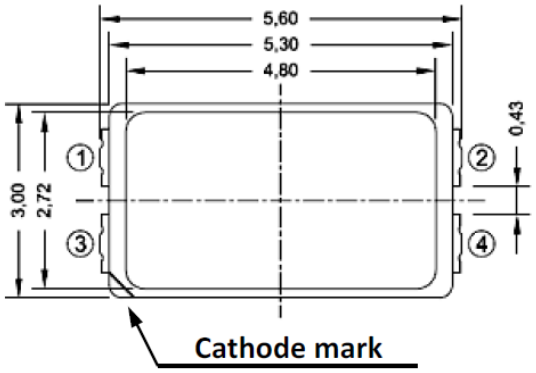
A-BRIGHT INDUSTRIAL CO., LTD.

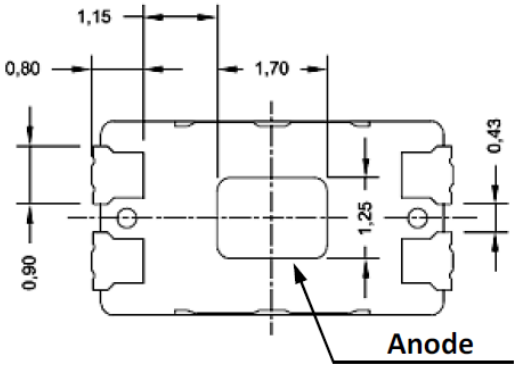
SURFACE MOUNT LED LAMPS

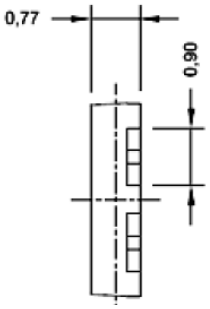
Power Warm White Surface Mount Device

Part Number: 62-217AWW2C1H

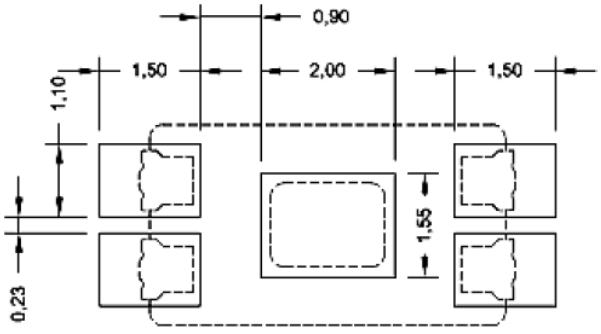
Package outlines & Re-flow Profile



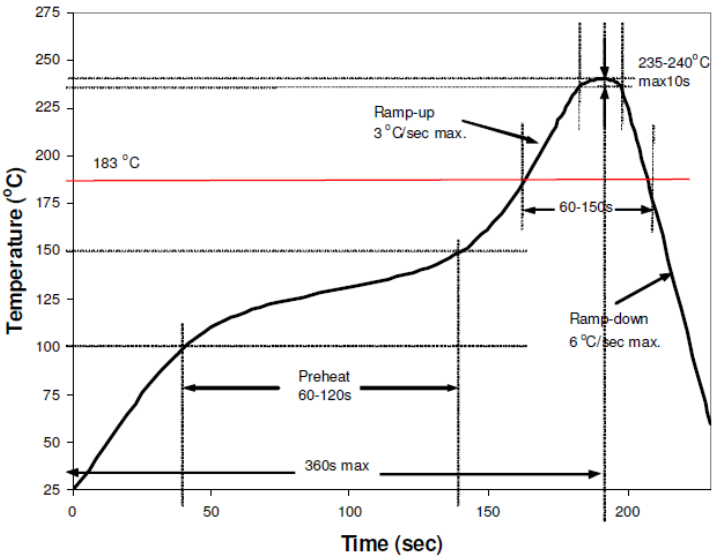




For Reflow Soldering



■Reflow Temp/Time



■Soldering iron

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

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 ±0.1mm (0.004inch) unless otherwise noted.
3. Polarity referring onto the cathode mark is reversed on the red.

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ELECTRO-OPTICAL CHARACTERISTICS (T_A=25℃)

Parameter	Test Condition	Symbol	Value			Unit
			MIN.	TYP.	MAX.	
Viewing angle at 50% I_V	I_F=60mA	2 θ 1/2		120		Deg
Forward voltage	I_F=60mA	V_F	2.9	---	3.3	V
Luminous Flux	I_F=60mA	Flux	---	25	---	Lm
Correlated Color Temperature	I_F=60mA	CCT	---	4000	---	K
Color Rending Index	I_F=60mA	CRI	---	80	---	---
Pulse Forward Current (Pulse Width ≤ 10msec, and duty ≤1/10)	I_F=60mA	I_{FP}		240		mA

Absolute maximum ratings (T_A=25℃)

Parameter	Symbol	Value	Unit
Forward current	I_F	120	mA
Reverse voltage	V_R	5	V
Reverse current (Zener Diode)	I_R	0.5	μA
Power dissipation	P_D	0.4	W
Operating temperature range	Top	-40 ~+85	℃
Storage temperature range	Tstg	-40 ~+100	℃

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Part Number: 62-217AWW2C1H

Bin Range

V_F Rank	Condition	Min.	Max.
1	I_F = 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_F = 60 mA	20	22.5
VE		22.5	25
VF		25	28

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SURFACE MOUNT LED LAMPS

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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

Note:

(1) Correlated color Temperature is derived from the CIE 1931Chromaticity diagram

(2) Measurement tolerance is ± 0.01

(3) The luminous flux tolerance is ±10%

(4) The Forward Voltage tolerance is ±0.1V

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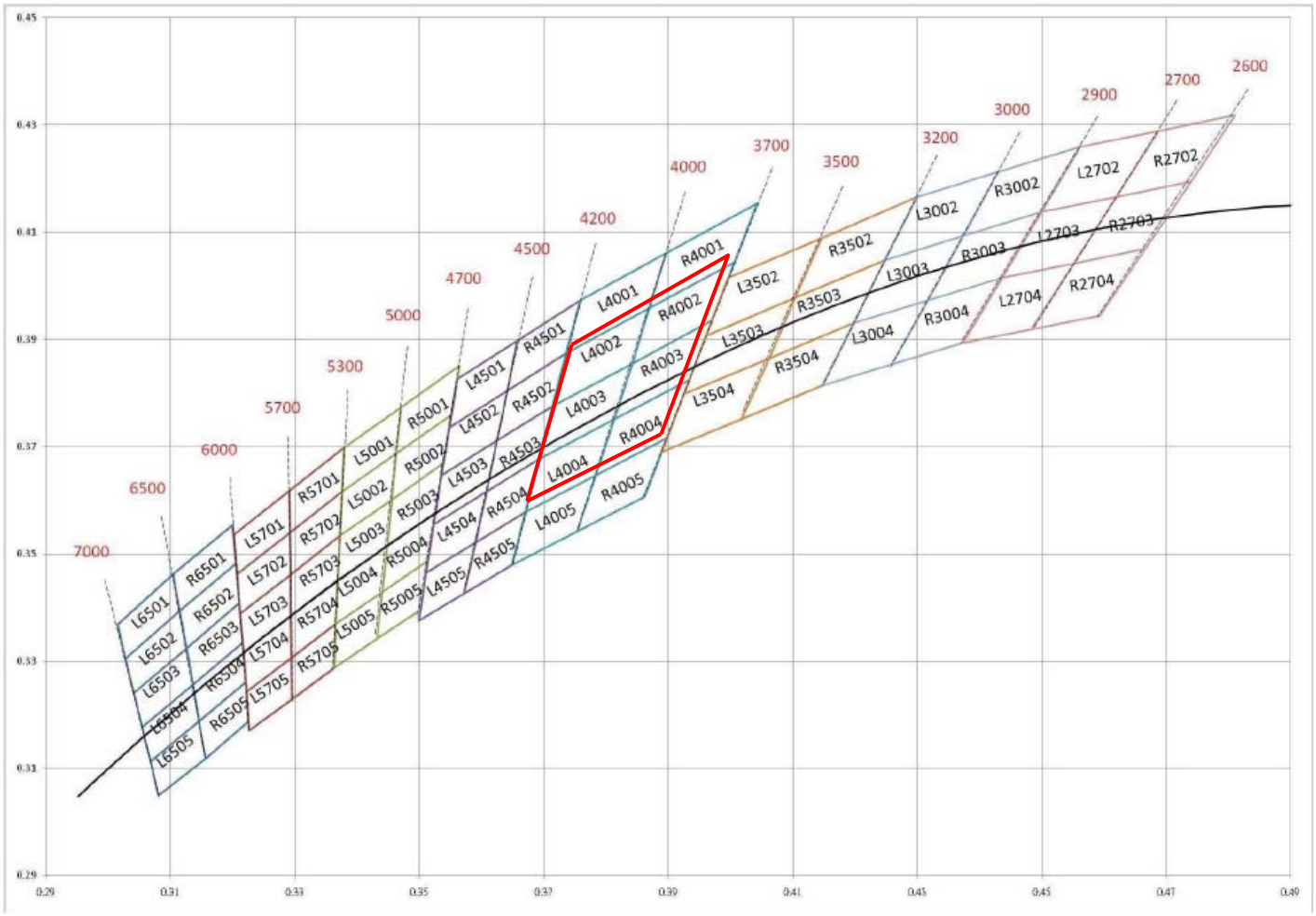
CIE Chromaticity Diagram



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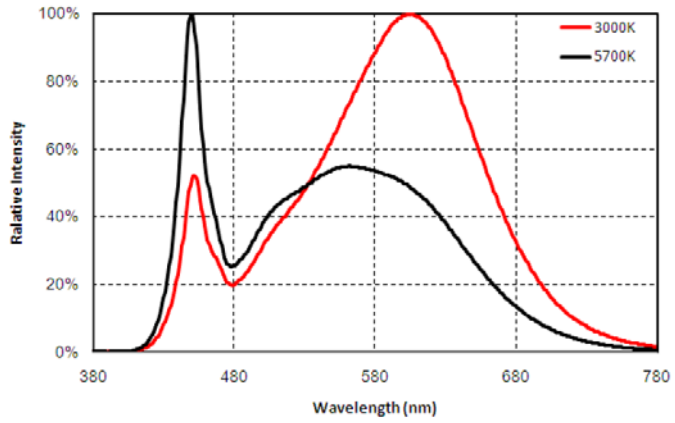
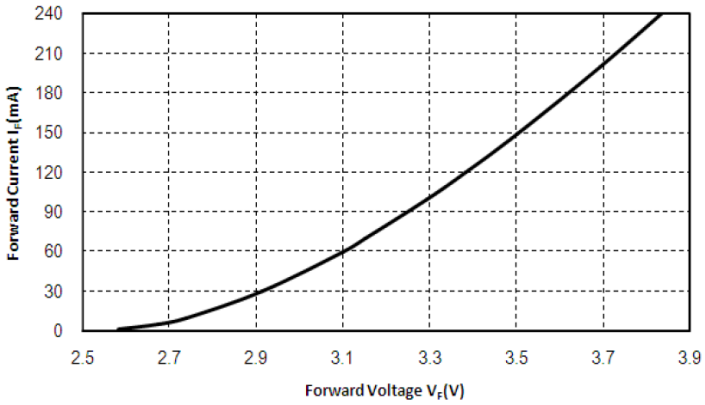
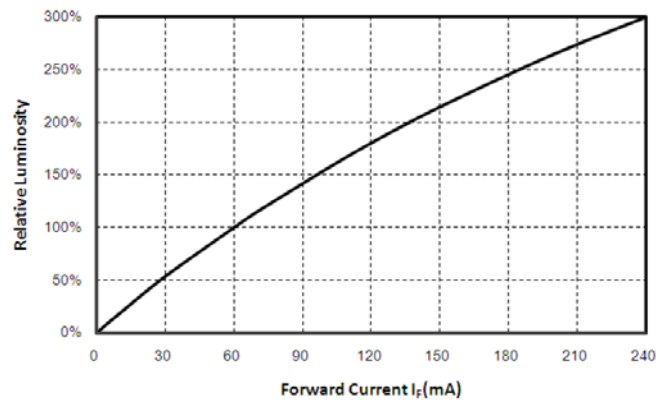
SURFACE MOUNT LED LAMPS

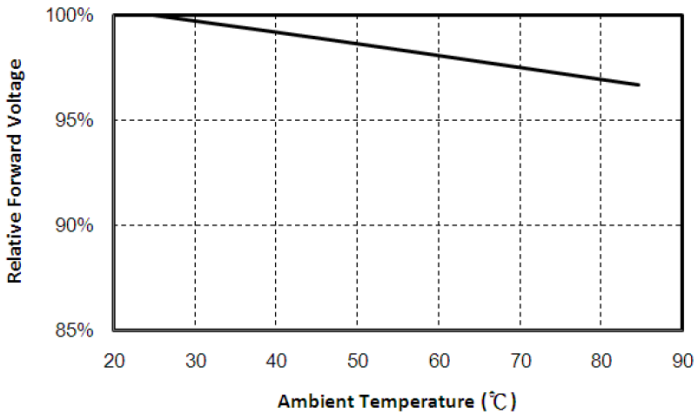
Part Number: 62-217AWW2C1H

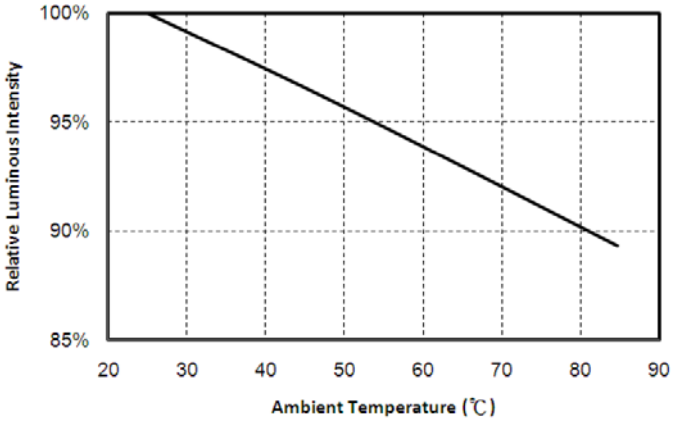
Typical Electro-Optical Characteristic Curves

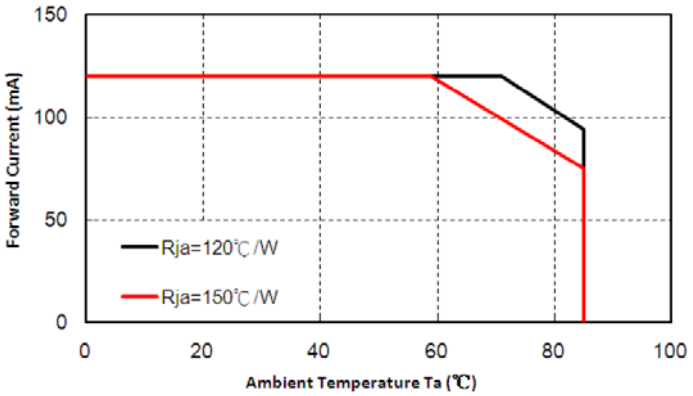












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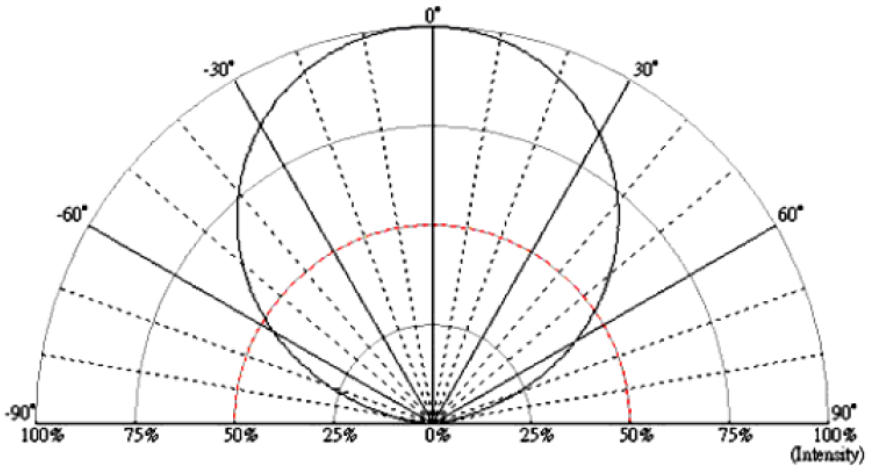

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Part Number: 62-217AWW2C1H

Reliability

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

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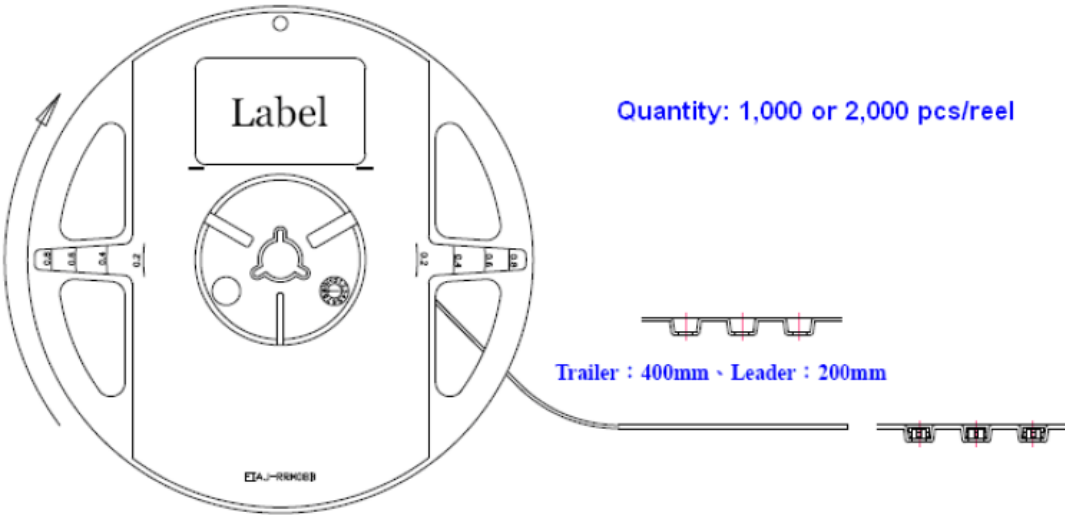
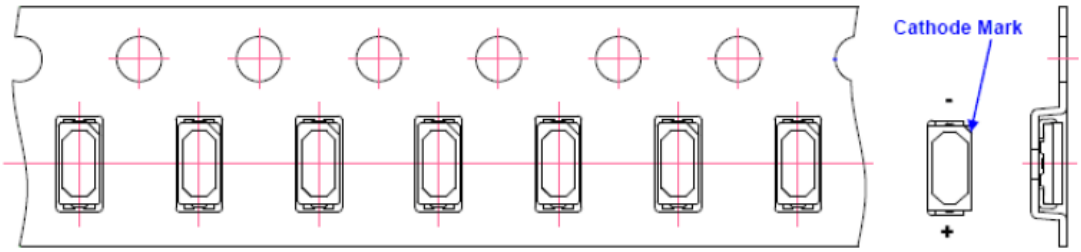
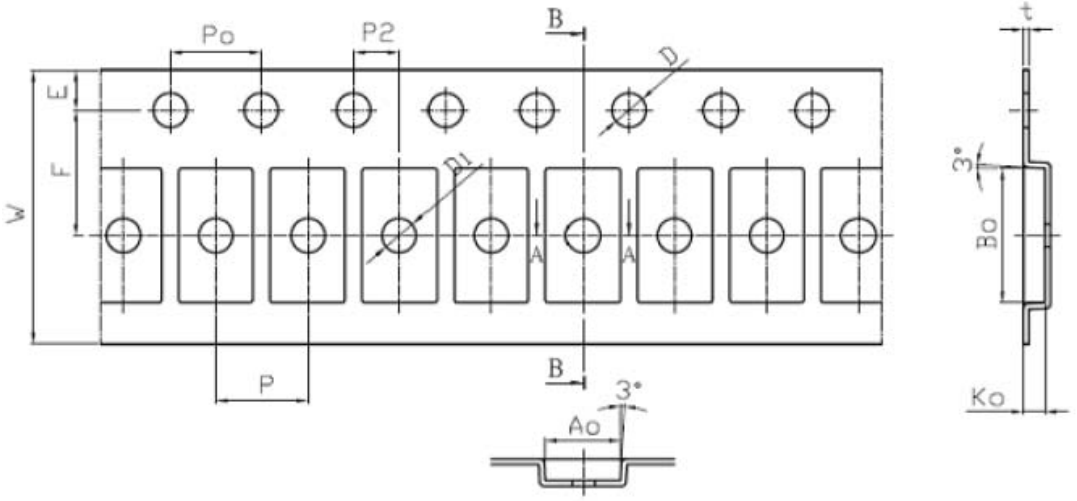
Package







Unit: mm

Item	Spec	Tol.(+/-)	Item	Spec	Tol.(+/-)
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

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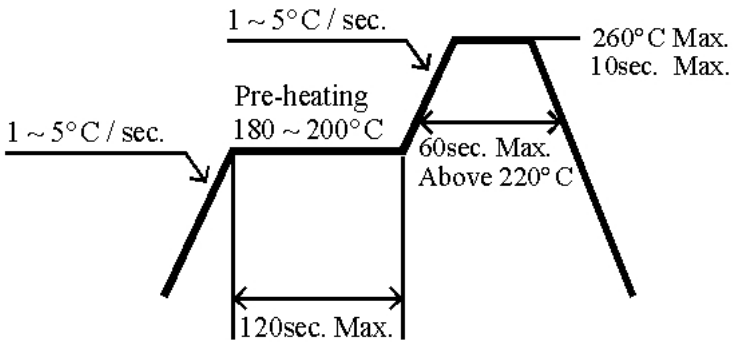
Precautions For Use

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℃ 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℃ 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℃ 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℃ 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.