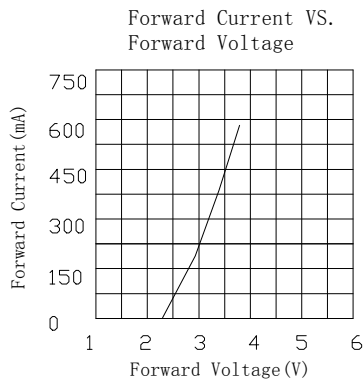
Absolute maximum ratings
(Ta=25°C)

Parameter	Symbol	Value	Unit
Forward current	If	350	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	1500	mW
Operating temperature range	Top	-25~+80	°C
Storage temperature range	Tstg	-30~+85	°C
Peak pulsing current (1/8 duty f=1KHz)	Ifp	450	mA
Junction Temperature	Tj	115	°C/W
Electrostatic Discharge(HBM)	ESD	1000	V

Electro-Optical characteristics
(TA=25°C)

Parameter	Test Condition	Symbol		Value			Unit
				Min	Typ	Max	
ColorTemperature	If=350mA	CCT	AW	8000	---	12000	K
Forward voltage	If=350mA	Vf	AW	3.0	---	3.4	V
luminous flux	If=350mA	φ	AW	110	---	130	LM
Viewing angle at 50% IV	If=350mA	2θ1/2	AW	--	120	--	Deg
Dominant wavelength	If=350mA	λd	--	--	--	--	nm
Reverse current	Vr=5V	Ir	AW	--	5	--	μA
Color Rendering Index	If=350mA	CRI	--	--	80	--	Ra

Typical photoelectricity characteristic curve chart



Test items and results of reliability

Type	Test item	Standard	Test Conditions	Note	Quantity	Number of Damaged
Environmental Sequence	Temperature Cycle	JIS C 7021 (1977)A-4	-25°C 30min ↑↓5min 80°C 30min	100 cycle	22	0
	Thermal Shock	MIL-SLD-107D	-25°C 15min ↑↓5min 80°C 15min	100 cycle	22	0
	High Humidity Heat Cycle	JIS C 7021 (1977)A-5	30°C <=> 65°C 90%RH 24hrs/1cycle	10 cycle	22	0
	High Temperature Storage	JIS C 7021 (1977)B-10	T _a =80°C	1000hrs	22	0
	Humidity Heat Storage	JIS C 7021 (1977)B-11	T _a =60°C RH=90%	1000hrs	22	0
	Low Temperature Storage	JIS C 7021 (1977)B-12	T _a =-30°C	1000hrs	22	0
Operation Sequence	Life Test	JIS C 7035 (1985)	T _a =25°C I _F =450mA	1000hrs	22	0
	High Humidity Heat Life Test	Ⓢ	60°C RH=90% I _F =450mA	500hrs	22	0
	Low Temperature Life Test	Ⓢ	T _a =-25°C I _F =450mA	1000hrs	22	0

Refer to reliability test standard specification for in this line.

Criteria For Judging Damage

Parameter	Symbol	Units	
Forward Voltage	V _F	I _F =I _{FT}	Initial Data±10%
Reverse Current	I _R	V _R =5V	I _R ≤ 10μA
Luminous Intensity	I _V	I _F =I _{FT}	Average I _V degradation ≤ 30% Single LED I _V degradation ≤ 50%
Resistance to Soldering Heat	--	--	Material without internal cracks, no material between stripped, no deaded light.

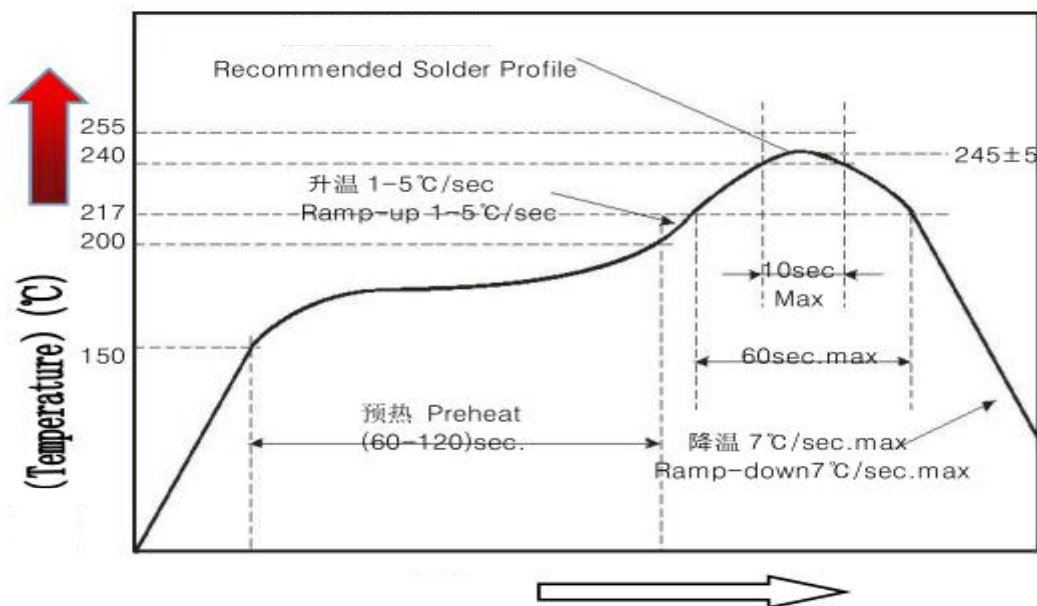
Useful hint:

1、 Hand Soldering

A soldering iron of less than 20W is recommended to be used in Hand Soldering. Please keep the temperature of the soldering iron under 360 °C while soldering. Each terminal of 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 a minimum.
- Before opening the package, the product should be kept at 30°C or less and humidity less than 60% RH, and be used within a year.
- After opening the package, the product should be stored at 30°C or less and humidity less than 10%RH, and be soldered within 24 hours (1day). It is recommended that the product be operated at the workshop condition of 30°C or less and humidity less than 60%RH.
- If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: $(70 \pm 5)^{\circ}\text{C}$ 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 Ag_2S 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 avoid vulcanization, such as to avoid using sulphur volatile substances and keeping away from high sulphur content of the material.

4. Safety Advice For Human Eyes

LED Viewing direct to the light emitting center of the LEDs, especially those of great Luminous Intensity will cause great hazard to human eyes. Please be careful.