



**Feature:**

- Dimension 2.8 × 1.2 × 0.8 mm
- Long operating life
- Low voltage DC operated
- This product doesn't contain restriction substance, comply ROHS standard
- Viewing Angle 130 deg.

**Application:**

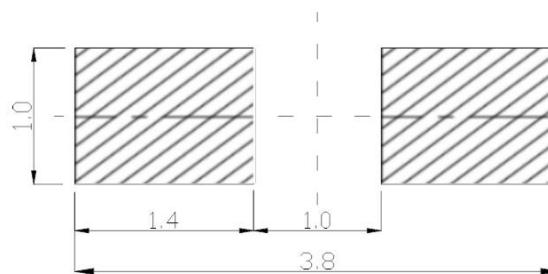
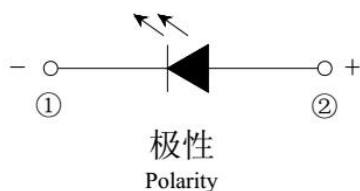
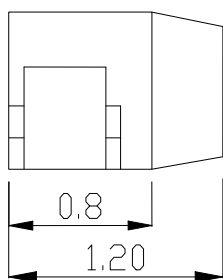
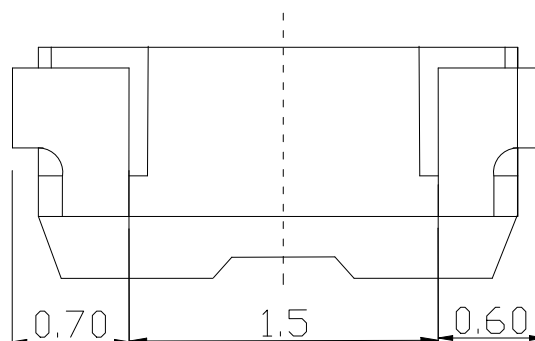
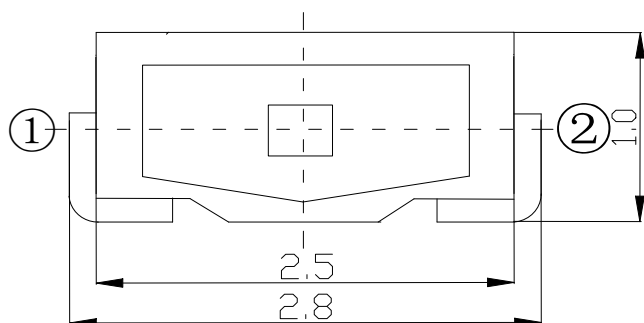
- Indicators
- Illuminations

**Certification & Compliance:**

- ISO9001
- RoHS Compliant



**Dimension:**



**RECOMMENDED PCB SOLDER PAD**

**Notes:**

1. All dimensions are in millimeters .
2. All dimensions tolerance is ±0.25mm unless otherwise noted.
3. Electrodes are pointed in yellow lines

**Electrical / Optical Characteristic** (Ta=25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Tolerance	Unit
Luminous Intensity	IV	IF=20mA	--	1200	--	±5%	mcd
Forward voltage	VF	IF=20mA	2.8	--	3.4	± 0.1	V
Reverse Current	IR	VR=5V	--	--	5	±0.1	μA
Dominant Wavelength	λD	IF=20mA	460	--	470	±100	nm
Peak Wavelength	λP	IF=20mA	--	465	--	±1	nm
Viewing Angle	2θ1/2	IF=20mA	--	130	--		deg.

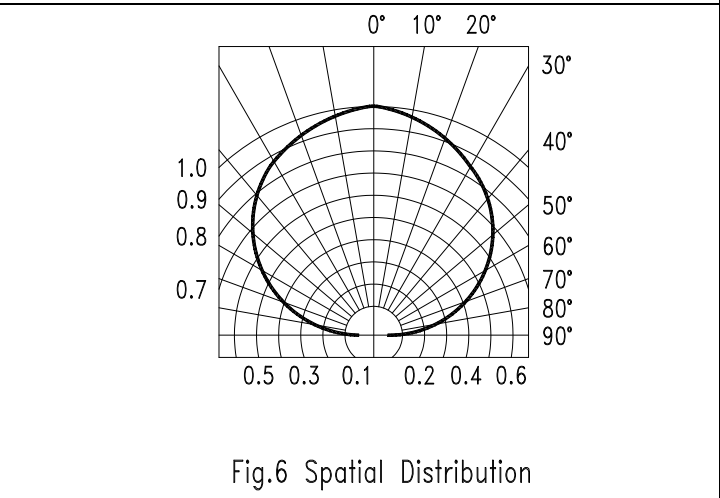
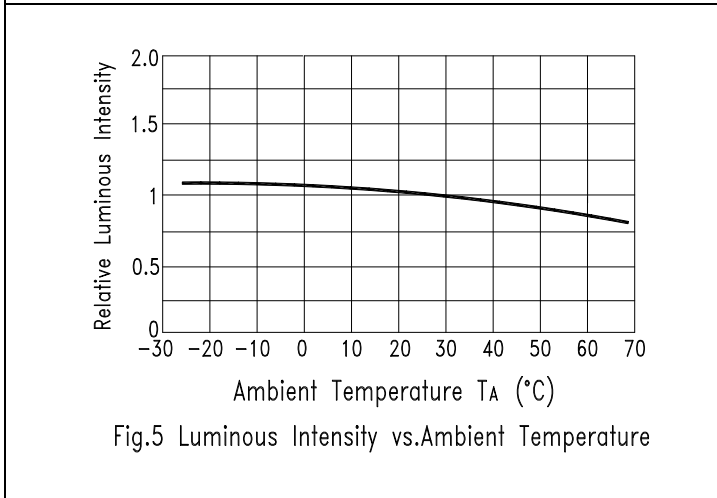
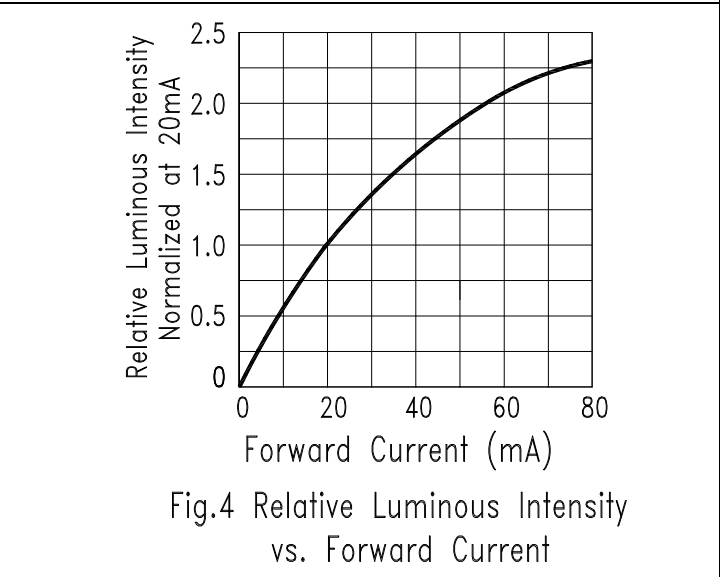
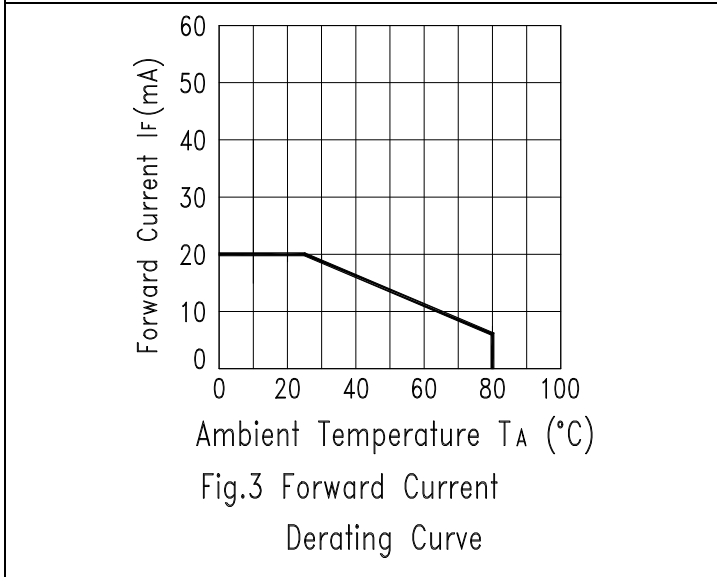
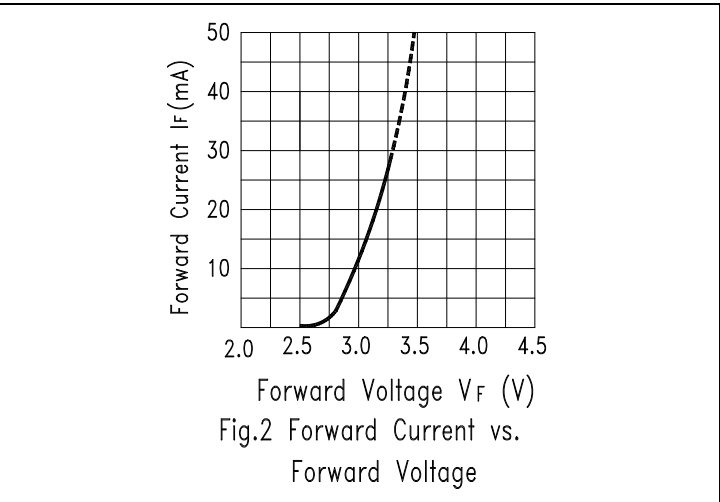
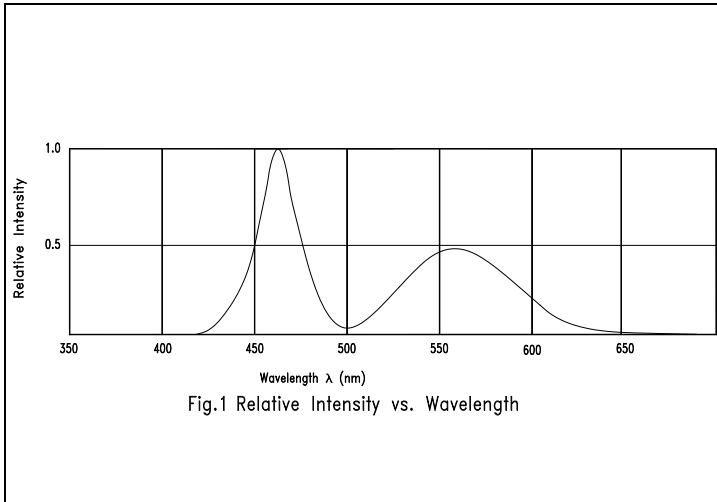
**Absolute Maximum Rating** (Ta=25 °C)

Parameter	Symbol	Absolute maximum Rating	Unit
Constant Forward Current	IF	25	mA
Peak Forward Current	IFP	75	mA
Reverse Voltage	VR	5	V
Operation Temperature	Topr	-30 ~ 85	°C
Storage Temperature	Tstg	-40 ~ 90	°C
Junction Temperature	Tj	125	°C
Power dissipation	Pd	90	mW
Electrostatic Discharge Classification	ESD	2000 V	

1. The temperature of Aluminum PCB do not exceed 55°C.
2. 1/10 Duty Cycle,0.1ms Pulse Width



**Characteristic Curves:**

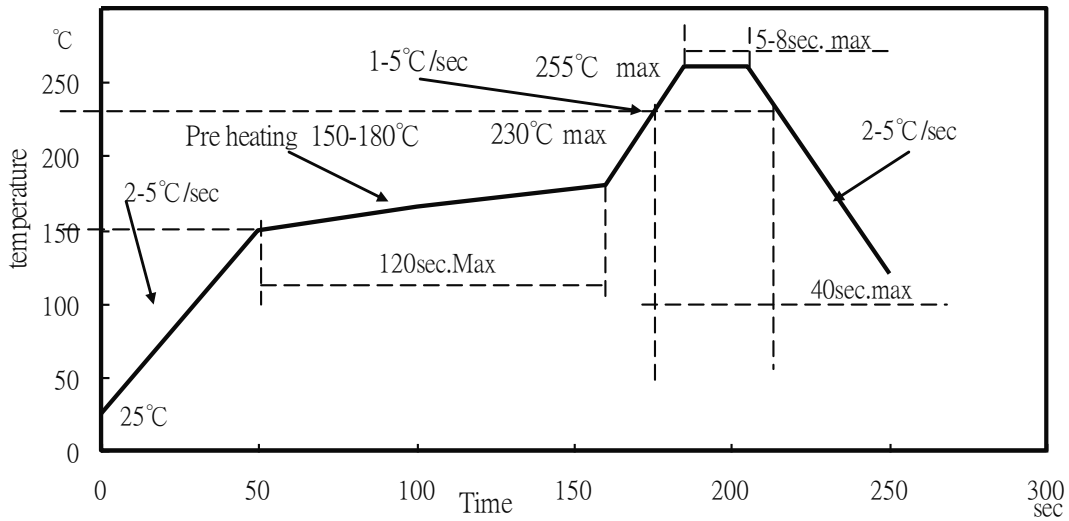




### Soldering Profile

- Recommended tin glue specifications: melting temperature in the range of 178~192 °C
- The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):

Lead Free solder



1. Reflow soldering should not be done more than two times. many times reflow soldering has destructive effect to the product.
2. When soldering, do not stress on the LEDs during heating.



**Reliability test items and conditions:**

NO	Item	Test Conditions	Time	Quantity	Ac/Re
1	IR-Reflow	TEMP : 240°C ± 5 °C	10 Sec	22 PCS	0/1
2	Temperature Cycle	H : +100°C 15min ∫ 5 min L : -40°C 15min	300 Cycles	22 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	300 Cycles	22 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 Hrs	22 PCS	0/1
5	Low Temperature Storage	TEMP : -40°C	1000 Hrs	22 PCS	0/1
6	DC Operating Life	TEMP : 25°C	1000 Hrs	22 PCS	0/1
		IF =20mA			
7	High Temperature / High Humidity	85°C / 85% RH	1000 Hrs	22 PCS	0/1

The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

**Criteria For Judging Damage**

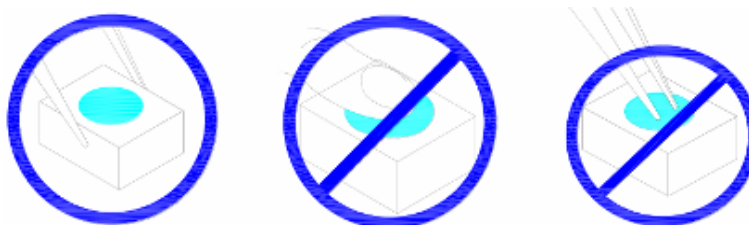
Item	Symbol	Test Conditions	Criteria for Judgement	
			Min	Max
Forward Voltage	VF	IF=20mA		U.S.L*)x1.1
Reverse Current	IR	VR=5V		U.S.L*)x2.0
Luminous Intensity	IV	IF=20mA	L.S.L*)x0.7	

U.S.L: Upper standard level  
L.S.L: Lower standard level



### ■ Instructions Of Soldering

1. Hand Solder should not be using hand soldering iron, suggest using heating operation, the use of solder paste melting point under 220 °C, the heating temperature set less than or equal to 255°C, the time is not more than 5s, a welding is complete, multiple welding products are destructive.
2. 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.



### ■ Cautions

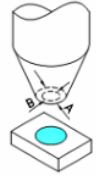
#### Storage condition

1. The operation of Temperatures and RH are :  $\leq 30^{\circ}\text{C}$ , RH<60%.
2. Once the package is opened, the products should be used within 8hours, Otherwise, more than the dehumidification process, dehumidifying conditions: reel 70 °C / 6 ~ 8 h, bulk LED150 °C / 3 h
3. Considering the operation environment of temperature and humidity ,we suggest our customers to use our products within three months (from production date), More than 3 months with toasted constant temperature 70 °C $\pm$ 5 °C for 6 ~ 8 hours desiccant (need to get rid of aluminum foil bag packing).
4. The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.

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5. LED operating environment and sulfur element composition cannot be over 100PPM in the LED contact usage material.



6. When external glue needed for LED application products, please make sure that the external glue matches the LED packaging glue. As most of LED packaging glue is silica gel, and it has strong Oxygen permeability as well as strong moisture permeability; in order to prevent external material from getting into the inside of LED, which may cause the malfunction of LED, the single content of Bromine element is required to be less than 900PPM, the single content of Chlorine element is required to be less than 900PPM, the total content of Bromine element and Chlorine element in the external glue of the application products is required to be less than 1500PPM

7. Please note that the electrostatic protection during processing, All devices, equipment and machinery must be properly grounded.

### Products use manual

1. LED unfavorable use by constant voltage or more LED directly to the parallel use, advising clients to use in constant current mode.
2. When using LED products, please note that according to the grades of the same (voltage, brightness, color temperature) code together, different grades and different batches should be confirmed to meet customers' requirements to mix stick, lest produce color difference or brightness difference.

### Part Numbering Code

S	2810	1	B	465	MT	01
SMD Type	Lead frame size	Chip qty	Color	nm/CCT	Chip Code	Version



**Part Number Coding**

**CODING SCHEME**

<u>X</u>	<u>XXXX</u>	<u>X</u>	<u>X</u>	<u>XXX</u>	<u>X</u>	<u>XX</u>
S - SMD Type P - PCB Type L - Lamp Type HP - High Power Type M - LED Module Type F - Fixture Type	Lead Frame Size	Chip Qty	Emitting Color - W - White B - Blue S - Sensor N - Not visible	Pd(watt)/nm/CCT  Pd - 01 - 1W  nm (ref.) - 365 - 365nm 470 - 470nm 660 - 660nm  CCT - W - Warm White N - Netruel White C - Cool White	Chip Code	Version

**Note**

The information in this document provides generic information but for specific information on a product the appropriate product datasheet should be used.