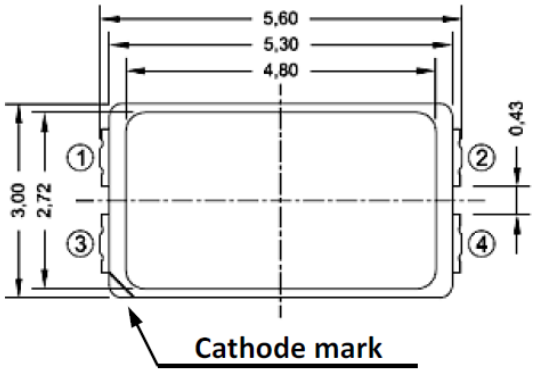
A-BRIGHT INDUSTRIAL CO., LTD.

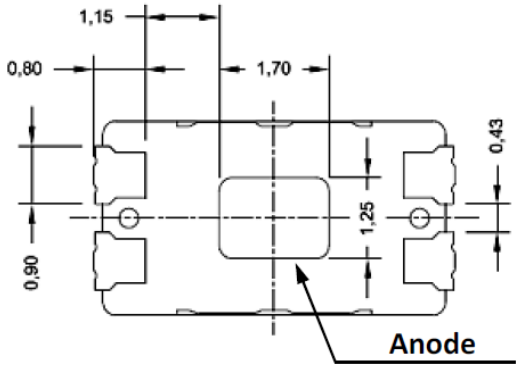
SURFACE MOUNT LED LAMPS

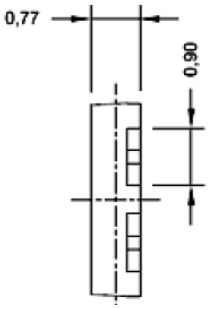
Power Warm White Surface Mount Device

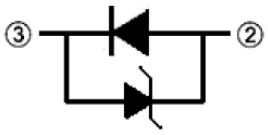
Part Number: 62-217ASW2C2H

Package outlines & Re-flow Profile

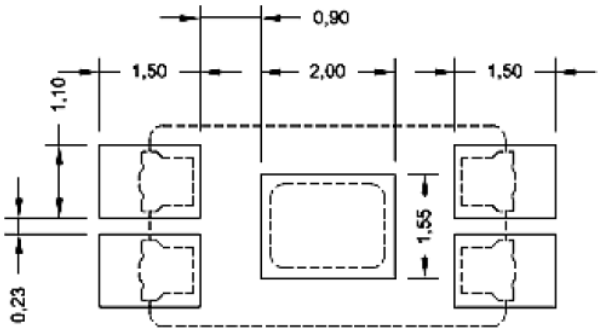




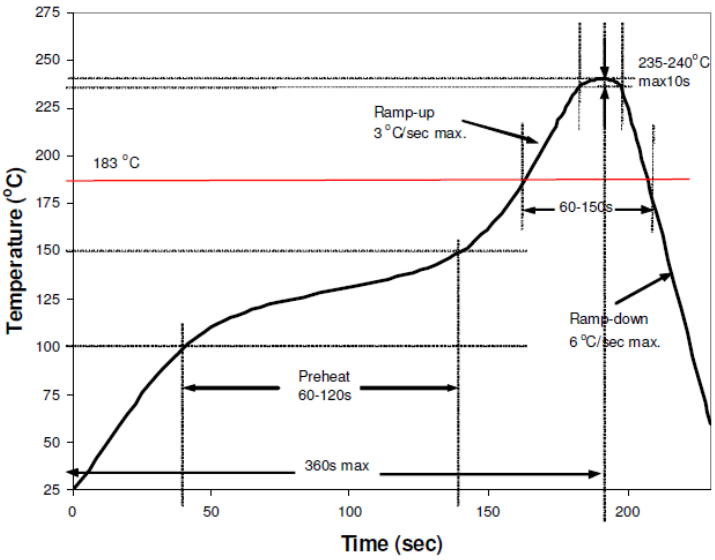




For Reflow Soldering



■Reflow Temp/Time



■Soldering iron

Basic spec is ≤ 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.

A-BRIGHT INDUSTRIAL CO., LTD.

SURFACE MOUNT LED LAMPS

Part Number: 62-217ASW2C2H

ELECTRO-OPTICAL CHARACTERISTICS (T_A=25℃)

Parameter	Test Condition	Symbol	Value			Unit
			MIN.	TYP.	MAX.	
Viewing angle at 50% I_V	I_F=120mA	2 θ 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 Rending 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℃)

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	℃
Storage temperature range	Tstg	-40 ~+100	℃

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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

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Bin Range

2700K					
Rank	CIE X	CIE Y	Rank	CIE X	CIE Y
V271	0.4515	0.4168	X271	0.4636	0.4197
	0.4562	0.426		0.4688	0.429
	0.4625	0.4275		0.475	0.4304
	0.4576	0.4182		0.4697	0.4211
V272	0.4467	0.4076	X272	0.4585	0.4104
	0.4515	0.4168		0.4636	0.4197
	0.4576	0.4182		0.4697	0.4211
	0.4526	0.409		0.4644	0.4118
V273	0.442	0.3985	X273	0.4534	0.4011
	0.4467	0.4076		0.4585	0.4104
	0.4526	0.409		0.4644	0.4118
	0.4477	0.3998		0.4591	0.4024
V274	0.4373	0.3893	X274	0.4483	0.3918
	0.442	0.3985		0.4534	0.4011
	0.4477	0.3998		0.4591	0.4024
	0.4428	0.3906		0.4538	0.3931
W271	0.4576	0.4182	Y271	0.4697	0.4211
	0.4625	0.4275		0.475	0.4304
	0.4688	0.429		0.4813	0.4319
	0.4636	0.4197		0.4758	0.4225
W272	0.4526	0.409	Y272	0.4644	0.4118
	0.4576	0.4182		0.4697	0.4211
	0.4636	0.4197		0.4758	0.4225
	0.4585	0.4104		0.4703	0.4132
W273	0.4477	0.3998	Y273	0.4591	0.4024
	0.4526	0.409		0.4644	0.4118
	0.4585	0.4104		0.4703	0.4132
	0.4534	0.4011		0.4648	0.4038
W274	0.4428	0.3906	Y274	0.4538	0.3931
	0.4477	0.3998		0.4591	0.4024
	0.4534	0.4011		0.4648	0.4038
	0.4483	0.3918		0.4593	0.3944

3000K					
Rank	CIE X	CIE Y	Rank	CIE X	CIE Y
R301	0.4299	0.4165	T301	0.4431	0.4213
	0.4261	0.4077		0.4388	0.4123
	0.4324	0.41		0.4451	0.4146
	0.4365	0.4189		0.4496	0.4236
R302	0.4261	0.4077	T302	0.4388	0.4123
	0.4223	0.399		0.4345	0.4033
	0.4284	0.4011		0.4406	0.4055
	0.4324	0.41		0.4451	0.4146
R303	0.4223	0.399	T303	0.4345	0.4033
	0.4185	0.3902		0.4303	0.3943
	0.4244	0.3923		0.4361	0.3964
	0.4284	0.4011		0.4406	0.4055
R304	0.4185	0.3902	T304	0.4303	0.3943
	0.4147	0.3814		0.426	0.3854
	0.4204	0.3834		0.4317	0.3873
	0.4244	0.3923		0.4361	0.3964
S301	0.4365	0.4189	U301	0.4496	0.4236
	0.4324	0.41		0.4451	0.4146
	0.4388	0.4123		0.4515	0.4168
	0.4431	0.4213		0.4562	0.426
S302	0.4324	0.41	U302	0.4451	0.4146
	0.4284	0.4011		0.4406	0.4055
	0.4345	0.4033		0.4468	0.4077
	0.4388	0.4123		0.4515	0.4168
S303	0.4284	0.4011	U303	0.4406	0.4055
	0.4244	0.3923		0.4361	0.3964
	0.4303	0.3943		0.442	0.3985
	0.4345	0.4033		0.4468	0.4077
S304	0.4244	0.3923	U304	0.4361	0.3964
	0.4204	0.3834		0.4317	0.3873
	0.426	0.3854		0.4373	0.3893
	0.4303	0.3943		0.442	0.3985

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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 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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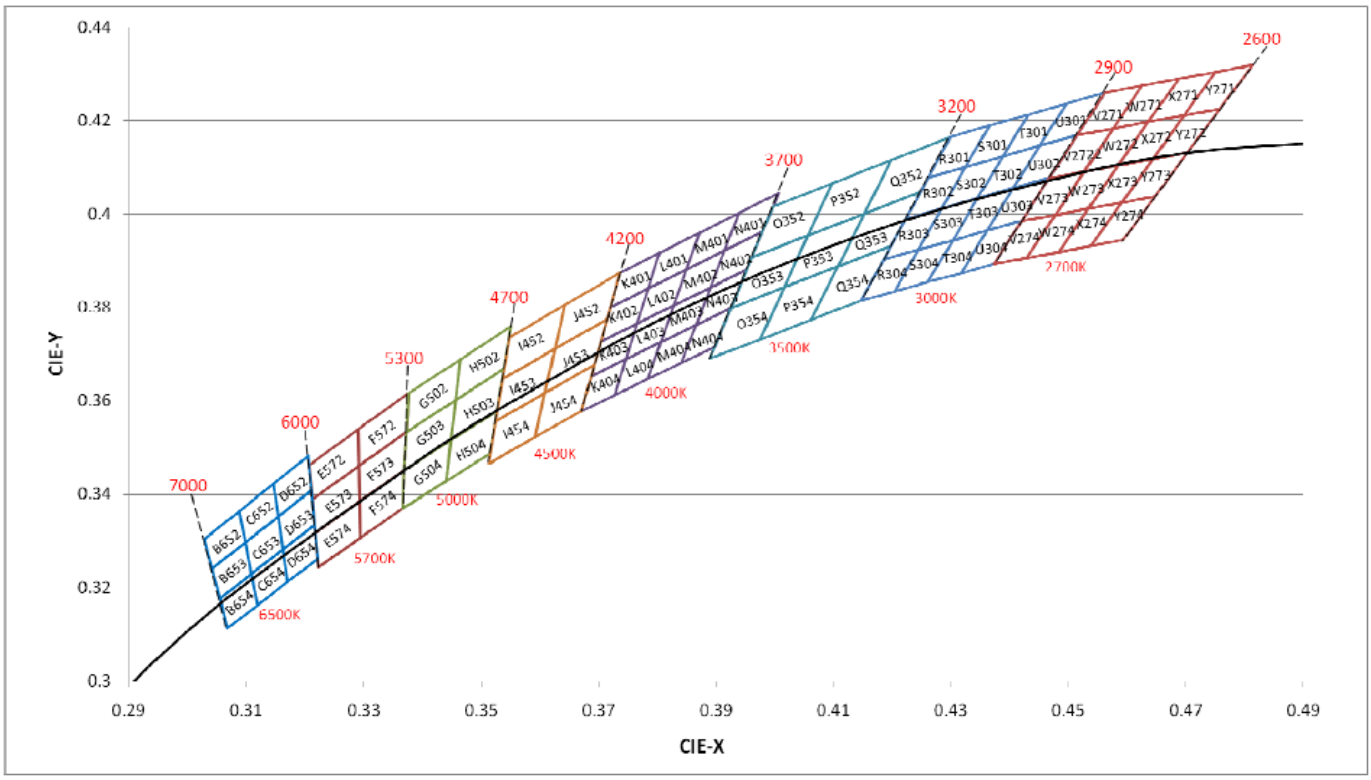
CIE Chromaticity Diagram



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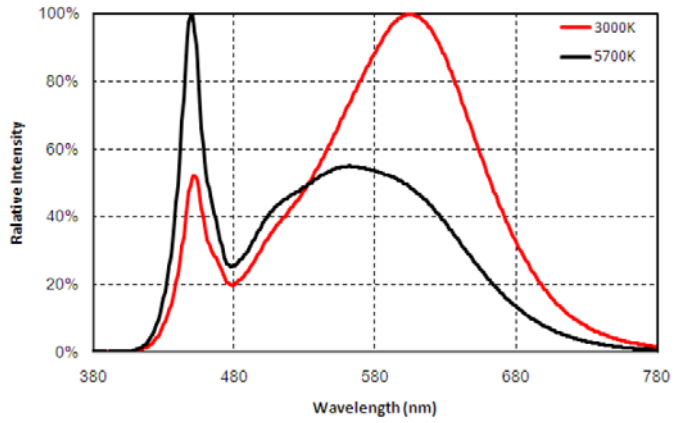
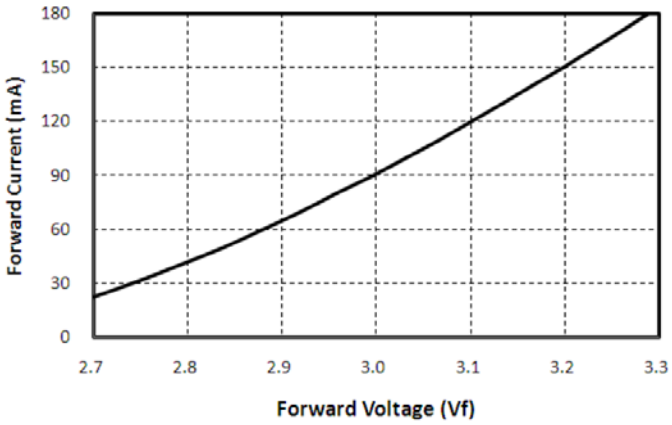
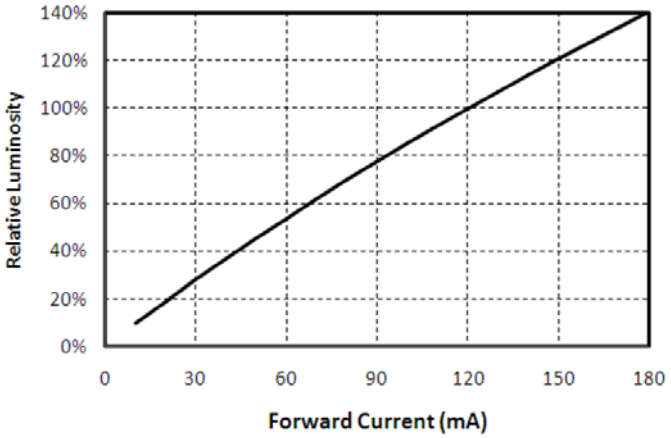
SURFACE MOUNT LED LAMPS

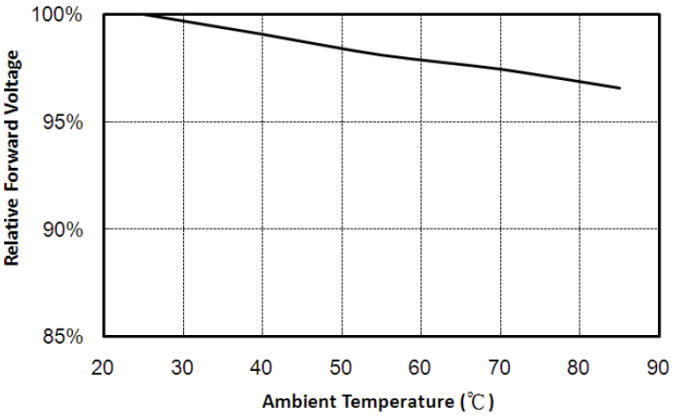
Part Number: 62-217ASW2C2H

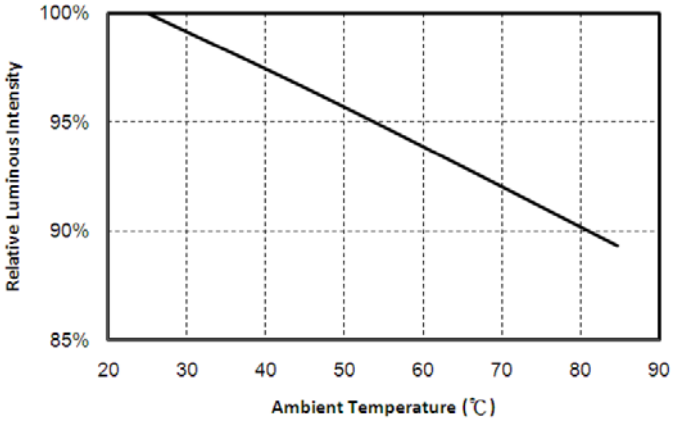
Typical Electro-Optical Characteristic Curves

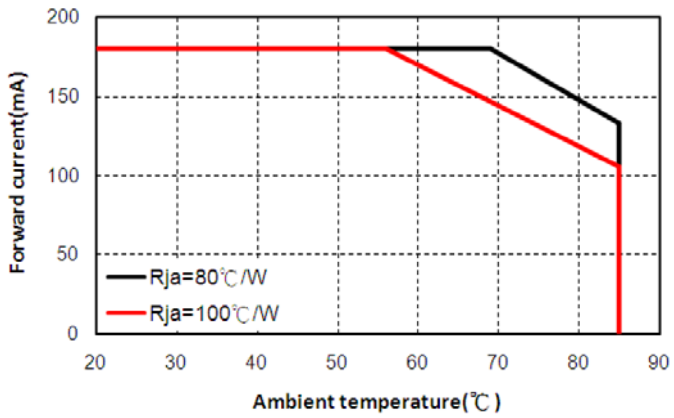












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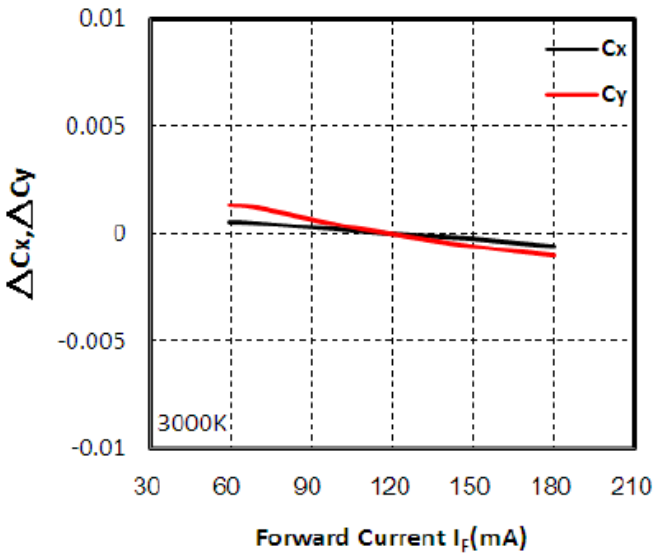
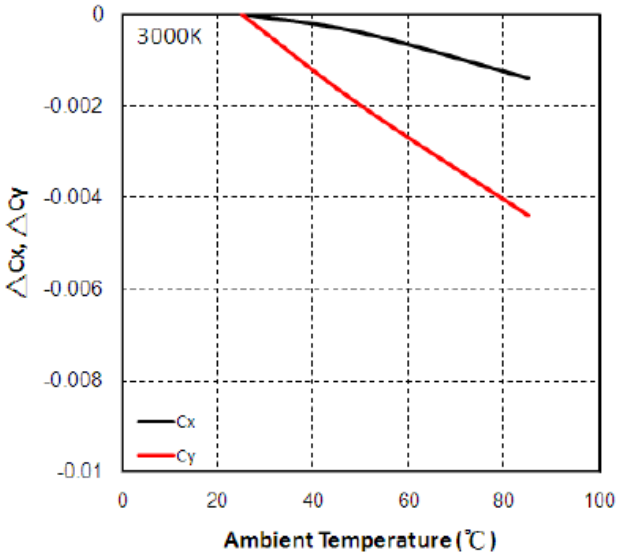
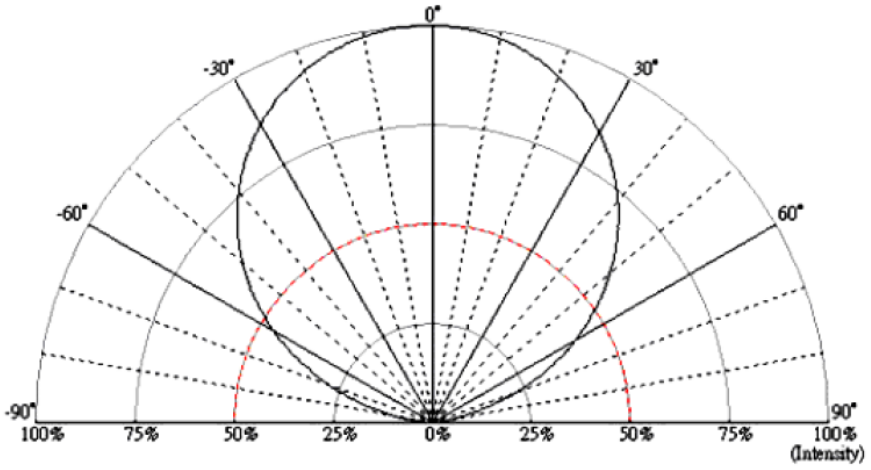
Typical Electro-Optical Characteristic Curves







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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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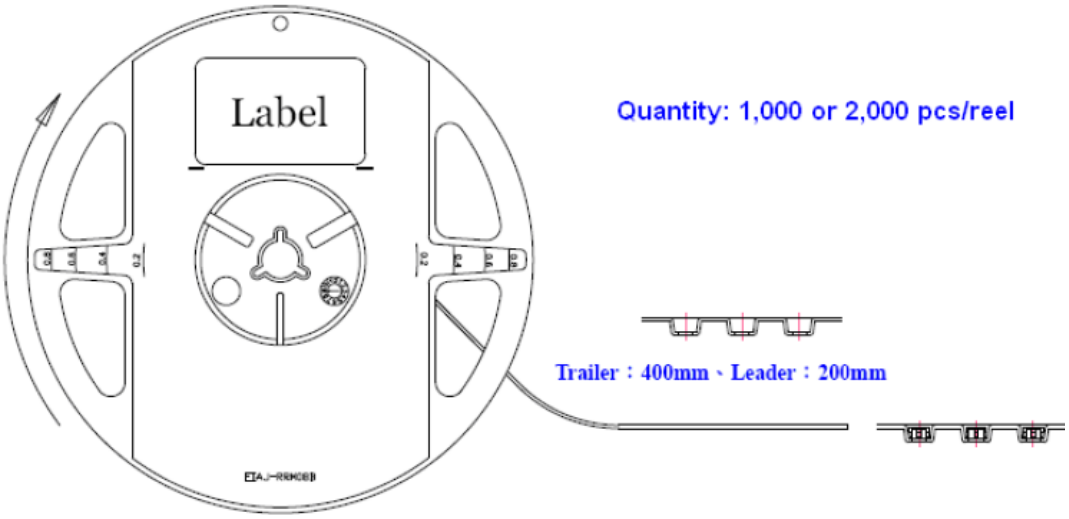
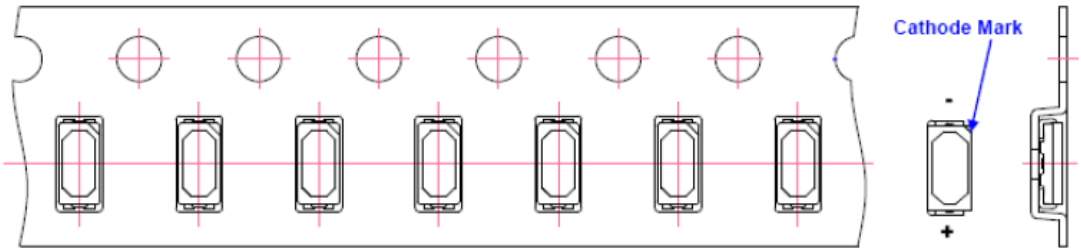
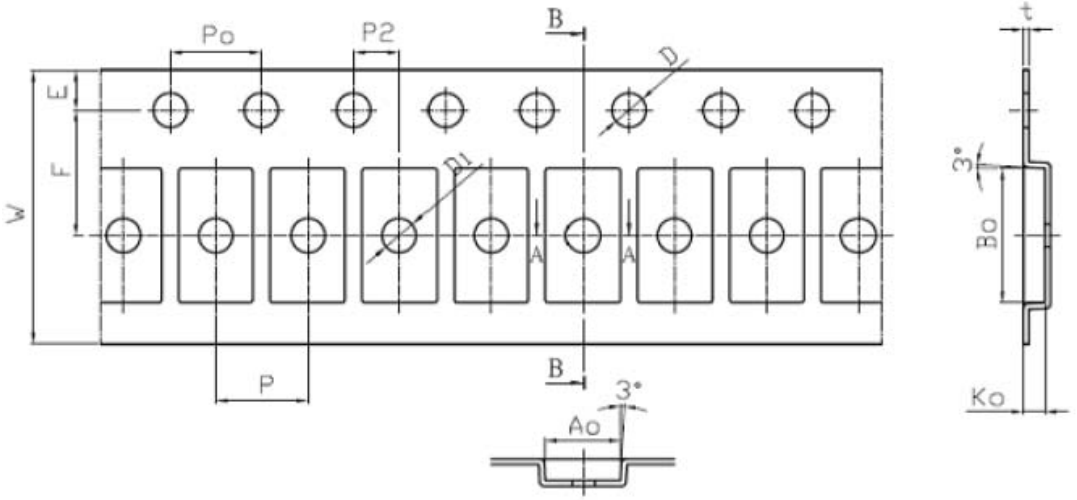
Package







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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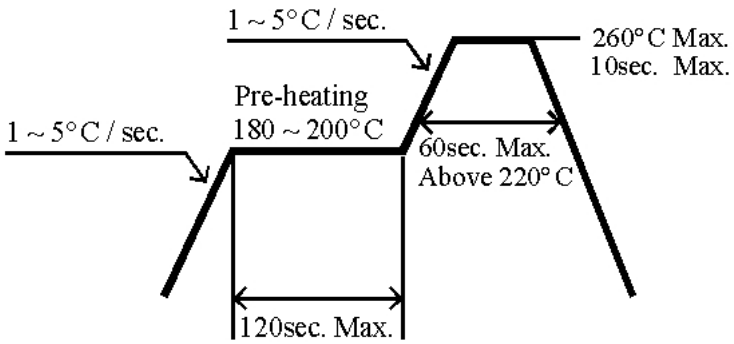
Precautions For Use

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.