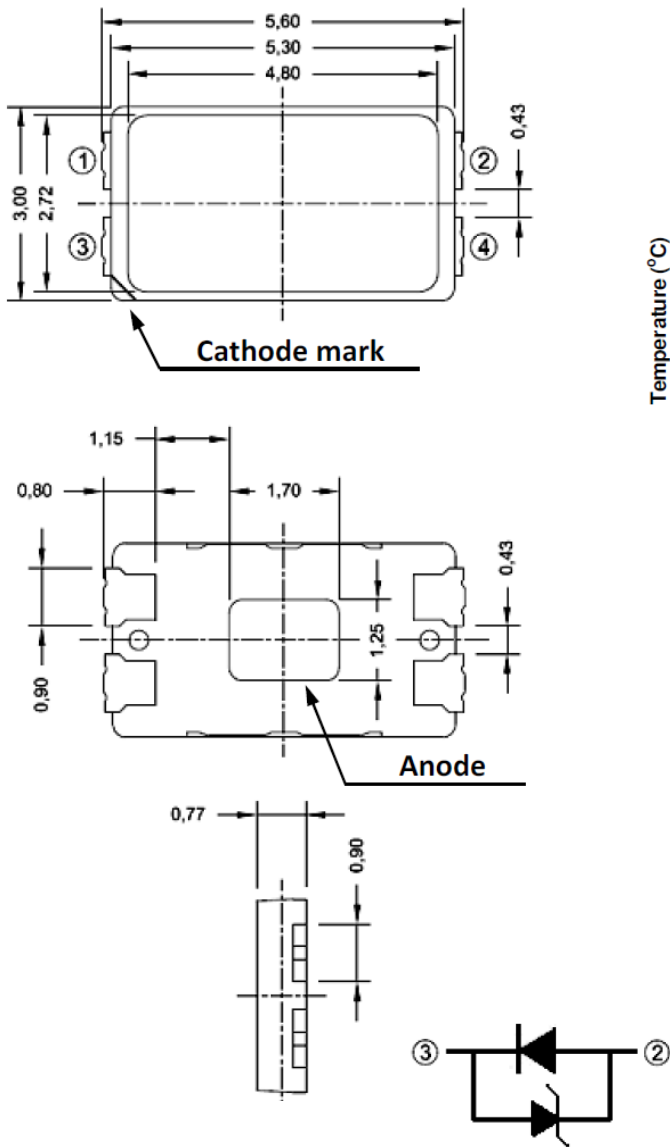


A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT LED LAMPS

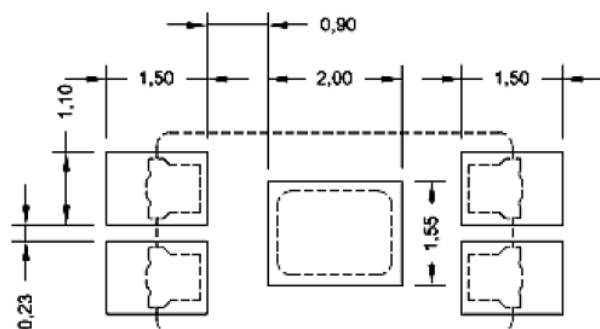
Power Warm White Surface Mount Device

Part Number: 62-217ASW2C2H

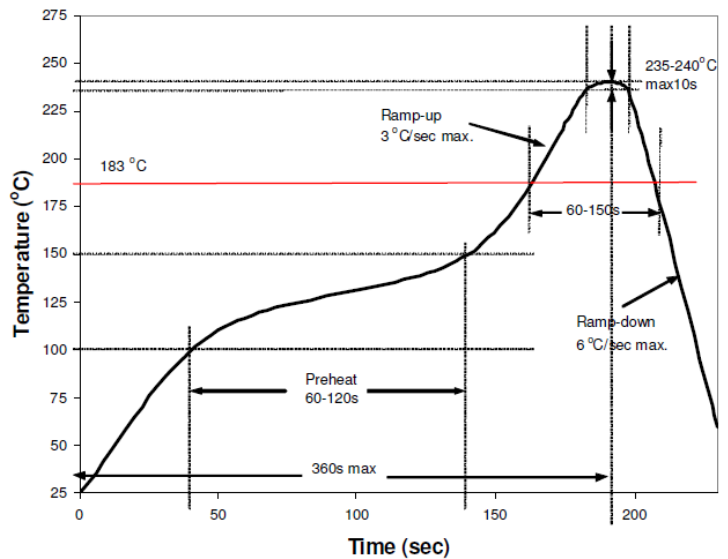
Package outlines & Re-flow Profile



For Reflow Soldering



Reflow Temp/Time



Soldering iron

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

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

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ± 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: 62-217ASW2C2H

ELECTRO-OPTICAL CHARACTERISTICS (T_A=25°C)

| Parameter | Test Condition | Symbol | Value | | | Unit |
|--|-----------------------|-----------------|-------|------|------|------|
| | | | MIN. | TYP. | MAX. | |
| Viewing angle at 50% I _v | I _F =120mA | 2θ 1/2 | 120 | | | Deg |
| Forward voltage | I _F =120mA | V _F | 2.9 | 3.1 | 3.6 | V |
| Correlated Color Temperature | I _F =120mA | CCT | 2600 | --- | 3700 | K |
| Color Rendering Index | I _F =120mA | CRI | --- | 80 | --- | --- |
| Pulse Forward Current (Pulse Width ≤ 10msec, and duty ≤ 1/10) | I _F =120mA | I _{FP} | 360 | | | mA |

Absolute maximum ratings (T_A=25°C)

| Parameter | Symbol | Value | Unit |
|-----------------------------|----------------|-----------|------|
| Forward current | I _F | 180 | mA |
| Reverse voltage | V _R | 5 | V |
| Power dissipation | P _D | 0.65 | 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: 62-217ASW2C2H

Bin Range

| V _F Rank | Condition | Min. | Max. |
|---------------------|-------------------------|------|------|
| 1 | I _F = 120 mA | 2.9 | 3.0 |
| 2 | | 3.0 | 3.1 |
| 3 | | 3.1 | 3.2 |
| 4 | | 3.2 | 3.3 |
| 5 | | 3.3 | 3.4 |
| 6 | | 3.4 | 3.5 |
| 7 | | 3.5 | 3.6 |
| Luminous Flux Rank | Condition | Min. | Max. |
| VI | I _F = 120 mA | 36 | 40.5 |
| VJ | | 40.5 | 45 |
| VK | | 45 | 49.5 |
| VL | | 49.5 | 54 |

SURFACE MOUNT LED LAMPS

Part Number: 62-217ASW2C2H

Bin Range

| 2700K | | | | | | 3000K | | | | | |
|-------|--------|--------|------|--------|--------|-------|--------|--------|------|--------|--------|
| Rank | CIE X | CIE Y | Rank | CIE X | CIE Y | Rank | CIE X | CIE Y | Rank | CIE X | CIE Y |
| V271 | 0.4515 | 0.4168 | X271 | 0.4636 | 0.4197 | R301 | 0.4299 | 0.4165 | T301 | 0.4431 | 0.4213 |
| | 0.4562 | 0.426 | | 0.4688 | 0.429 | | 0.4261 | 0.4077 | | 0.4388 | 0.4123 |
| | 0.4625 | 0.4275 | | 0.475 | 0.4304 | | 0.4324 | 0.41 | | 0.4451 | 0.4146 |
| | 0.4576 | 0.4182 | | 0.4697 | 0.4211 | | 0.4365 | 0.4189 | | 0.4496 | 0.4236 |
| V272 | 0.4467 | 0.4076 | X272 | 0.4585 | 0.4104 | R302 | 0.4261 | 0.4077 | T302 | 0.4388 | 0.4123 |
| | 0.4515 | 0.4168 | | 0.4636 | 0.4197 | | 0.4223 | 0.399 | | 0.4345 | 0.4033 |
| | 0.4576 | 0.4182 | | 0.4697 | 0.4211 | | 0.4284 | 0.4011 | | 0.4406 | 0.4055 |
| | 0.4526 | 0.409 | | 0.4644 | 0.4118 | | 0.4324 | 0.41 | | 0.4451 | 0.4146 |
| V273 | 0.442 | 0.3985 | X273 | 0.4534 | 0.4011 | R303 | 0.4223 | 0.399 | T303 | 0.4345 | 0.4033 |
| | 0.4467 | 0.4076 | | 0.4585 | 0.4104 | | 0.4185 | 0.3902 | | 0.4303 | 0.3943 |
| | 0.4526 | 0.409 | | 0.4644 | 0.4118 | | 0.4244 | 0.3923 | | 0.4361 | 0.3964 |
| | 0.4477 | 0.3998 | | 0.4591 | 0.4024 | | 0.4284 | 0.4011 | | 0.4406 | 0.4055 |
| V274 | 0.4373 | 0.3893 | X274 | 0.4483 | 0.3918 | R304 | 0.4185 | 0.3902 | T304 | 0.4303 | 0.3943 |
| | 0.442 | 0.3985 | | 0.4534 | 0.4011 | | 0.4147 | 0.3814 | | 0.426 | 0.3854 |
| | 0.4477 | 0.3998 | | 0.4591 | 0.4024 | | 0.4204 | 0.3834 | | 0.4317 | 0.3873 |
| | 0.4428 | 0.3906 | | 0.4538 | 0.3931 | | 0.4244 | 0.3923 | | 0.4361 | 0.3964 |
| W271 | 0.4576 | 0.4182 | Y271 | 0.4697 | 0.4211 | S301 | 0.4365 | 0.4189 | U301 | 0.4496 | 0.4236 |
| | 0.4625 | 0.4275 | | 0.475 | 0.4304 | | 0.4324 | 0.41 | | 0.4451 | 0.4146 |
| | 0.4688 | 0.429 | | 0.4813 | 0.4319 | | 0.4388 | 0.4123 | | 0.4515 | 0.4168 |
| | 0.4636 | 0.4197 | | 0.4758 | 0.4225 | | 0.4431 | 0.4213 | | 0.4562 | 0.426 |
| W272 | 0.4526 | 0.409 | Y272 | 0.4644 | 0.4118 | S302 | 0.4324 | 0.41 | U302 | 0.4451 | 0.4146 |
| | 0.4576 | 0.4182 | | 0.4697 | 0.4211 | | 0.4284 | 0.4011 | | 0.4406 | 0.4055 |
| | 0.4636 | 0.4197 | | 0.4758 | 0.4225 | | 0.4345 | 0.4033 | | 0.4468 | 0.4077 |
| | 0.4585 | 0.4104 | | 0.4703 | 0.4132 | | 0.4388 | 0.4123 | | 0.4515 | 0.4168 |
| W273 | 0.4477 | 0.3998 | Y273 | 0.4591 | 0.4024 | S303 | 0.4284 | 0.4011 | U303 | 0.4406 | 0.4055 |
| | 0.4526 | 0.409 | | 0.4644 | 0.4118 | | 0.4244 | 0.3923 | | 0.4361 | 0.3964 |
| | 0.4585 | 0.4104 | | 0.4703 | 0.4132 | | 0.4303 | 0.3943 | | 0.442 | 0.3985 |
| | 0.4534 | 0.4011 | | 0.4648 | 0.4038 | | 0.4345 | 0.4033 | | 0.4468 | 0.4077 |
| W274 | 0.4428 | 0.3906 | Y274 | 0.4538 | 0.3931 | S304 | 0.4244 | 0.3923 | U304 | 0.4361 | 0.3964 |
| | 0.4477 | 0.3998 | | 0.4591 | 0.4024 | | 0.4204 | 0.3834 | | 0.4317 | 0.3873 |
| | 0.4534 | 0.4011 | | 0.4648 | 0.4038 | | 0.426 | 0.3854 | | 0.4373 | 0.3893 |
| | 0.4483 | 0.3918 | | 0.4593 | 0.3944 | | 0.4303 | 0.3943 | | 0.442 | 0.3985 |

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

Part Number: 62-217ASW2C2H

Bin Range

| 3500K | | | | | |
|-------|--------|--------|------|--------|--------|
| Rank | CIE X | CIE Y | Rank | CIE X | CIE Y |
| O352 | 0.3996 | 0.4015 | P354 | 0.4016 | 0.3843 |
| | 0.396 | 0.3907 | | 0.3975 | 0.3731 |
| | 0.4056 | 0.3954 | | 0.4061 | 0.3773 |
| | 0.4097 | 0.4065 | | 0.4107 | 0.3887 |
| O353 | 0.396 | 0.3907 | Q352 | 0.4198 | 0.4115 |
| | 0.3925 | 0.3798 | | 0.4152 | 0.4001 |
| | 0.4016 | 0.3843 | | 0.4248 | 0.4048 |
| | 0.4056 | 0.3954 | | 0.4299 | 0.4165 |
| O354 | 0.3925 | 0.3798 | Q353 | 0.4152 | 0.4001 |
| | 0.3889 | 0.369 | | 0.4107 | 0.3887 |
| | 0.3975 | 0.3731 | | 0.4198 | 0.3931 |
| | 0.4016 | 0.3843 | | 0.4248 | 0.4048 |
| P352 | 0.4097 | 0.4065 | Q354 | 0.4107 | 0.3887 |
| | 0.4056 | 0.3954 | | 0.4061 | 0.3773 |
| | 0.4152 | 0.4001 | | 0.4147 | 0.3814 |
| | 0.4198 | 0.4115 | | 0.4198 | 0.3931 |
| P353 | 0.4056 | 0.3954 | | | |
| | 0.4016 | 0.3843 | | | |
| | 0.4107 | 0.3887 | | | |
| | 0.4152 | 0.4001 | | | |

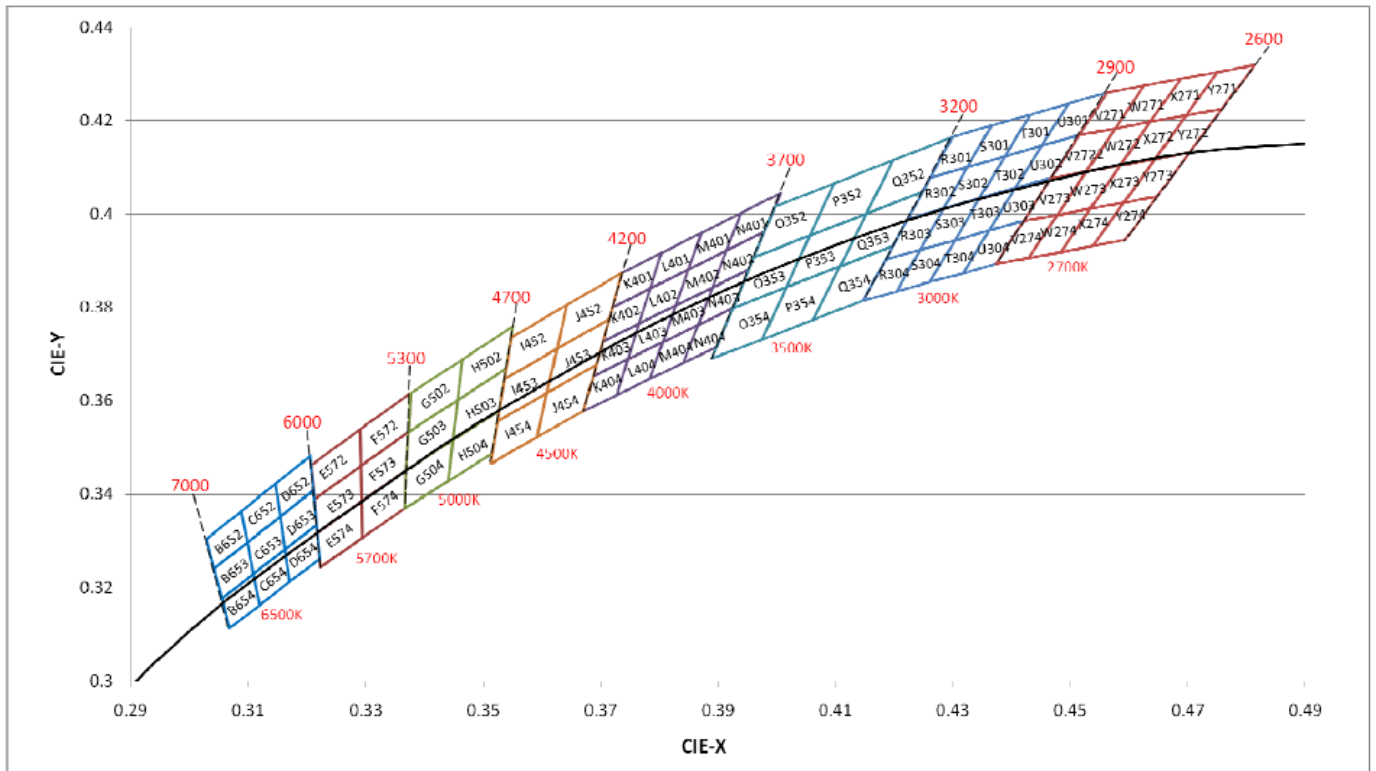
Note:

- (1) Correlated color Temperature is derived from the CIE 1931 Chromaticity diagram
- (2) Measurement tolerance is ± 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: 62-217ASW2C2H

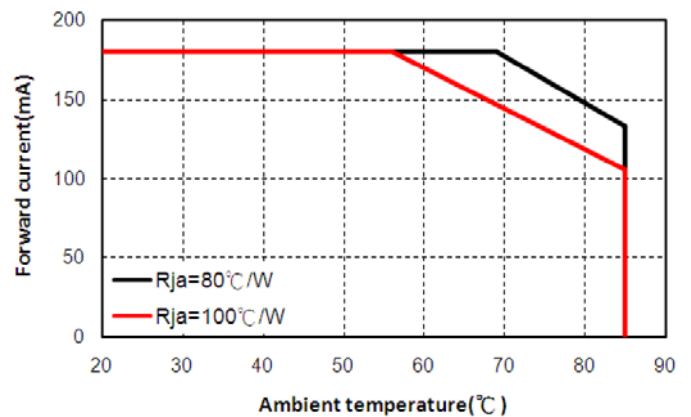
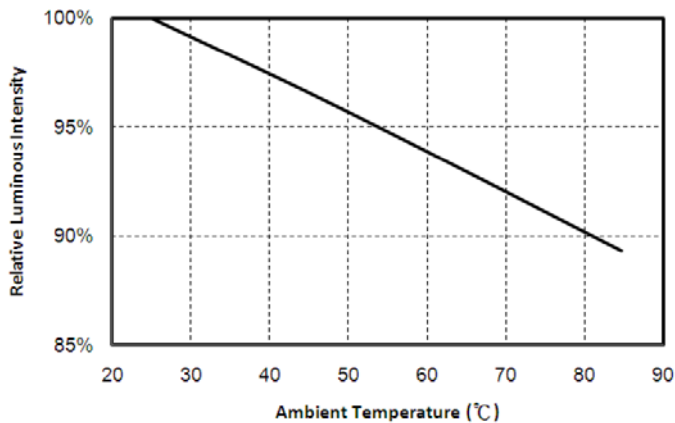
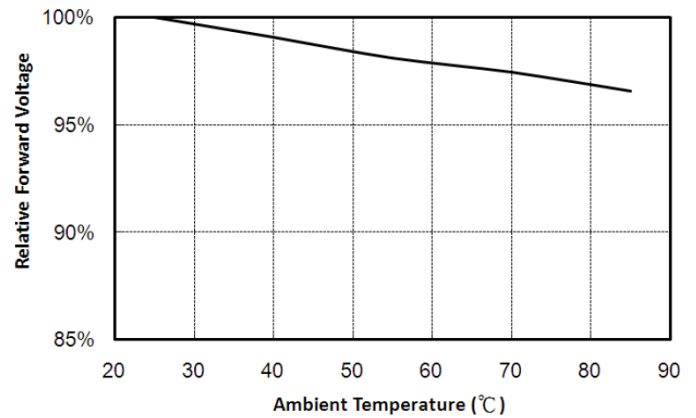
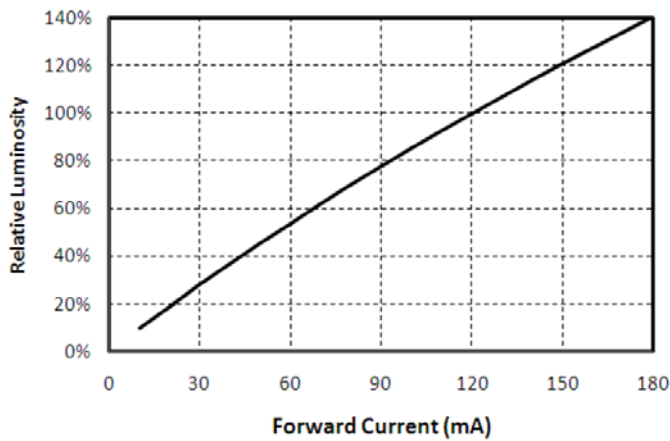
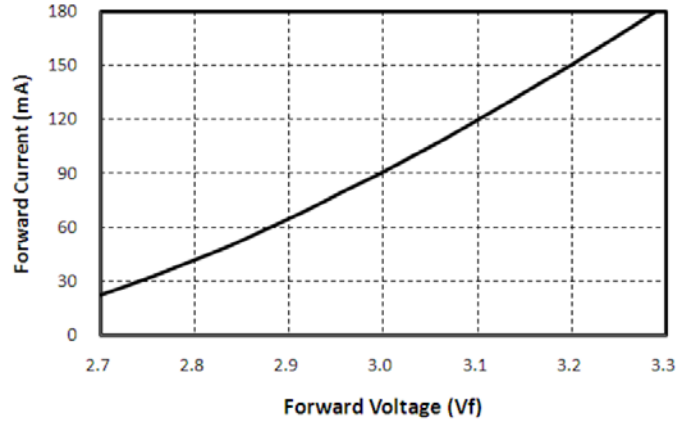
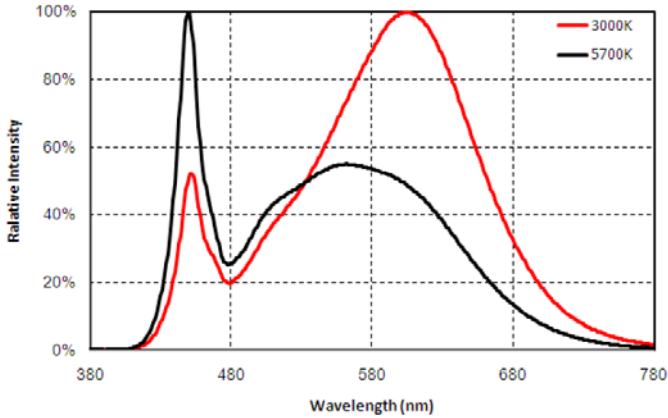
CIE Chromaticity Diagram



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

Part Number: 62-217ASW2C2H

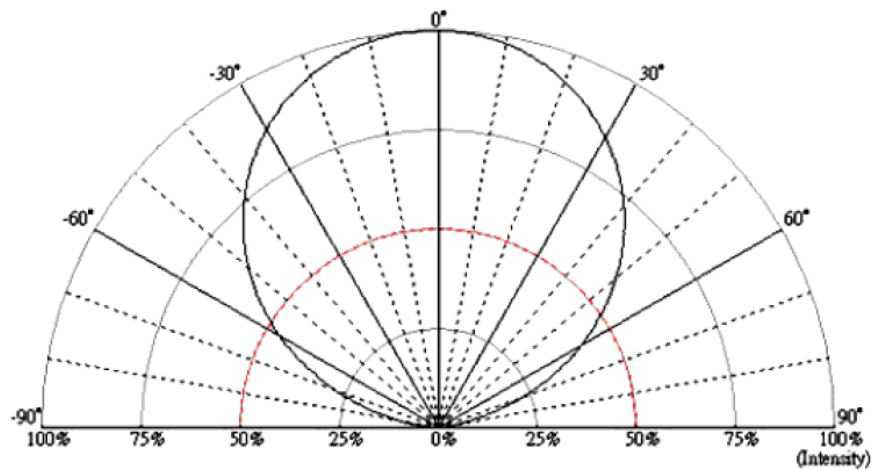
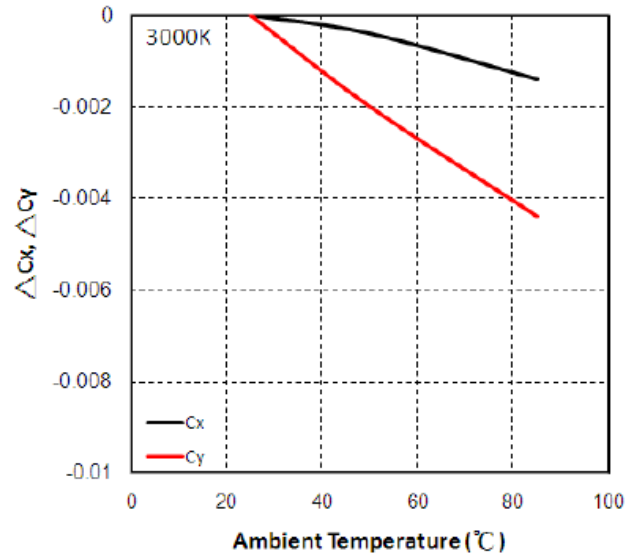
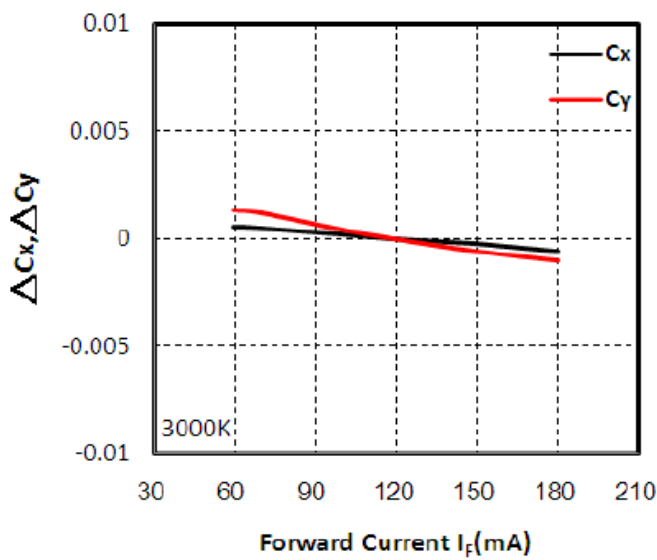
Typical Electro-Optical Characteristic Curves



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

Part Number: 62-217ASW2C2H

Typical Electro-Optical Characteristic Curves



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

Part Number: 62-217ASW2C2H

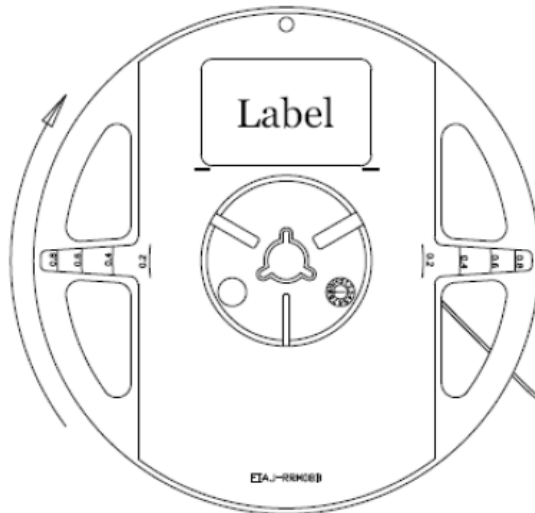
Reliability

| 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

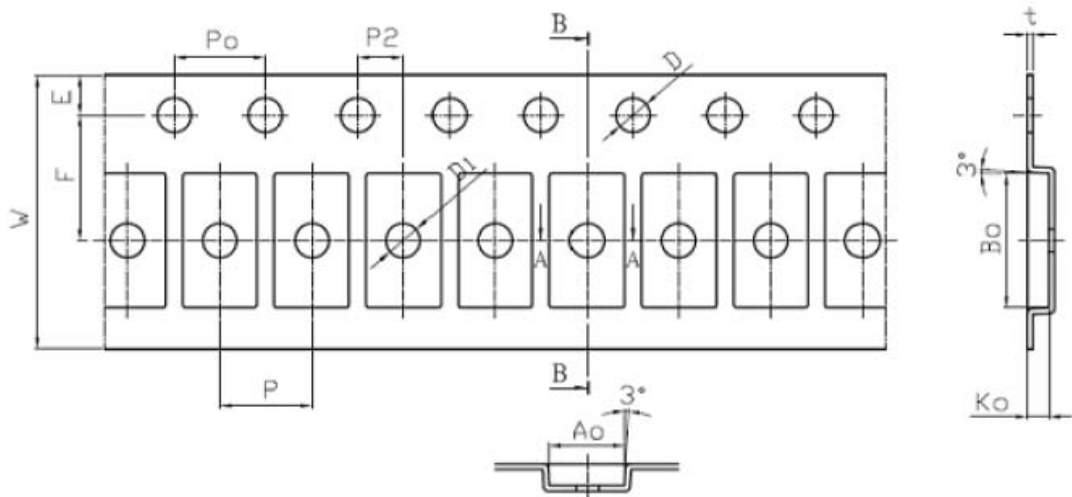
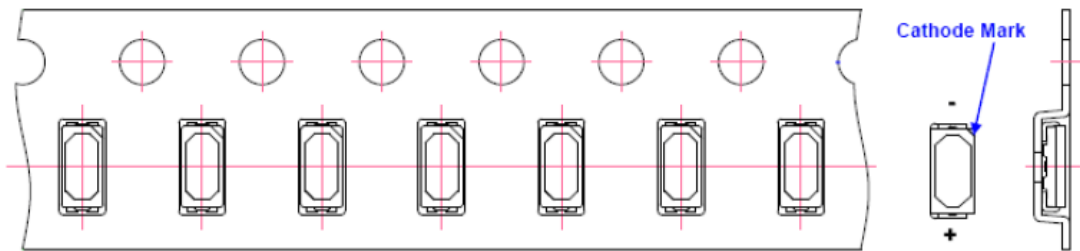
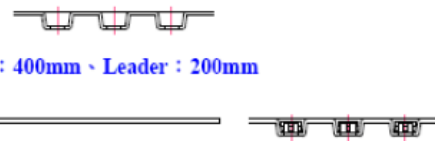
Part Number: 62-217ASW2C2H

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: 62-217ASW2C2H

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.

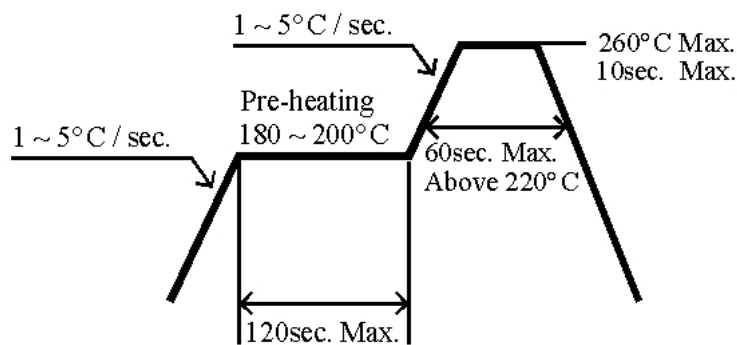
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

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.