

## Surface Mounted Chip LED

Model No.: CL-SP170YG

■ 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
GaP	Yellow Green	Water Clear

### Absolute Maximum Ratings

( Ta=25°C )

Item	Symbol	Maximum	Unit
Power Dissipation	P <sub>D</sub>	78	mW
Continuous Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Derating Linear From 25°C		0.4	mA/°C
Operating Temperature Range	T <sub>opr</sub>	-30 to +80	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +85	°C

### Electrical / Optical Characteristics

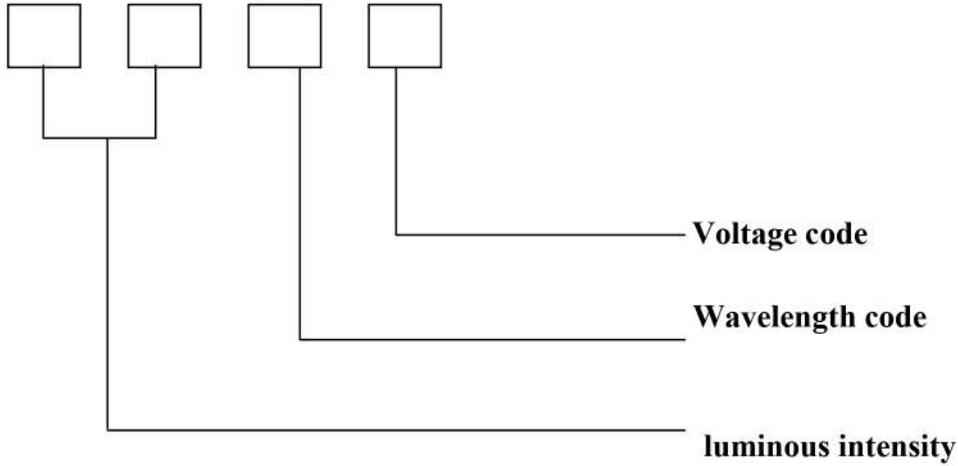
( Ta=25°C )

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	IF=5mA		1.9	2.3	V
Reverse Current	I <sub>R</sub>	VR=5V			10	uA
Peak Emission Wavelength	λ <sub>P</sub>	IF=5mA		568		nm
Dominant Wavelength	λ <sub>D</sub>	IF=5mA		570		nm
Viewing Angle	2θ <sub>1/2</sub>	IF=5mA		130		Deg
Luminous Intensity	I <sub>V</sub>	IF=5mA	1.2	2.2		med

ISSUE	DIMENSION NO :	VERSION :	DATE :
		A	2007/05/14
	APPROVAL :	CHECK :	EDIT :

◆ **Packing coding principle**

Notice: Bin code: luminous intensity / wavelength / voltage。



◆ **The Luminous Intensity Grade of Yellow Green Chip-LED Products**

● Test Condition : @ 5mA

Range,mcd	Bin code
1.2/2.2	C1
2.2/3.6	C2

◆ **Dominant Wavelength Grade of Yellow Green Chip-LED Products**

● I type @5mA

BIN	Range
0	568/570
1	570/572
2	572/574
3	574/576
4	576/578

◆ **Forward Voltage Grade of Yellow Green Chip-LED Products**

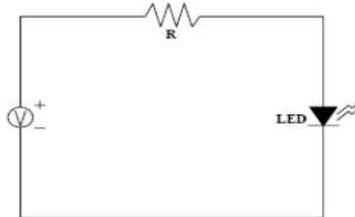
● I type @ 5mA

BIN	Range	BIN	Range
5	1.9/2.0	6	2.0/2.1

◆ **Precautions For Use :**

- Over – current – proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change ( Burn out will happen )



- Storage

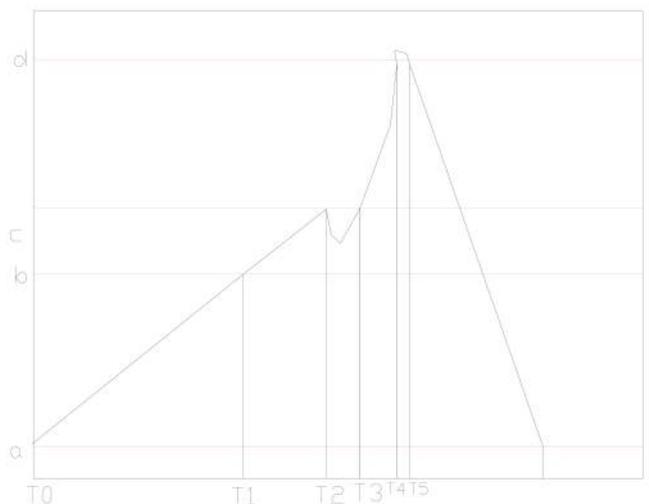
1. The operation of temperature and R.H. are :  $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ , R.H.60% Max..
2. Once the package is opened, the products should be used within 72 hrs. Otherwise, they should be kept in a dampproof box with desiccating regent. Considering the tape life, we suggest our customers to use our products within 1 year ( from production date ) .
3. It's recommended to bake before soldering when the package is unsealed after 72 hrs. The condition is :  $80^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 24hrs.

◆ **Soldering Iron :**

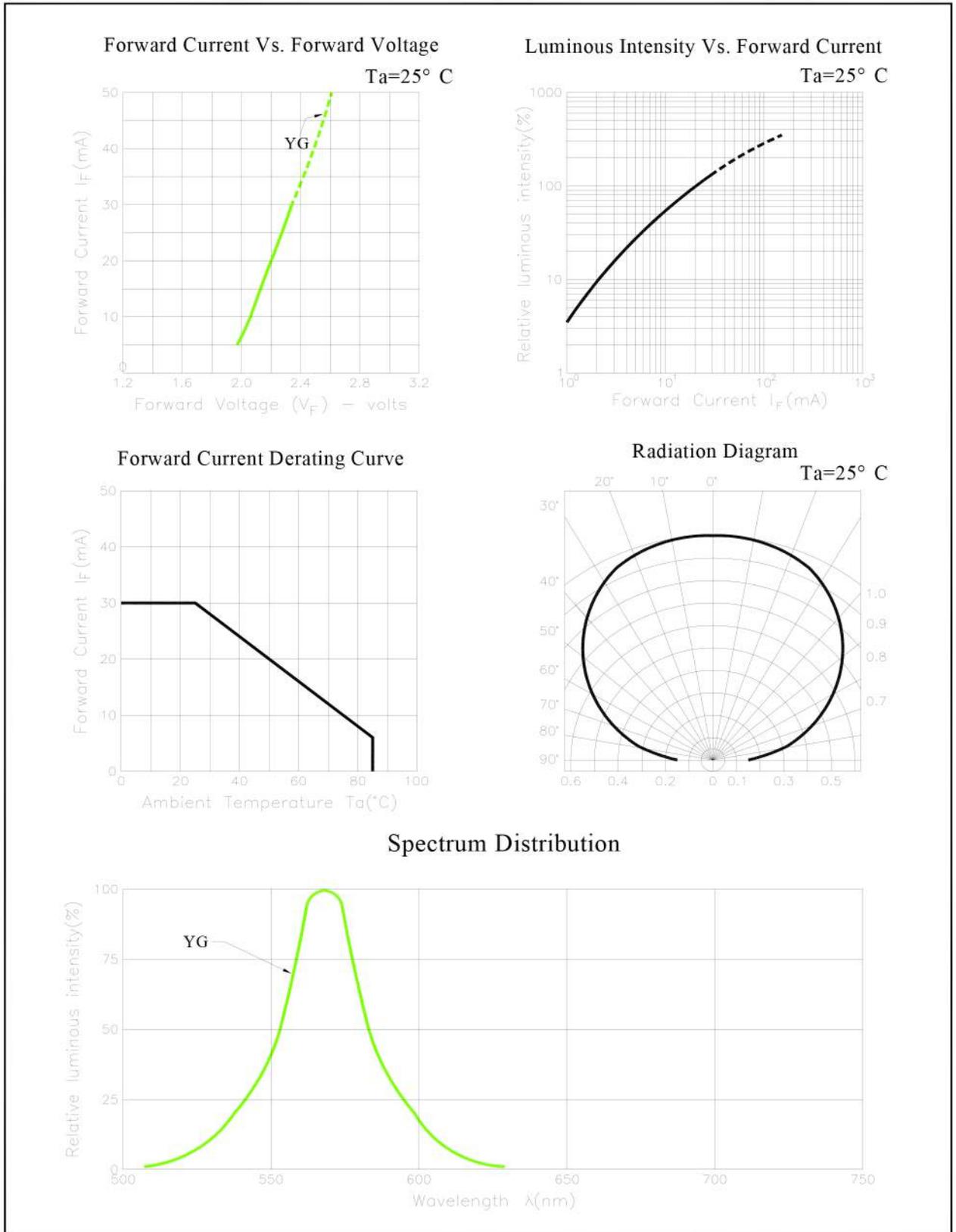
- Temperature at tip of iron :  $300^{\circ}\text{C}$  Max. ( 25W Max. )
- Soldering time :  $5 \pm 1\text{sec}$ .

◆ **Wave Soldering Temp. / Time :**

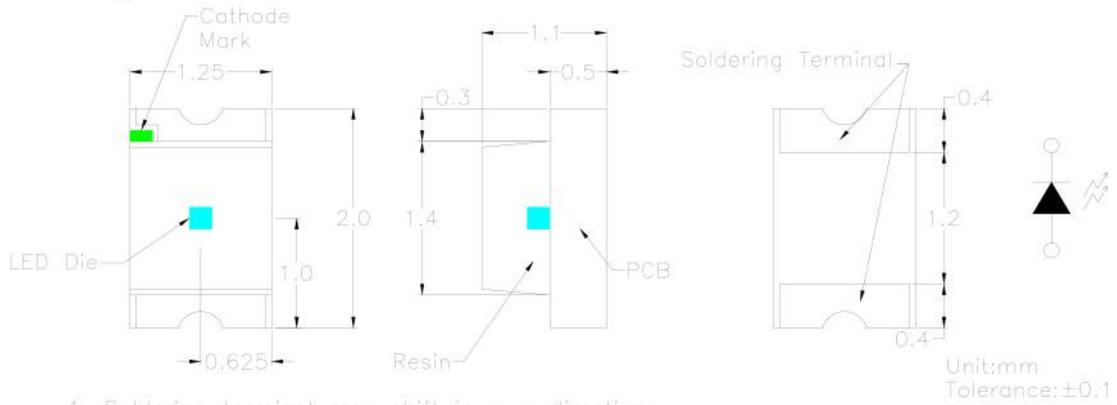
Temp.( $^{\circ}\text{C}$ )		Time(Sec)	
a	25	T1~T2	$60 \pm 20$
b	$130 \pm 10$	T2~T3	
c	185	T3~T6	
d	$250 \pm 3$	T4~T5	$3 \pm 2$



◆ Typical Electro-Optical Characteristic Curve :

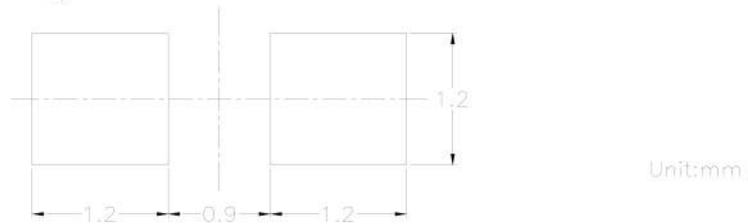


◆ Package Dimensions of Device ( CL-SP170YG )



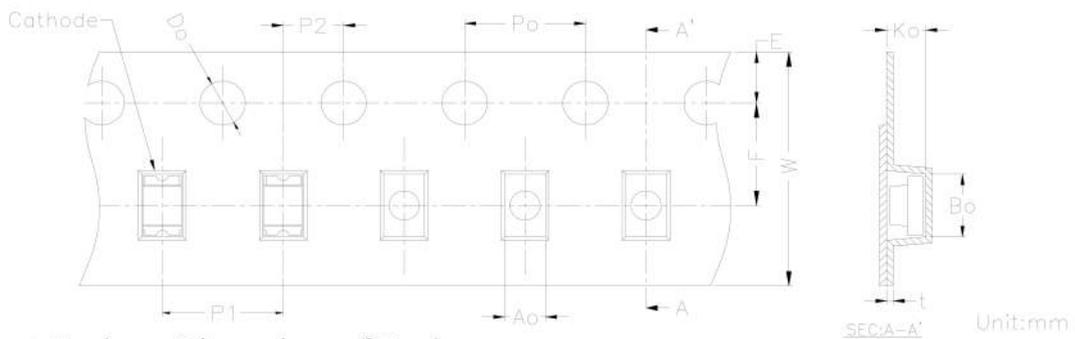
1. Soldering terminal may shift in x, y direction.
2. Polarity referring onto the cathode mark is reversed on the HR/UR/SR

◆ Recommended Soldering Pad Dimensions

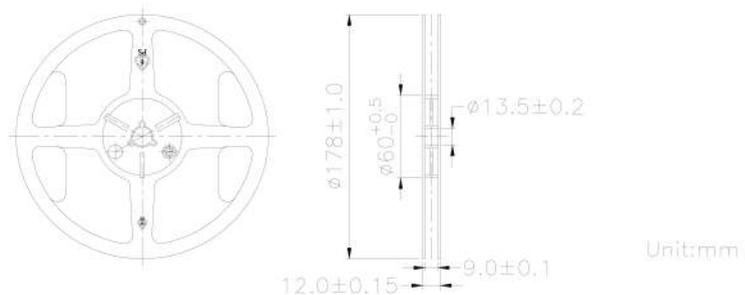


◆ Tape Specification : 3000pcs Per Reel

Packing Size													
Item	W	P1	E	F	Do	D1	Po	10Po	P2	Ao	Bo	Ko	t
Spec.	8.00	4.00	1.75	3.50	1.50	1.00	4.00	40.00	2.00	1.40	2.25	1.35	0.23
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



◆ **Packing and Shipping Spec.**

