



Data Sheet

Customer:

Part No:

CL-SFC3020USD-02

Sample No:

Description:

Item No:

Customer			
Check	Inspection	Approval	Date

Surface Mounted Chip LED

◆ Features :

- Compatible with automatic placement equipment
- Compatible with reflow solder process

◆ Applications :

- Automotive_Telecommunication
- Indicators
- LCD Back-lights
- Illuminations

Dice Material	Light Color	Lens Color
AlInGaP	Ultra High Orange	Water Clear

◆ Absolute Maximum Ratings

Item	Symbol	Maximum	Unit
Power dissipation	P _D	52.5	mW
Continuous forward current	I _{Fmax}	25	mA
Peak forward current (1/10 duty cycle 0.1ms pulse width)	I _{FP}	100	mA
Reverse voltage	V _R	5	V
Electrostatic Discharge (HBM)	ESD	2000	V
Operating temperature range	T _{opr}	-30 to +85	°C
Storage temperature range	T _{stg}	-40 to +100	°C

◆ Electrical/Optical Characteristics

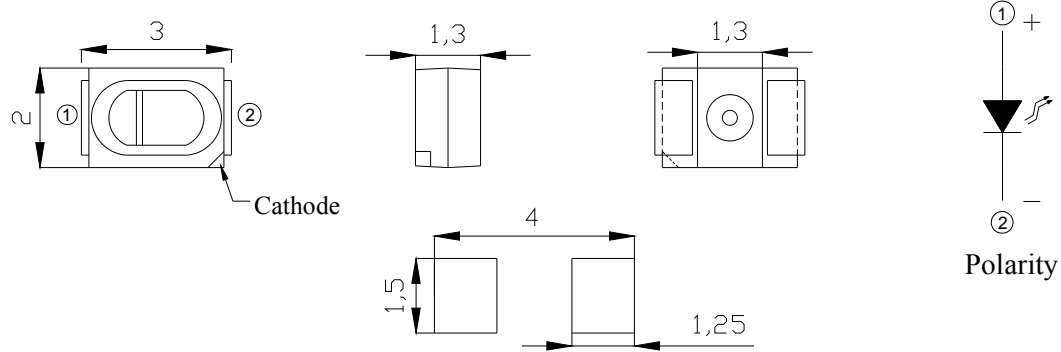
Item	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage	V _F	I _F =5mA	1.7	2.0	2.0	V
		I _F =20mA	1.8	2.1	2.1	
Dominant wavelength	λ _d	I _F =5mA	615	622	630	nm
		I _F =20mA	617	624	632	
Viewing Angle	2θ _{1/2}	I _F =20mA	-	120	-	Deg
Luminous Intensity	I _v	I _F =5mA	36	45		mcd
		I _F =20mA	115	145		
Reverse Current	I _r	V _r =5V			10	uA

※ The measuring tolerance → Luminous intensity ±15%

Dominant wavelength ± 2nm

◆Dimensions/Taping and Package Spec

● Package Dimensions of Device(SL610 series)

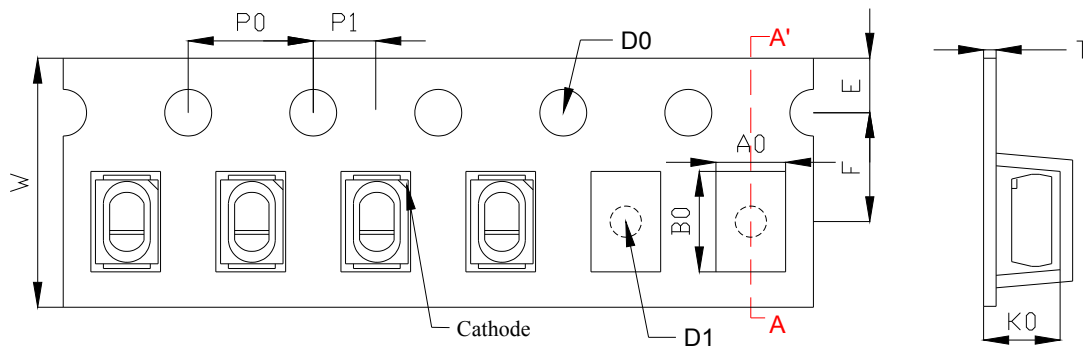


For Reflow Soldering

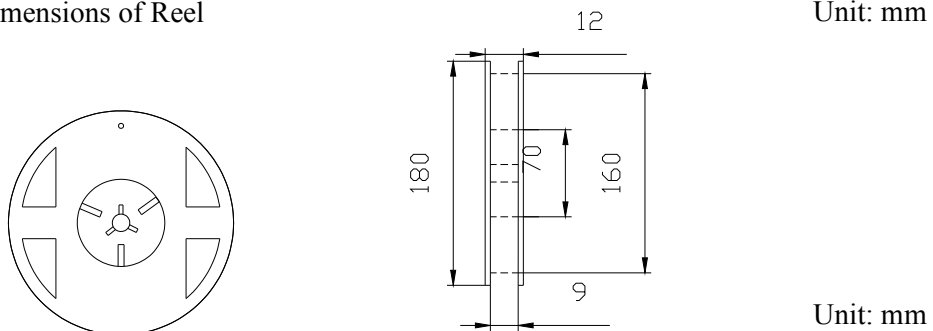
Unit: mm

● The Specification :2000 pcs Per Reel

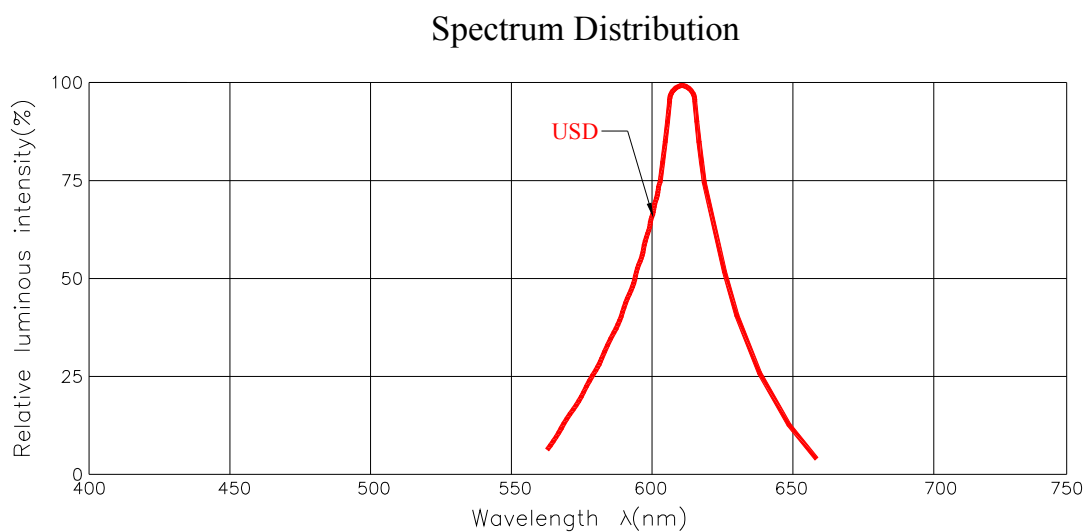
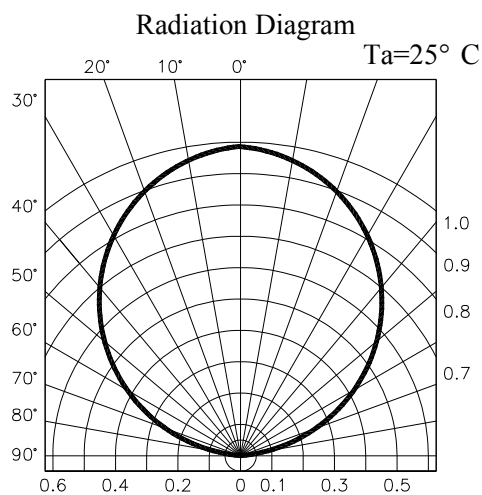
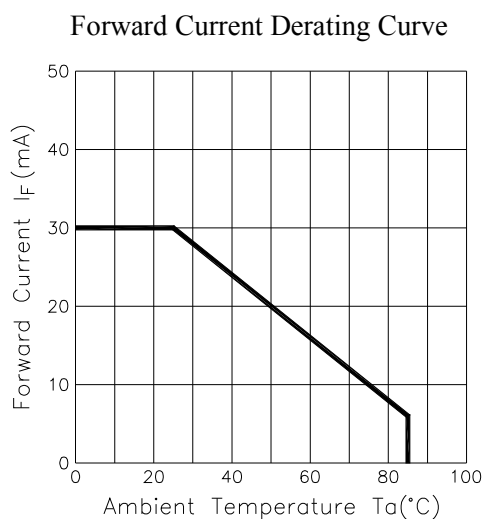
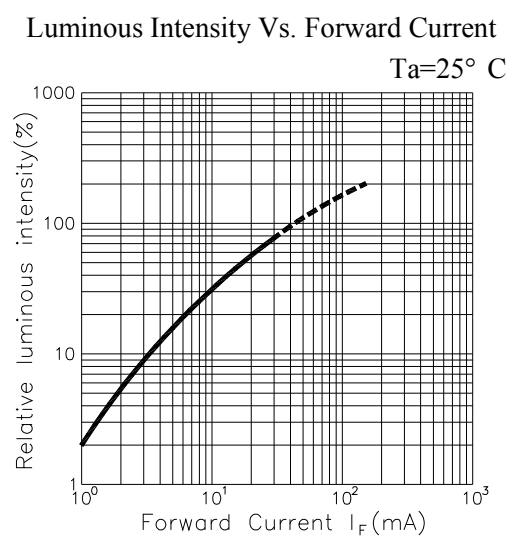
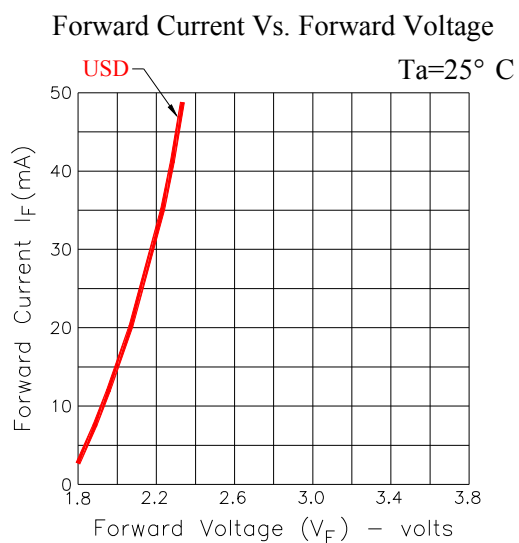
Packing Size													
Item	W	P1	E	F	D0	D1	P0	10P0	P2	A0	B0	K0	T
Spec	8.00	4.00	1.75	3.50	1.50	1.00	4.00	40.00	2.00	2.23	3.23	1.53	0.25
Tolerance	± 0.20	± 0.10	± 0.10	± 0.05	+ 0.10 - 0.00	± 0.05	± 0.05	± 0.20	± 0.05	± 0.10	± 0.10	± 0.10	± 0.05



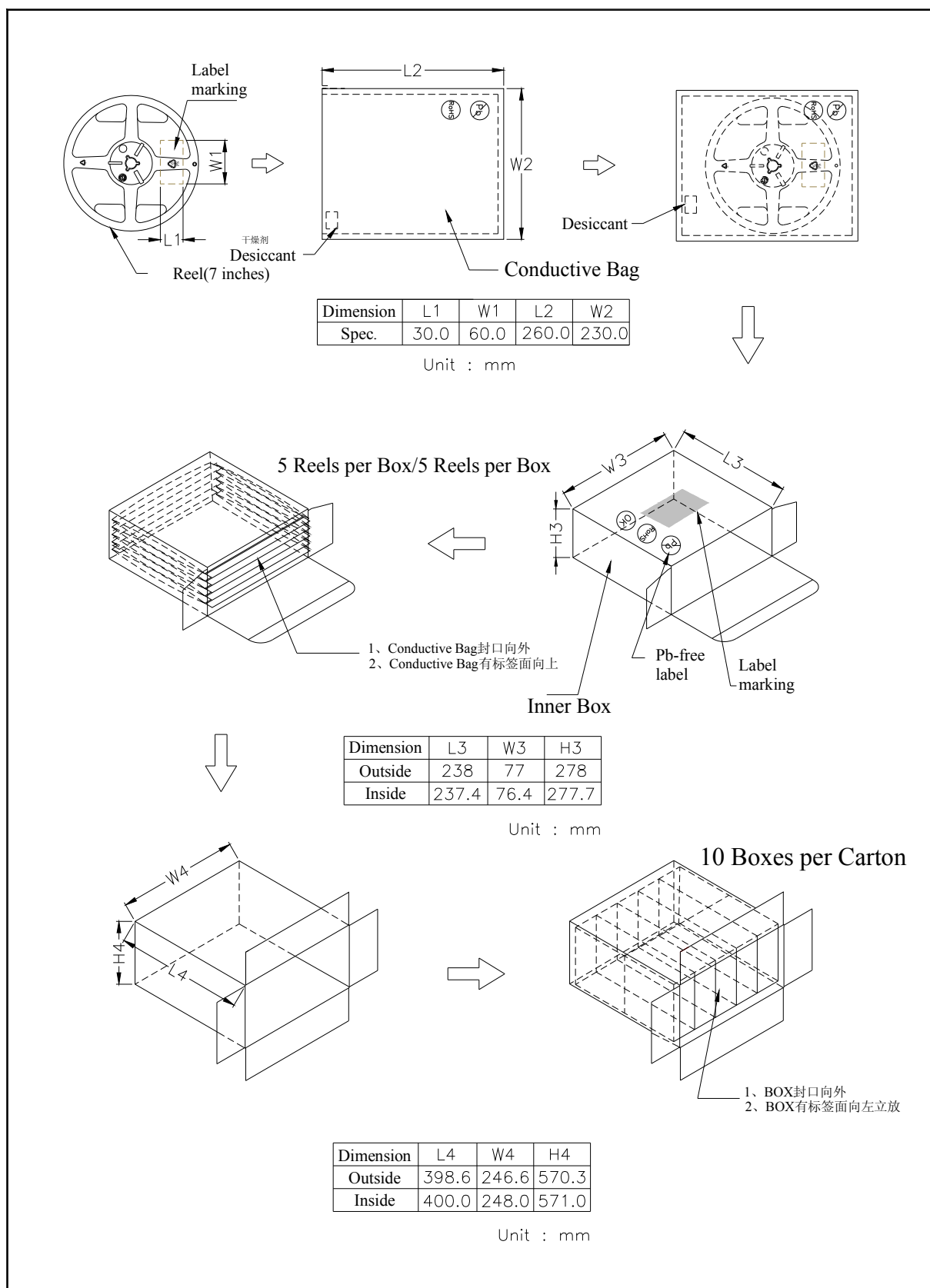
● Package Dimensions of Reel



◆ Typical Electro-Optical Characteristic Curves



◆ Packing and Shipping Instruction



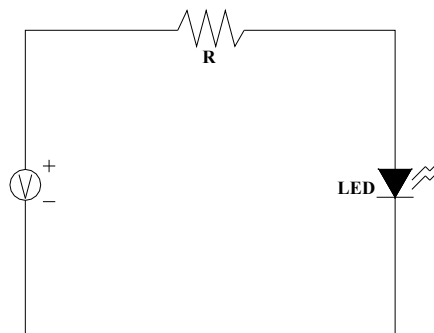
◆ Descriptions :

- The Chip-LED Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature application, etc.

◆ Reliability Test Items And Conditions :

No.	Item	Test Conditions	Test hr/cycle/time	Sample Q'ty	Ac / Re
1	Solder Heat	TEMP : 260℃±5℃ ; 10±1 sec	2 times	30 pcs	0 / 1
2	Solder ability Test ※	TEMP : 235℃±5℃ ; 3±1 sec	1 time	5 pcs	0 / 1
3	Temperature Cycle	H : +85℃ 30min. 			

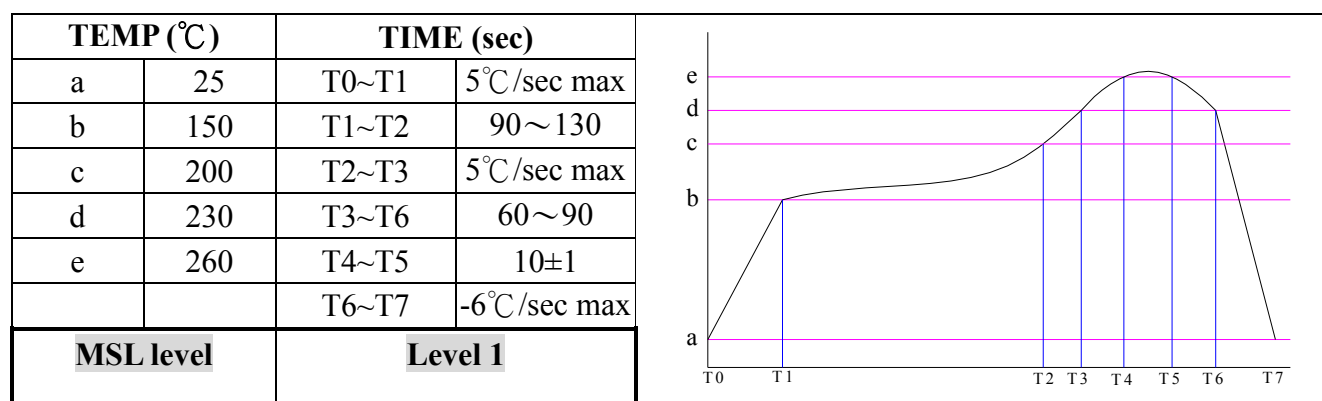
◆ Test Circuit



◆ Precautions For Use :

- Overdrive current proof
Customer must apply resistors for protection, otherwise slight voltage shift will cause current change with great deal. (Burn out will happen)
- Storage
 1. The operation of temperature and R.H. are : $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$, 60%R.H. Max..
 2. Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with desiccant. Considering the tape life, we suggest our customers to use our products within 1.5 year (from production date) .
 3. It's recommended to bake before soldering when the package is unsealed more than 72 hrs. The condition is : $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 2hrs.

◆ Reflow Temp/Time :



◆ Hand Soldering Iron :

- Temperature at tip of iron : 400°C Max. (35W Max.)
- Soldering time : $3 \pm 1\text{sec}$.

1 Luminous Intensity Bin Limits

Test Condition @20mA		
BIN Code	IVmin(mcd)	IVmax (mcd)
L1	115	145
L2	145	180
M1	180	225
M2	225	285

Dominant Wavelength BIN Limits

BIN Code	Test condition: @20mA	
USD	λ_{dmin} (nm)	λ_{dmax} (nm)
1	617	622
2	622	627
3	627	632

Forward Voltage Bin Limits

Test Condition: @20mA		
BIN Code	Vfmin(v)	Vfmax(v)
4	1.8	1.9
5	1.9	2.0
6	2.0	2.1