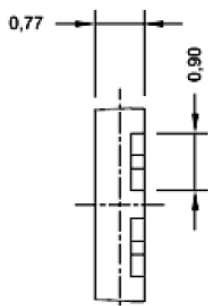
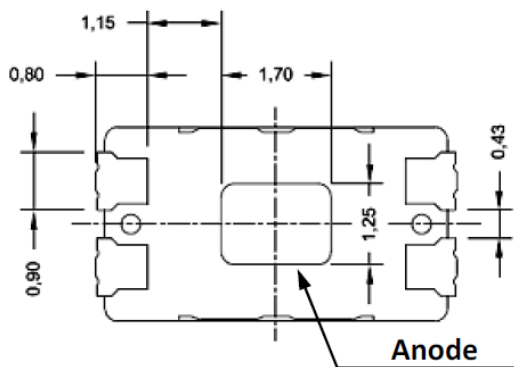
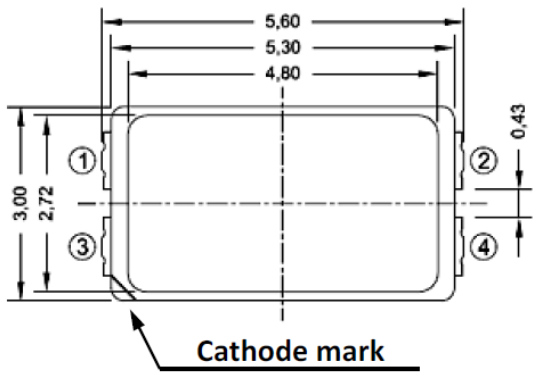


# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT LED LAMPS

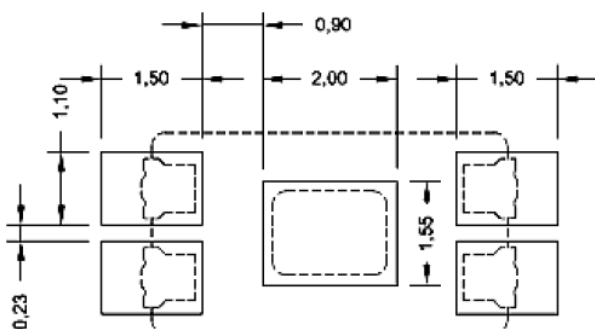
Power White Surface Mount Device

Part Number: 62-217AUW2C1H

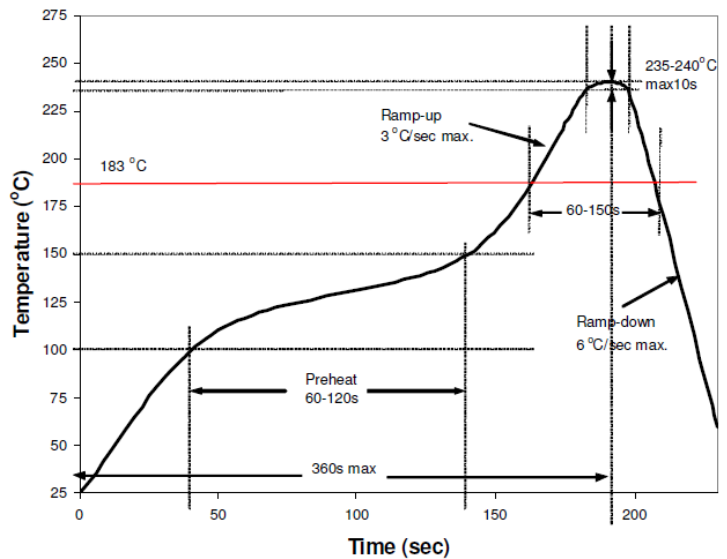
## Package outlines & Re-flow Profile



For Reflow Soldering



### Reflow Temp/Time



### Soldering iron

Basic spec is  $\leq 5$ sec when  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1$ sec). Power dissipation of iron should be smaller than 15W, and temperatures should be controllable. Surface temperature of the device should be under  $230^{\circ}\text{C}$ .

ITEM	MATERIALS
Resin (mold)	Epoxy
Lens color	Yellow Diffused
Printed circuit board	BT
Emitted color	White
Material	InGaN

### NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are  $\pm 0.1$ mm (0.004inch) unless otherwise noted.
3. Polarity referring onto the cathode mark is reversed on the red.

**A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.**  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

**ELECTRO-OPTICAL CHARACTERISTICS** (T<sub>A</sub>=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			MIN.	TYP.	MAX.	
Viewing angle at 50% I <sub>v</sub>	I <sub>F</sub> =60mA	2θ 1/2	120			Deg
Forward voltage	I <sub>F</sub> =60mA	V <sub>F</sub>	2.9	---	3.3	V
Luminous Flux	I <sub>F</sub> =60mA	Flux	---	25	---	Lm
Correlated Color Temperature	I <sub>F</sub> =60mA	CCT	3700	---	7000	K
Color Rendering Index	I <sub>F</sub> =60mA	CRI	---	80	---	---
Pulse Forward Current (Pulse Width ≤ 10msec, and duty ≤ 1/10)	I <sub>F</sub> =60mA	I <sub>FP</sub>	240			mA

**Absolute maximum ratings** (T<sub>A</sub>=25°C)

Parameter	Symbol	Value	Unit
Forward current	I <sub>F</sub>	120	mA
Reverse voltage	V <sub>R</sub>	5	V
Reverse current (Zener Diode)	I <sub>R</sub>	0.5	μA
Power dissipation	P <sub>D</sub>	0.4	W
Operating temperature range	Top	-40 ~+85	°C
Storage temperature range	Tstg	-40 ~+100	°C

**A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD.  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

**Bin Range**

V <sub>F</sub> Rank	Condition	Min.	Max.
1	I <sub>F</sub> = 60 mA	2.9	3.0
2		3.0	3.1
3		3.1	3.2
4		3.2	3.3

Luminous Flux Rank	Condition	Min.	Max.
VD	I <sub>F</sub> = 60 mA	20	22.5
VE		22.5	25
VF		25	28

**A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.**  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

**Bin Range**

CCT	CIE Rank	CIE X	CIE Y		CIE X	CIE Y
4000	L4001	0.3758	0.3973	R4001	0.3896	0.4061
		0.3736	0.3874		0.3869	0.3958
		0.3869	0.3958		0.4006	0.4044
		0.3896	0.4061		0.4042	0.4153
	L4002	0.3736	0.3874	R4002	0.3869	0.3958
		0.3714	0.3775		0.3842	0.3855
		0.3842	0.3855		0.397	0.3935
		0.3869	0.3958		0.4006	0.4044
	L4003	0.3714	0.3775	R4003	0.3842	0.3855
		0.3692	0.3677		0.3813	0.3751
		0.3813	0.3751		0.3934	0.3825
		0.3842	0.3855		0.397	0.3935
	L4004	0.3692	0.3677	R4004	0.3813	0.3751
		0.367	0.3578		0.3783	0.3646
		0.3783	0.3646		0.3898	0.3716
		0.3813	0.3751		0.3934	0.3825
	L4005	0.367	0.3578	R4005	0.3783	0.3646
		0.3648	0.3479		0.3753	0.3541
		0.3753	0.3541		0.3862	0.3607
		0.3783	0.3646		0.3898	0.3716
4500	L4501	0.356	0.3826	R4501	0.3657	0.3897
		0.3548	0.3736		0.3641	0.3804

***A-BRIGHT*** A-BRIGHT INDUSTRIAL CO., LTD.  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

**Bin Range**

CCT	CIE Rank	CIE X	CIE Y		CIE X	CIE Y	
		0.3641	0.3804		0.3736	0.3874	
		0.3657	0.3897		0.3758	0.3973	
	L4502	0.3548	0.3736	R4502	0.3641	0.3804	
		0.3536	0.3646		0.3625	0.3711	
		0.3625	0.3711		0.3714	0.3775	
		0.3641	0.3804		0.3736	0.3874	
	L4503	0.3536	0.3646	R4503	0.3625	0.3711	
		0.3523	0.3555		0.3608	0.3616	
		0.3608	0.3616		0.3692	0.3677	
		0.3625	0.3711		0.3714	0.3775	
	L4504	0.3523	0.3555	R4504	0.3608	0.3616	
		0.3511	0.3465		0.359	0.3521	
		0.359	0.3521		0.367	0.3578	
		0.3608	0.3616		0.3692	0.3677	
	L4505	0.3511	0.3465	R4505	0.359	0.3521	
		0.3499	0.3375		0.3572	0.3426	
		0.3572	0.3426		0.3648	0.3479	
		0.359	0.3521		0.367	0.3578	
	5000	L5001	0.3379	0.3698	R5001	0.347	0.3773
			0.3376	0.3616		0.3463	0.3687
0.3463			0.3687	0.3552		0.376	
0.347			0.3773	0.3565		0.3851	
L5002		0.3376	0.3616	R5002	0.3463	0.3687	
		0.3373	0.3534		0.3456	0.3601	
		0.3456	0.3601		0.3539	0.3669	
		0.3463	0.3687		0.3552	0.376	
L5003		0.3373	0.3534	R5003	0.3456	0.3601	
		0.3369	0.3451		0.3448	0.3514	
		0.3448	0.3514		0.3526	0.3578	
		0.3456	0.3601		0.3539	0.3669	
L5004		0.3369	0.3451	R5004	0.3448	0.3514	
		0.3366	0.3369		0.344	0.3428	
		0.344	0.3428		0.3514	0.3487	
		0.3448	0.3514		0.3526	0.3578	
L5005		0.3366	0.3369	R5005	0.344	0.3428	
		0.3363	0.3287		0.3432	0.3342	

**A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.**  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

**Bin Range**

CCT	CIE Rank	CIE X	CIE Y		CIE X	CIE Y
5700		0.3432	0.3342		0.3502	0.3396
		0.344	0.3428		0.3514	0.3487
	L5701	R5701	0.3202	0.3535	0.3291	0.3617
			0.3207	0.3462	0.3292	0.3539
			0.3292	0.3539	0.3376	0.3616
			0.3291	0.3617	0.3379	0.3698
			0.3207	0.3462	0.3292	0.3539
	L5702	R5702	0.3212	0.3389	0.3293	0.3461
			0.3293	0.3461	0.3373	0.3534
			0.3292	0.3539	0.3376	0.3616
			0.3212	0.3389	0.3293	0.3461
	L5703	R5703	0.3217	0.3316	0.3293	0.3384
			0.3293	0.3384	0.3369	0.3451
			0.3293	0.3461	0.3373	0.3534
			0.3217	0.3316	0.3293	0.3384
	L5704	R5704	0.3222	0.3243	0.3294	0.3306
			0.3294	0.3306	0.3366	0.3369
			0.3293	0.3384	0.3369	0.3451
			0.3222	0.3243	0.3294	0.3306
	L5705	R5705	0.3227	0.317	0.3295	0.3228
0.3295			0.3228	0.3363	0.3287	
0.3294			0.3306	0.3366	0.3369	
0.3227			0.317	0.3295	0.3228	
6500	L6501	R6501	0.3015	0.3368	0.3104	0.3462
			0.3028	0.3304	0.3115	0.3393
			0.3115	0.3393	0.3205	0.3481
			0.3104	0.3462	0.32	0.3554
	L6502	R6502	0.3028	0.3304	0.3115	0.3393
			0.3041	0.324	0.3126	0.3324
			0.3126	0.3324	0.321	0.3408
			0.3115	0.3393	0.3205	0.3481
	L6503	R6503	0.3041	0.324	0.3126	0.3324
			0.3055	0.3177	0.3136	0.3256
			0.3136	0.3256	0.3216	0.3334
			0.3126	0.3324	0.321	0.3408
	L6504	R6504	0.3055	0.3177	0.3136	0.3256
			0.3068	0.3113	0.3146	0.3187

# **A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.**

## **SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

### **Bin Range**

CCT	CIE Rank	CIE X	CIE Y		CIE X	CIE Y
		0.3146	0.3187		0.3221	0.3261
		0.3136	0.3256		0.3216	0.3334
	L6505	0.3068	0.3113	R6505	0.3146	0.3187
		0.3081	0.3049		0.3156	0.3118
		0.3156	0.3118		0.3226	0.3188
		0.3146	0.3187		0.3221	0.3261

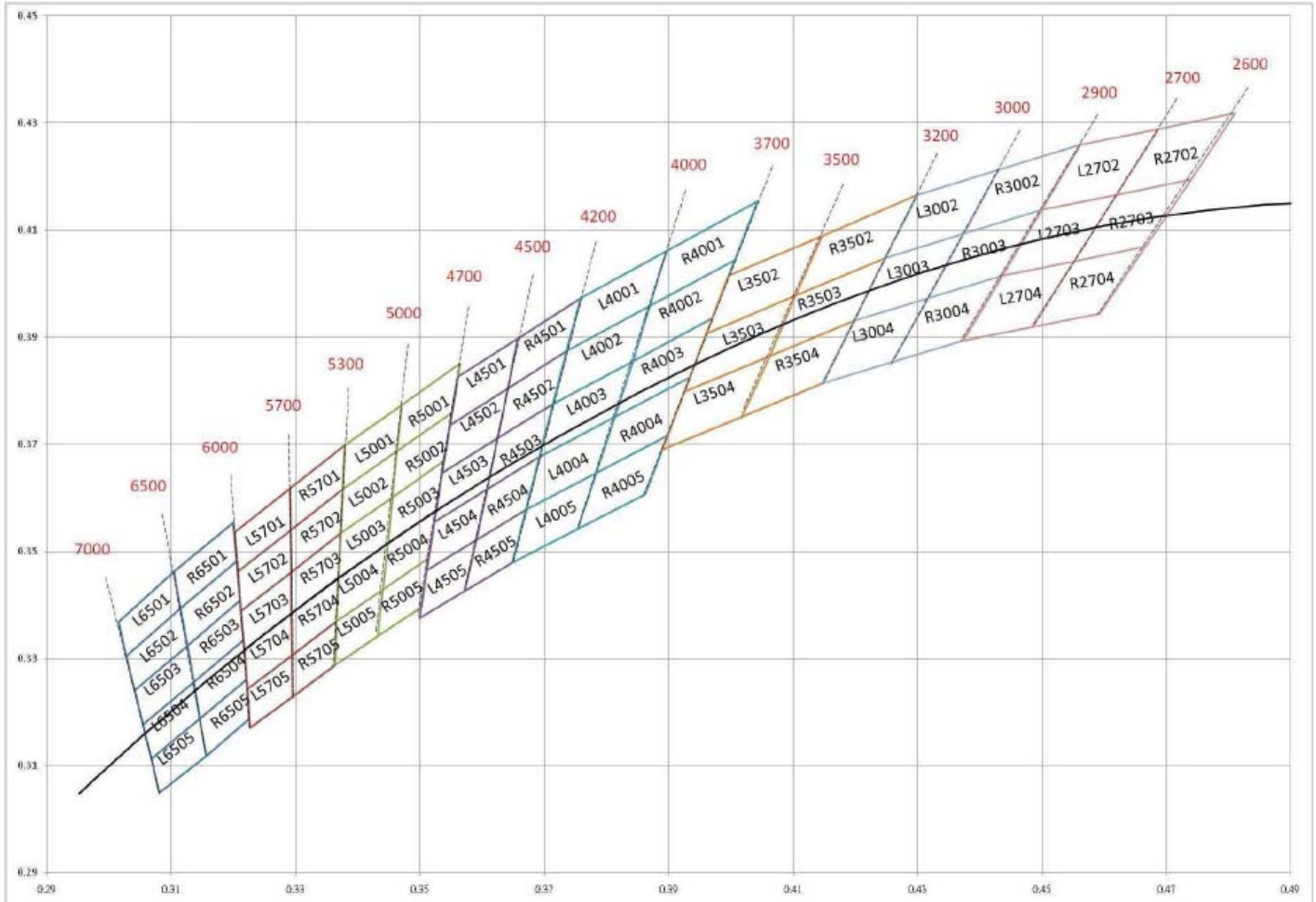
Note:

- (1) Correlated color Temperature is derived from the CIE 1931 Chromaticity diagram
- (2) Measurement tolerance is  $\pm 0.01$
- (3) The luminous flux tolerance is  $\pm 10\%$
- (4) The Forward Voltage tolerance is  $\pm 0.1V$

# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. **SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

## CIE Chromaticity Diagram



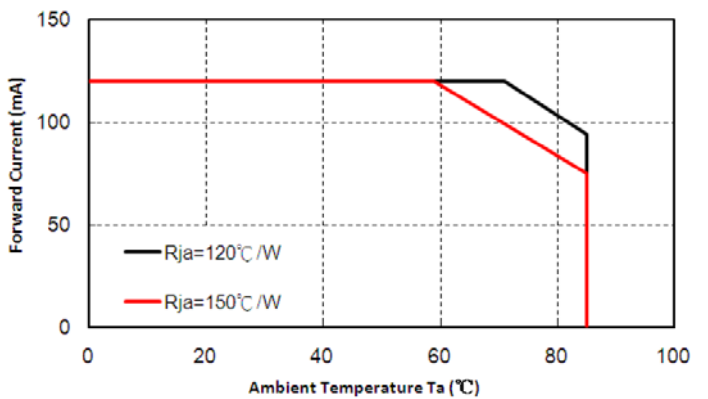
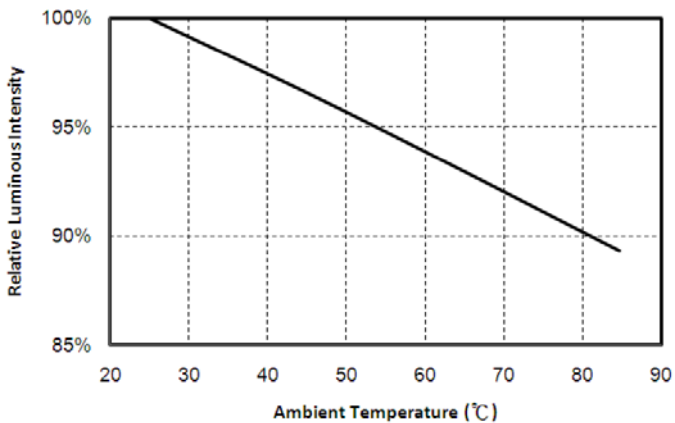
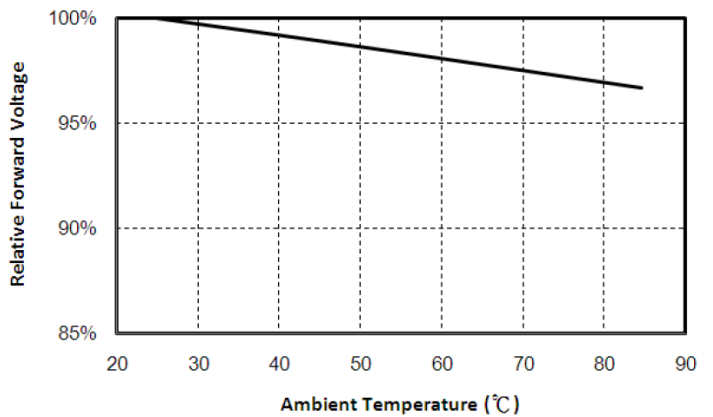
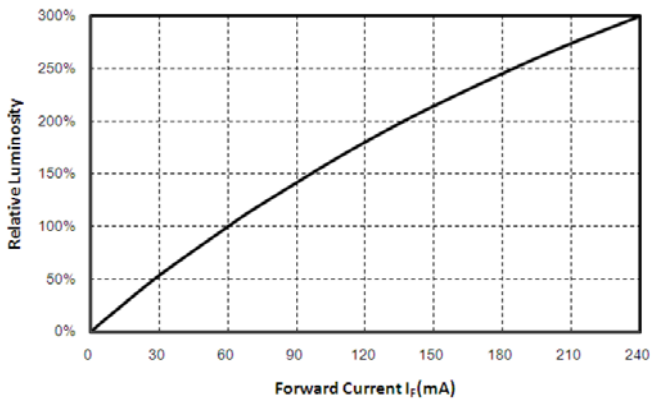
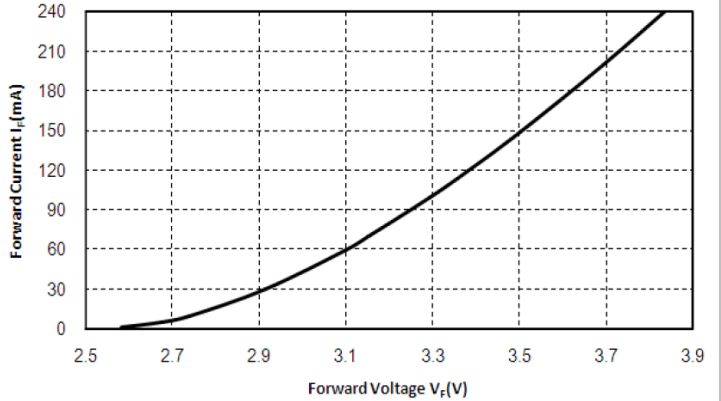
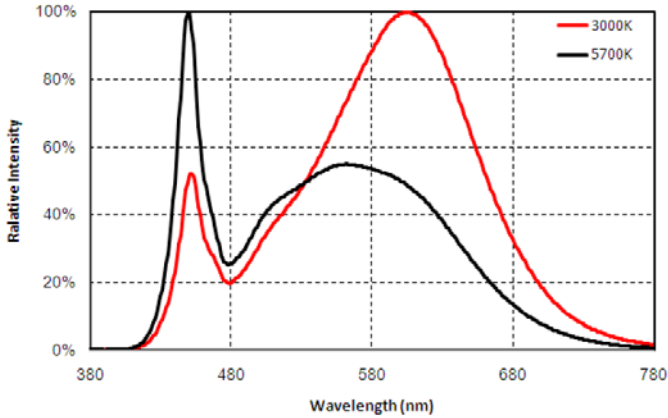


# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD.

## **SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

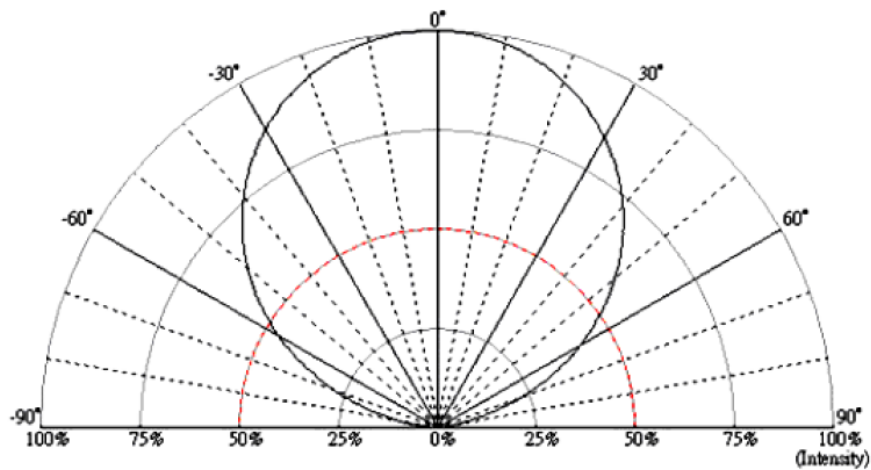
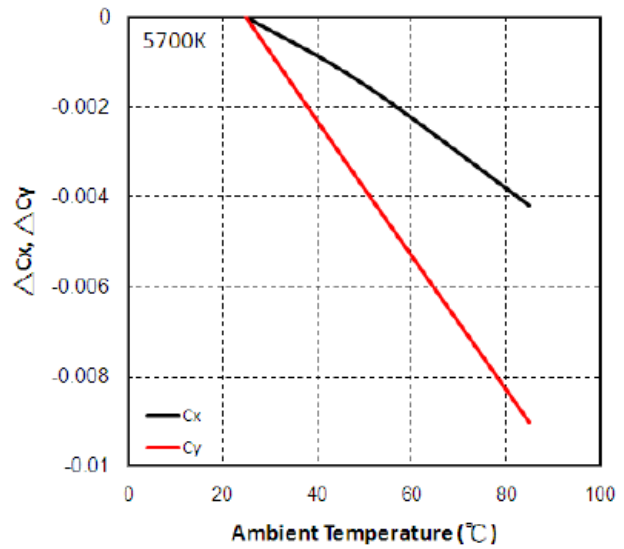
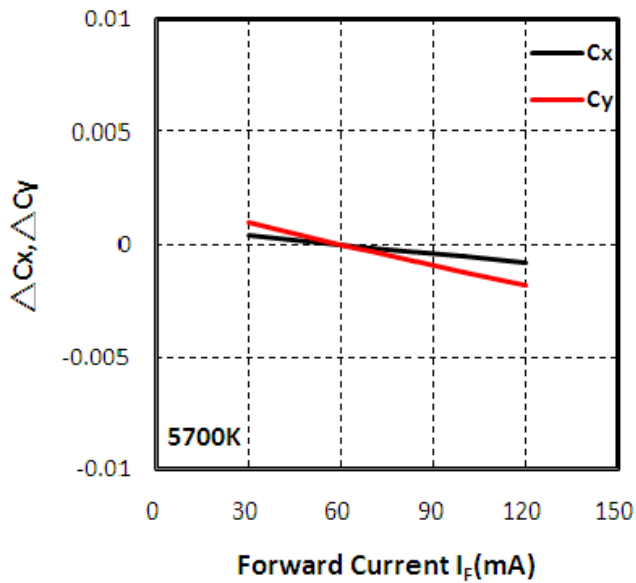
### Typical Electro-Optical Characteristic Curves



**A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD.  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

**Typical Electro-Optical Characteristic Curves**



**A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.**  
**SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

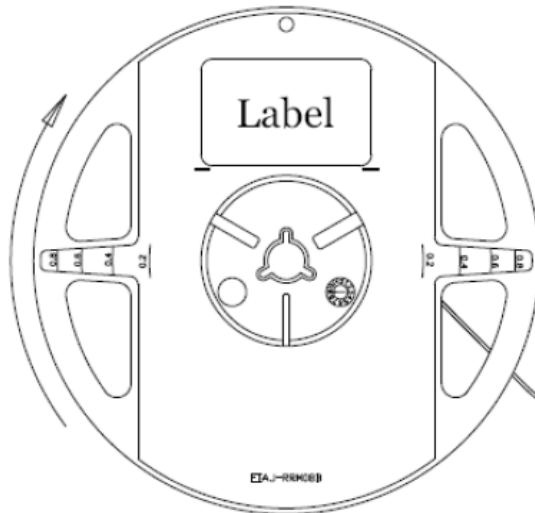
**Reliability**

Item	Condition	Time/Cycle
Steady State Operating Life of Room Temperature	25°C Operating	1000 Hrs
Steady State Operating Life of Low Temperature -40°C	-40°C Operating	1000 Hrs
Steady State Operating Life of High Temperature 60°C	60°C Operating	1000 Hrs
Steady State Operating Life of High Temperature 85°C	85°C Operating	1000 Hrs
Low temperature storage -40°C	-40°C Storage	1000 Hrs
High temperature storage 100°C	100°C Storage	1000 Hrs
Steady State Operating Life of High Humidity Heat 60°C/90%	60°C/90% Operating	1000 Hrs
Steady State Pulse Operating Life Condition	25°C 10Hz duty=1/10 Operating	200 Cycles
Resistance to soldering heat on PCB (JEDEC MSL3)	pre-store@60°C, 60%RH for 52hrs Tslid max.=260 °C 10sec	3 Times
Heat Cycle Test (JEDEC MRC)	25°C ~ 65°C ~ -10°C, 90%RH, 24hr/1cycle	10 Cycles
Thermal shock	-40°C/20min ~5min ~ 100°C/20min	300 Cycles

# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT LED LAMPS

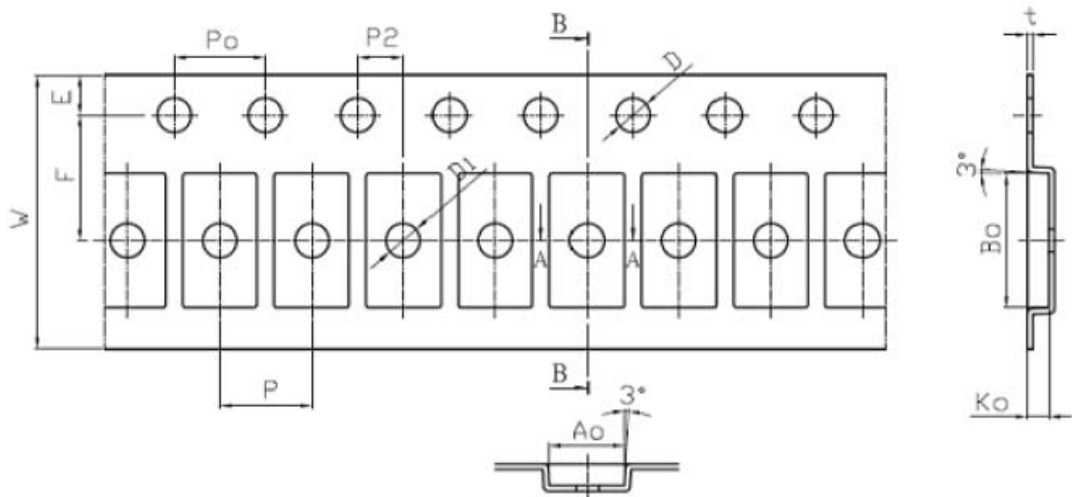
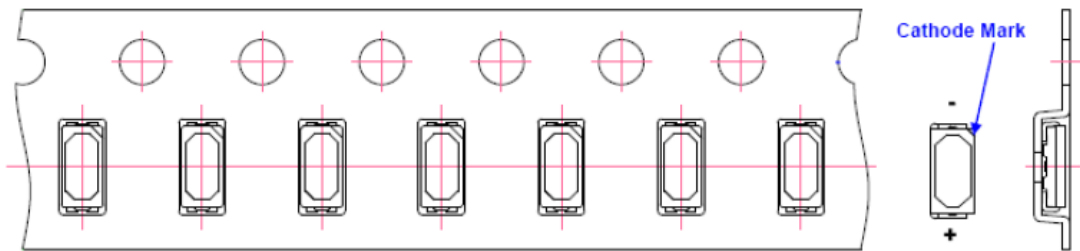
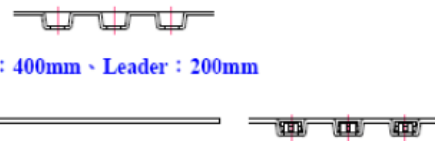
Part Number: 62-217AUW2C1H

## Package



Quantity: 1,000 or 2,000 pcs/reel

Trailer : 400mm · Leader : 200mm



Unit: mm

Item	Spec	To1. (+/- )	Item	Spec	To1. (+/- )
W	12.00	±0.10	P2	2.00	±0.05
E	1.75	±0.10	P0 x 10	40.00	±0.20
F	5.50	±0.05	t1	0.25	±0.05
D	1.50	+0.10, -0.00	A0	3.25	±0.10
D1	1.50	±0.10	B0	5.90	±0.10
P0、P1	4.00	±0.20	K0	0.95	±0.10

# **A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.**

## **SURFACE MOUNT LED LAMPS**

Part Number: 62-217AUW2C1H

### **Precautions For Use**

1. Over-current proof

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

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

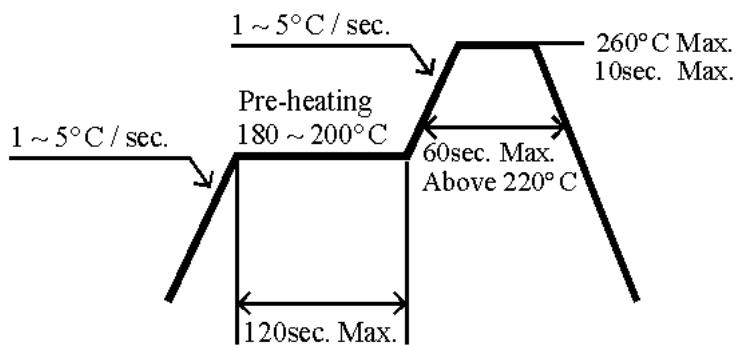
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280°C for 3 seconds within once in less than soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.