DATA SHEET

Customer: ______________________

Part No: CL-SFC281DNB-B-02(SKY BLUE)

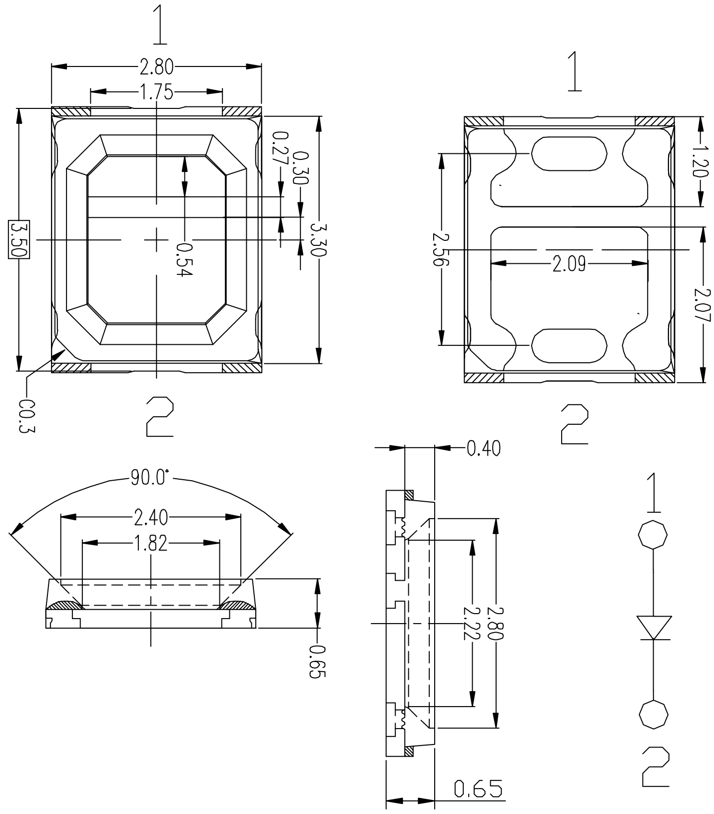
Sample No: ______________________

Description: ______________________

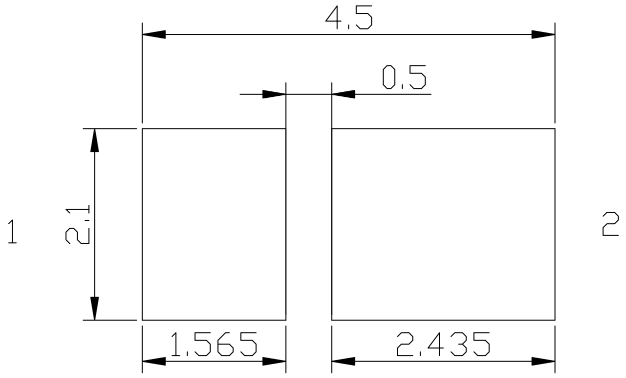
Item No: ______________________

Customer			
Check	Inspection	Approval	Date

Package Dimensions



Recommended Soldering Pattern



（NOTES）:

1. All dimensions are in millimeters
2. Tolerances are ±0.1mm unless otherwise note.

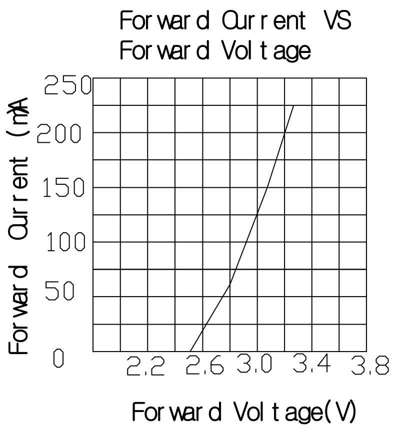
Absolute maximum ratings （Ta=25°C）

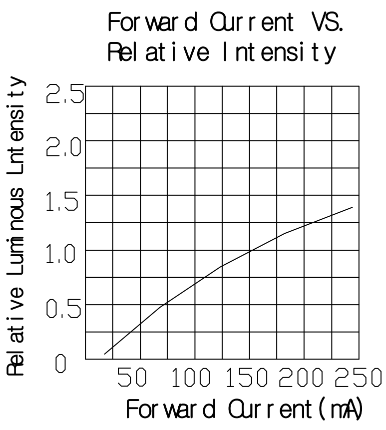
Parameter	Symbol	Value	Unit
Forward current	If	150	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	480	mW
Operating temperature range	Top	-25~+80	°C
Storage temperature range	Tstg	-30~+85	°C
Peak pulsing current（1/8 duty f=1KHz）	Ifp	250	mA
Junction Temperature	Tj	115	°C
Electrostatic Discharge(HBM)	ESD	2000	V

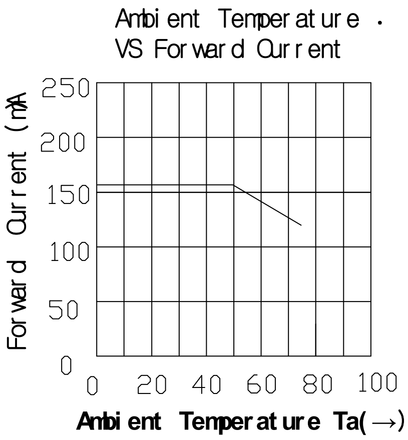
Electro-Optical characteristics (TA=25°C)

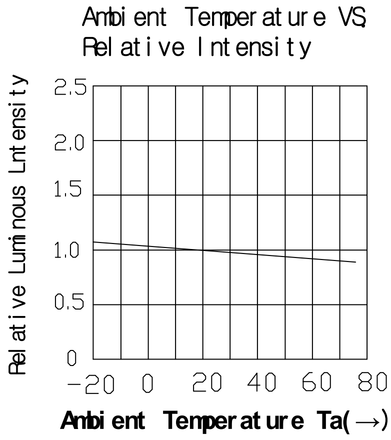
Parameter	Test Condition	Symbol	Color	Value			Unit
				Min	Typ	Max	
Color Temperature	IF=150mA	CCT	W	--	100000	--	K
Forward voltage	IF=150mA	Vf	W	3.1	--	3.3	V
luminous flux	IF=150mA	φ	W	45	--	50	LM
Viewing angle at 50% IV	IF=150mA	2θ1/2	W	--	120	--	Deg
Reverse current	Vr=5V	Ir	W	--	5	--	μA
Color Rendering Index	IF=150mA	CRI	W	--	--	--	Ra

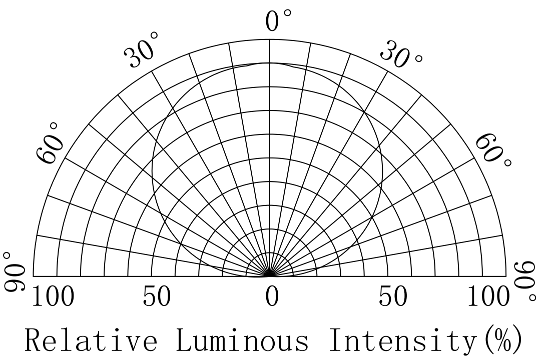
Typical photoelectricity characteristic curve chart











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	50 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=150mA	1000hrs	22	0
	High Humidity Heat Life Test	∗	60°C RH=90% I_F=150mA	500hrs	22	0
	Low Temperature Life Test	∗	Ta=-25°C I_F=150mA	1000hrs	22	0

∗Refer to reliability test standard specification for in this line.

Criteria For Judging Damage

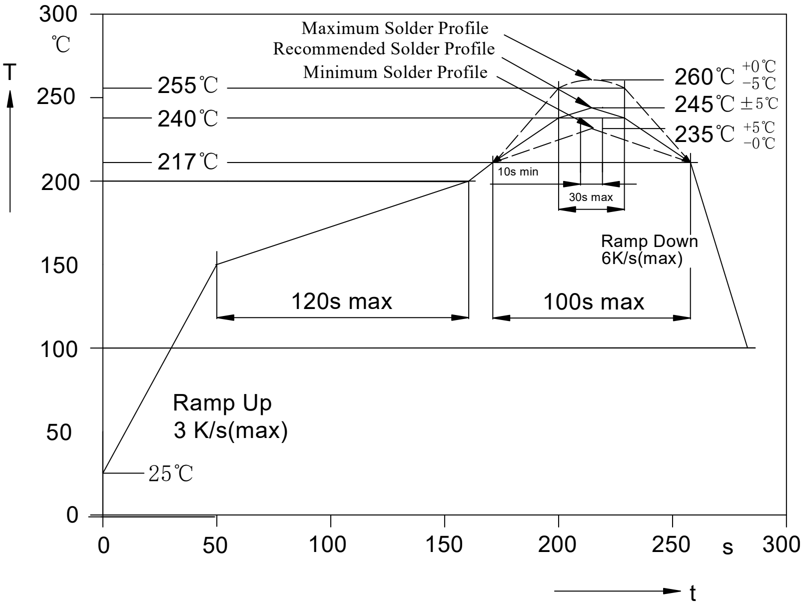
Test item	Symbol	Test Conditions	Standard
Forward Voltage	V_F	I_F=I_{FT}	Initial Data±10%
Reverse Current	I_R	V_R=5V	I_R≦10μA
Luminous Intensity	I_V	I_F=I_{FT}	Average I_V degradation≦30% Single LED I_V degradation≦50%
Resistance to Soldering Heat	--	--	Meterial without internal cracks, no material between stripped, no deaded light.

Guideline for Soldering

1、

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

SMD-Reflow Soldering Profile for lead free soldering(Acc.to J-STD-020B)



Remark: If not lead free soldering, the recommended solder profile is 230°Cand max solder profile is 245°C.

2、 Hand Soldering

1)、

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 onetime only.

2)、

Be careful because the damage of the product is often started at the time of the hand soldering.

3、 Cleaning

1)、

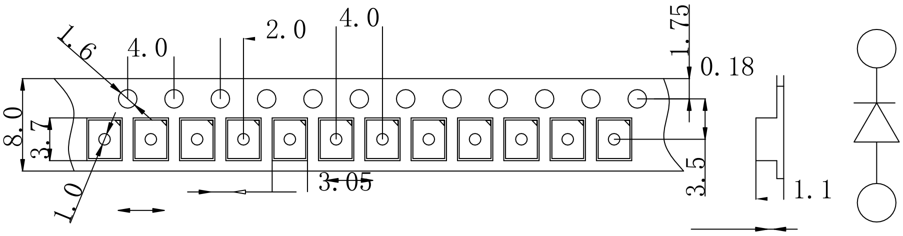
It is recommended that alcohol be used as a solvent for cleaning after soldering. Cleaning is to go under 30°C for 3 minutes or 50°C for 30 seconds. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not.

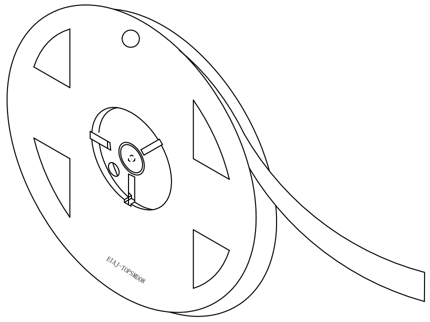
2)、

Ultrasonic cleaning is also an effective way for cleaning. But the influence of Ultrasonic cleaning on LED depends on factors such an ultrasonic power. Generally, the ultrasonic power should not be higher than 300W.Before cleaning, a pre-test should be done to confirm whether any damage to LEDs will occur.

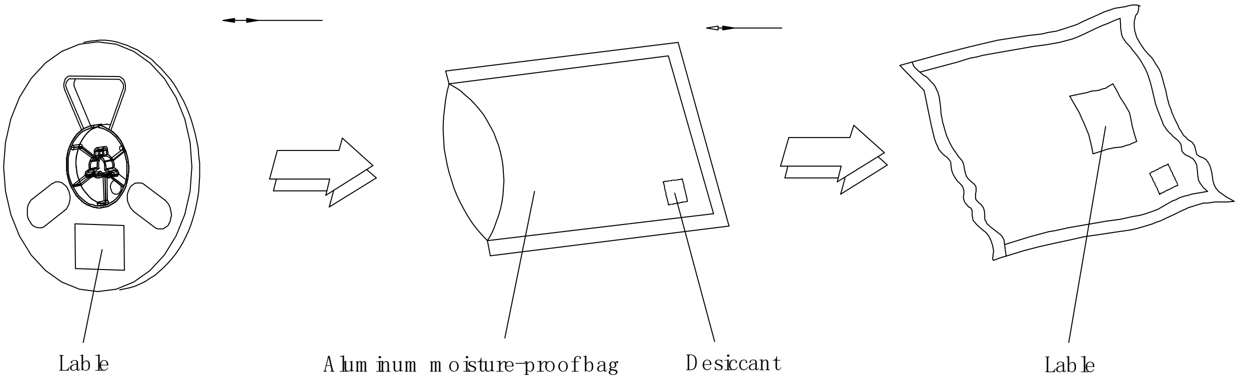
Tape and Packaging

1、Tape leader and reel





2、Moisture Resistant Packaging



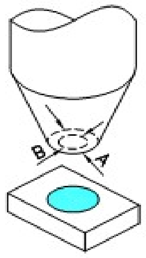
3、 Cautions

1)、

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the 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 silicone resin should be proper.

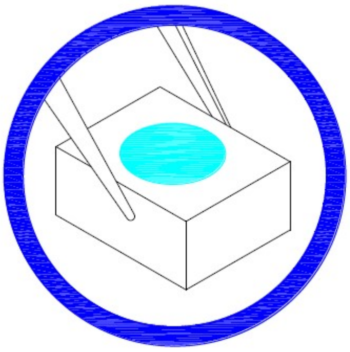
2)、

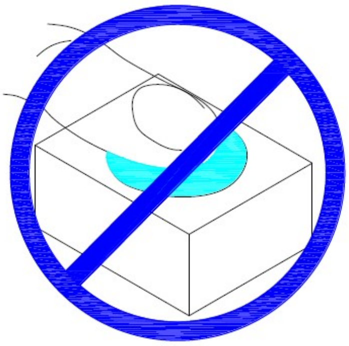
The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible. pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.

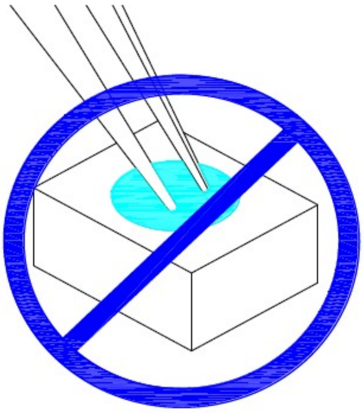


Handling Precautions

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.