

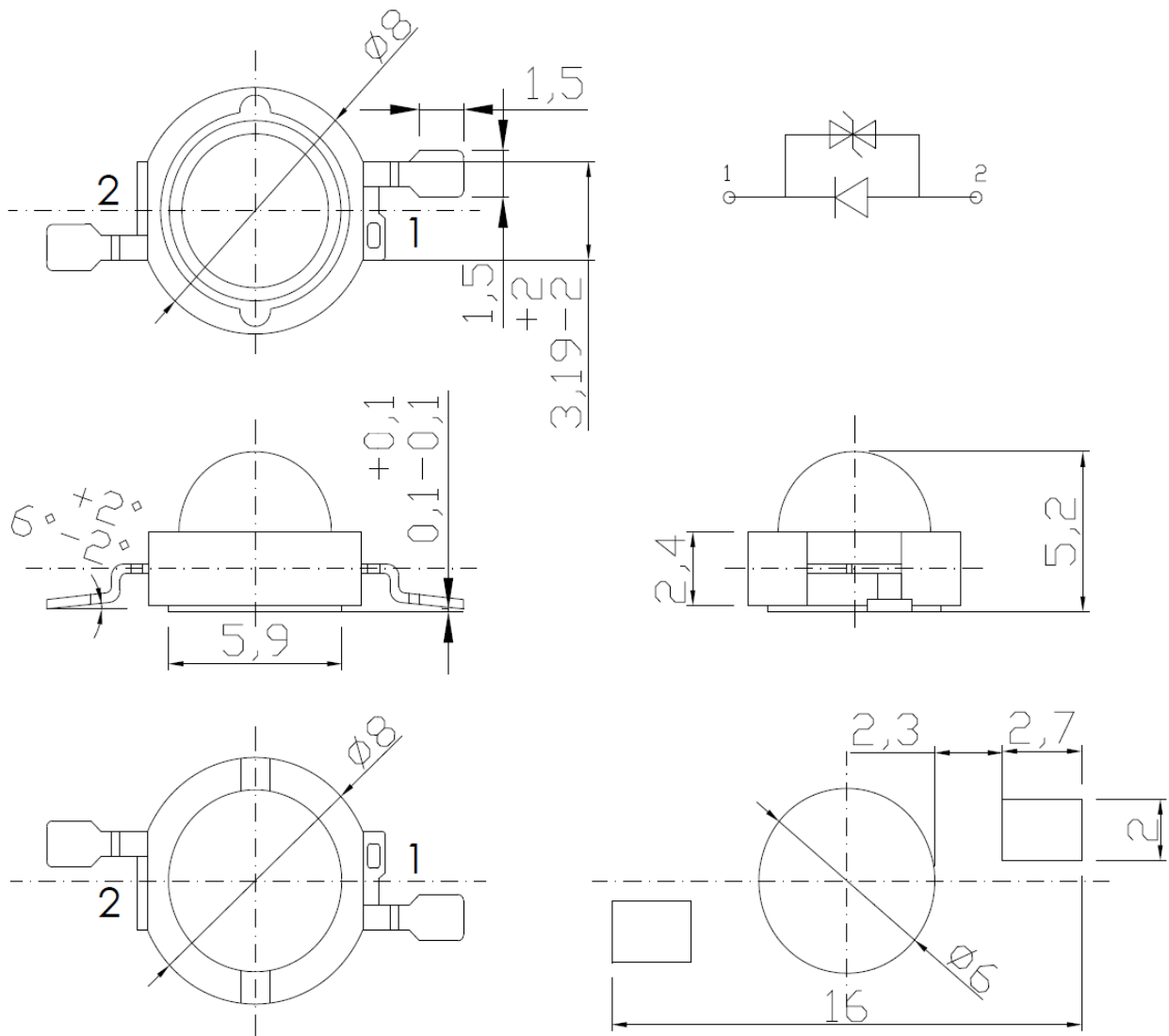
1. Features:

Electrically neutral thermal path and silicone molding package
 Extremely wide viewing angle.
 Suitable for all SMT assembly and solder process
 Package: 50pcs/tape
 RoHS compliant.

Applications

UV Curing
 UV Ink Curing
 Medical treatment and health
 Nail Care
 General use.

2. (Package Dimensions):



Notes:

All dimensions units are in millimeters.
 All dimensions tolerances are $\pm 0.2\text{mm}$ unless otherwise noted

3. Electrical Optical Characteristics (Ta=25°C):

Item	Symbol	Test condition	Min.	Value Type.	Max.	Unit
Forward Voltage	VF	IF=700mA	3.0	3.4	3.8	V
Reverse Current	IR	VR=5V	--	--	10	uA
380nm-390nm	øe	IF=700mA	800	--	940	mW
			940	--	1110	mW
390nm-400nm	øe	IF=700mA	940	--	1110	mW
			1110	--	1310	mW
400nm-410nm	øe	IF=700mA	940	--	1110	mW
			1110	--	1310	mW
			1310	--	1545	mW
410nm-420nm	øe	IF=700mA	940	--	1110	mW
			1110	--	1310	mW
			1310	--	1545	mW
Viewing Angle	2Ø1/2	IF=700mA	--	120	--	Deg
Thermal resistance	Rth(j-s)	IF=700mA	--	12	--	°C/W

4. Absolute Maximum Ratings (Ta=25°C):

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	2000	mW
Forward Current	IF	700	mA
Peak Forward Current	IFP	700	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C

Note:

1/10 Duty cycle, 0.1ms pulse width.

The above forward voltage measurement allowance tolerance is 0.1V.

The above color coordinates measurement allowance tolerance is 0.003.

The above luminous intensity measurement allowance tolerance is ± 10%

Care is to be taken that power dissipation does not exceed the absolute maximum rating of the product.

All measurements were made under the standardized environment of the manufacturer.

When the LEDs are in operation the maximum current should be decided after measuring the package temperature, junction temperature should not exceed the maximum rate.

5. Typical optical characteristics curves

Fig.1-Forward Voltage vs. Forward Current Intensity

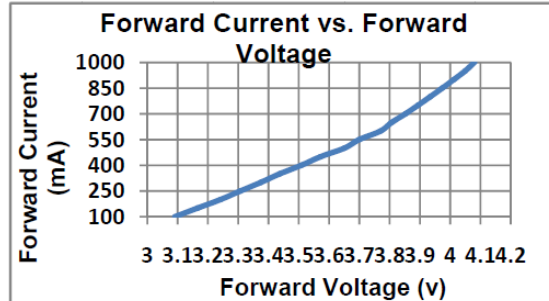


Fig.2-Forward Current vs. Relative Power

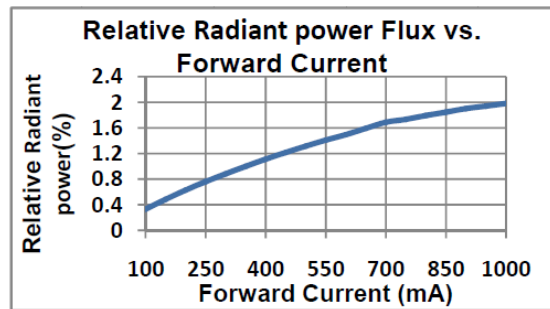


Fig.3-Radiation diagram

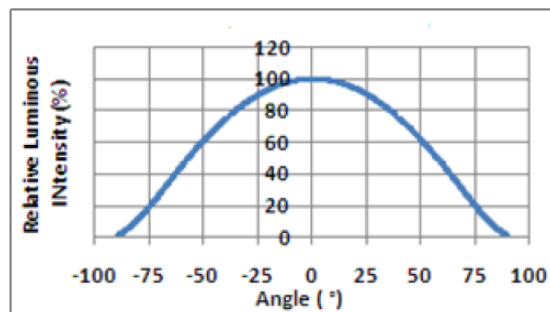
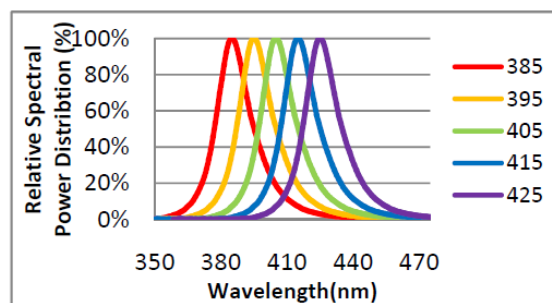


Fig.4- Spectrum Distribution



**6. (Reliability Performance):**

Test item	Ref. Standard	Test Condition	Time	Quantity	Ac/Re
Reflow	JESD22-B106	Temp: 260°C max T=10sec	2 times.	10pcs.	0/1
Temperature Cycle	JESD22-A104	100°C 30min. ↑↓ -40°C 30min.	100 Cycles	10pcs.	0/1
Thermal Shock	JESD22-A106	-40°C 15min. ↑↓ 100°C 15min.	100 Cycles	10pcs.	0/1
High Temperature Storage	JESD22-A103	Temp: 100°C	1000hrs.	10pcs.	0/1
Low Temperature Storage	JESD22-A119	Temp: -40°C	1000hrs.	10pcs.	0/1
Life Test	JESD22-A108	Ta=25°C IF=700mA	1000hrs.	10pcs.	0/1

7. Criteria for Judging Damage:

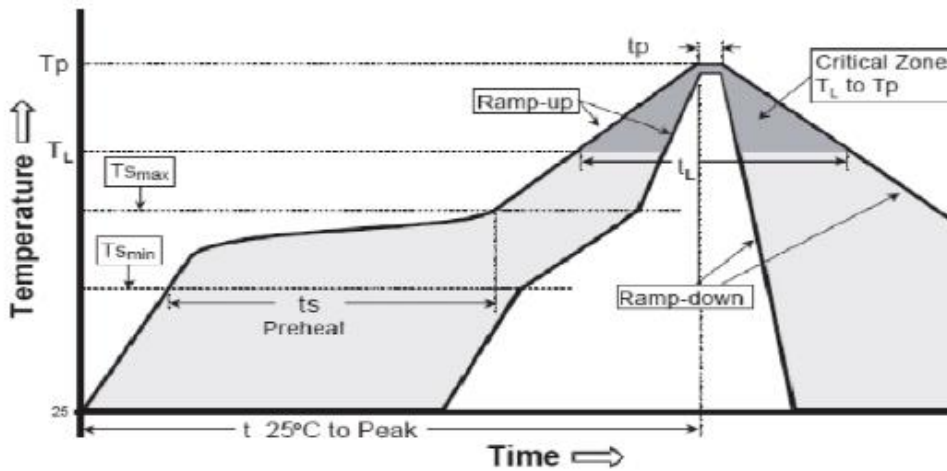
Test Items	Symbol	Test Condition	Criteria For Judgement	
			Min.	Max.
Forward Voltage	VF	IF=700mA	-	U.S.L*)x1.1
Reverse Current	IR	VR=5V	-	U.S.L*)x2.0
Radiation Power	Im	IF=700mA	L.S.L*)x0.7	-

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

The Reliability tests are based on manufacturers existing test platform.

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.

8. SMT Reflow Soldering Instructions



(T _{smax} T _p)	3°C	3°C
(T _{smin})	100°C	150°C
(T _{smax})	150°C	200°C
(t _{smin} – t _{smax})	60-120	60-180
(T _L)	183°C	217°C
(t _L)	60-150	60-150
(T _p)	215°C	260°C
(t _p) 5°C	10-30	20-40
25°C	6	8

1. Reflow soldering should not be done more than two times. In the case of more than 24 hours passed soldering after first, LEDs will be damaged.
2. When soldering, do not put stress on the LEDs during heating

Soldering Iron

1. When hand soldering, keep the temperature of iron below less 300°C less than 3 seconds
2. The hand solder should be done only one time
- 3.

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed in advance whether the characteristics of LEDs will or will not be damaged by repairing.

Cautions

1. The encapsulated material of the LEDs is silicon. Therefore the LEDs have a soft surface on the top of package. The pressure to the top-surface will be influence to reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicon resin should be proper.
2. Components should not be mounted on warped (non coplanar) portion of PCB. After soldering, do not warp the circuit board.
3. Do not apply mechanical force or excess vibration during the cooling process to normal temperature after soldering.
4. Do not rapidly cool device after soldering.