1.60*0.80 SMD

A-1608BUW-S

Features

• Single color.
• Viewing angle:120 deg
• The materials of the LED dice is InGaN
• RoHS compliant lead-free soldering compatible

Applications

• Optical indicator
• Indoor display
• Interior automotive lighting
• Backlight for LCD, switch and Symbol, display
• Light pipe application
• General use

Ordering Information

Part Number	Size	Dice	Lens Type
A-1608BUW-S	1.60*0.80*0.30mm	WHITE (InGaN)	Yellow Diffused

Luminous intensity(mcd) @20mA		Luminous flux(lm) @ 20mA	
Min.	Typ.	Min.	Typ.
1900	2200	6.0	6.5
1900	2200		

Note:
1.the above luminous intensity measurement allowance tolerance ±10%.

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Maximum Ratings

Parameter	Symbol	Value	Unit
Operating temperature	T_{OP}	-40 ~ +85	ºC
Storage temperature	T_{STG}	-40 ~ +90	ºC
DC Forward current (T_A=25 ºC)	I_F	25	mA
Pulse Forward Current [1]	I_{FP}	100	mA
Reverse voltage (T_A=25 ºC)	V_R	5	V
Electrostatic Discharge (HBM)	ESD	1500	V
Power Dissipation	Pd	110	mW

Electrical / Optical Characteristics (1)

(T_A = 25 ºC)

Parameter		Symbol	Value	Unit
Viewing angle at 50% [2] IF = 5mA	**(Typ.)**	**$2\theta_{1/2}$**	130	degree
Forward voltage IF = 5mA	**(Min.)**	**V_F**	2.60	V
	(Typ.)	**V_F**	-	V
	(Max.)	**V_F**	3.00	V
Reverse current V_R = 5V	**(Max.)**	**I_R**	50	µA

Note:
1. 1/10 Duty cycle, 0.1ms pulse width.
2. 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
3. The above forward voltage measurement allowance tolerance ±0.05V.

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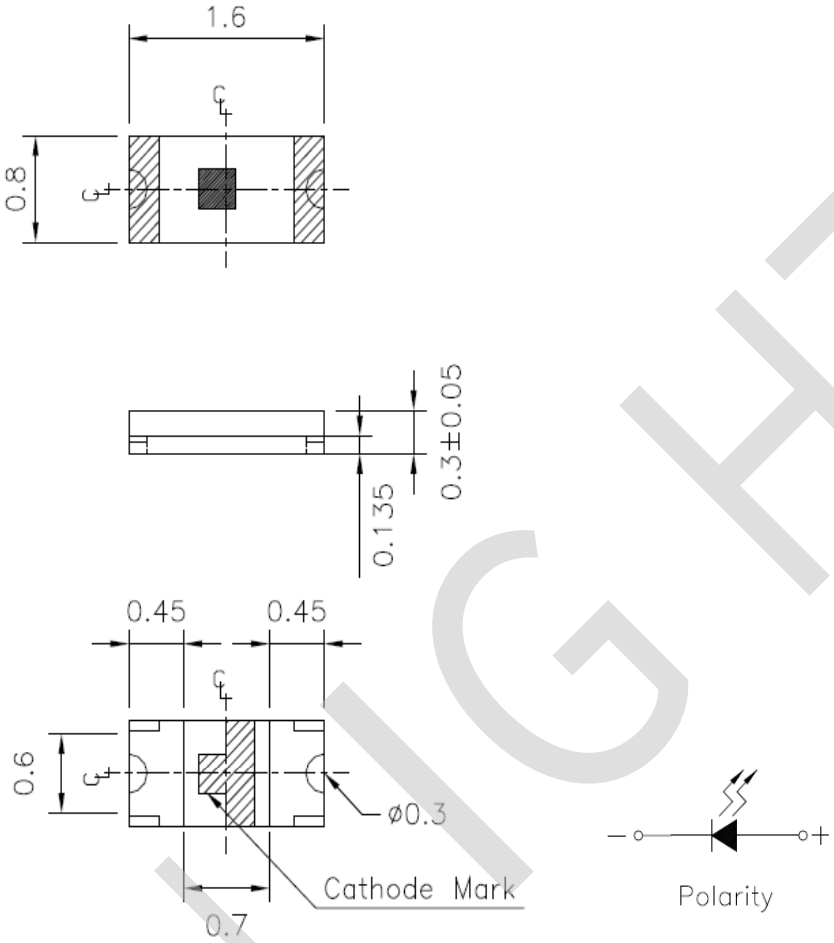
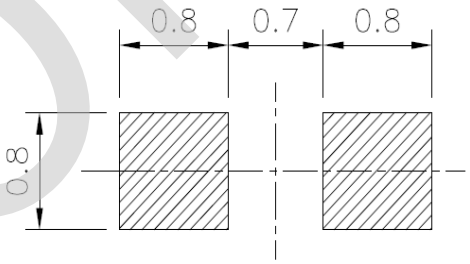
Package Dimensions



Recommended Soldering



Notes:

1. All dimensions are in millimeters.
2. All dimension tolerance is ±0.1mm unless otherwise noted.

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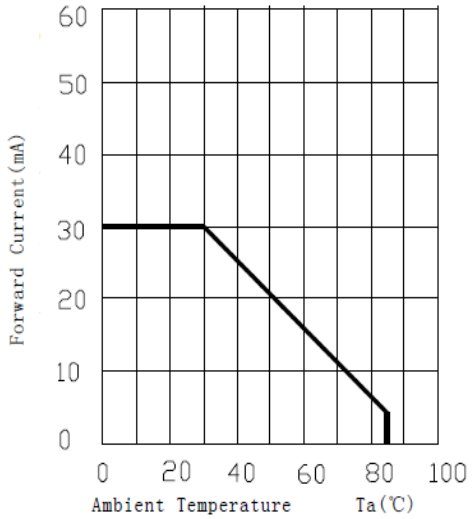
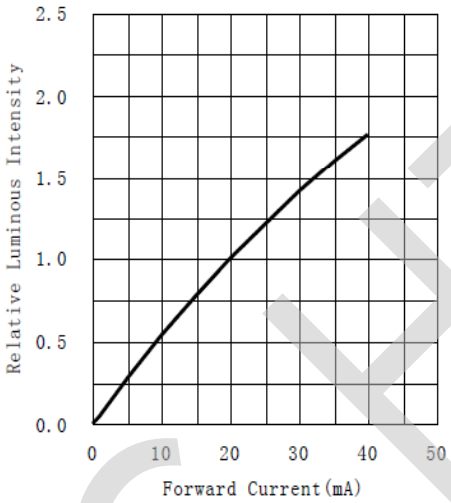
Electrical/Optical Charateristic (2)

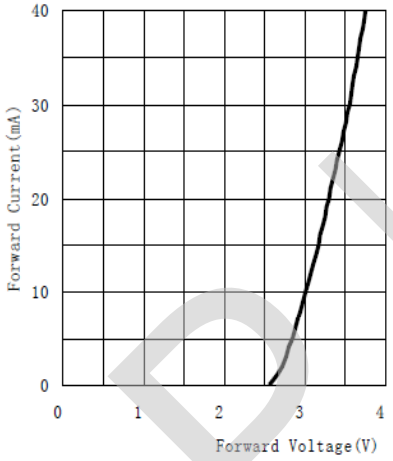
Ambient Temperature VS. Forward Current



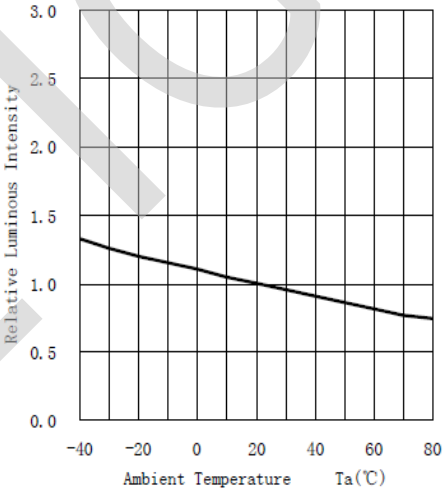
Forward Current VS. Relative Intensity



Forward Voltage VS. Forward Current



Ambient Temperature VS. Relative Intensity



Relative spectral emission

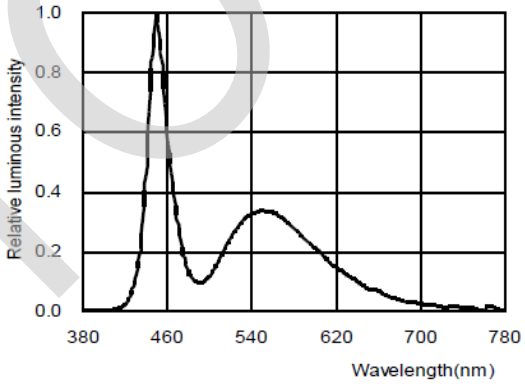
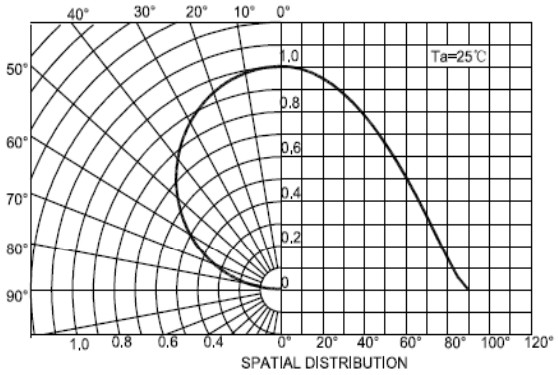


Diagram characteristics of radiation



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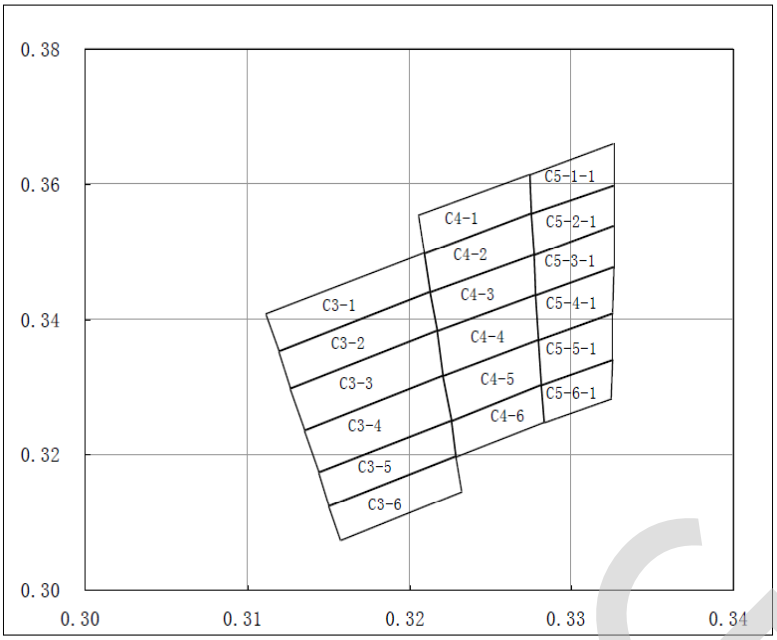
CIE Chromaticity Diagram



C3-1 6000-6500K				
X	0.3112	0.3209	0.3213	0.3120
Y	0.3408	0.3498	0.3440	0.3354

C3-2 6000-6500K				
X	0.3120	0.3213	0.3217	0.3127
Y	0.3354	0.3440	0.3382	0.3299

C3-3 6000-6500K				
X	0.3127	0.3217	0.3221	0.3136
Y	0.3299	0.3382	0.3317	0.3237

C3-4 6000-6500K				
X	0.3136	0.3221	0.3226	0.3144
Y	0.3237	0.3317	0.3251	0.3174

C3-5 6000-6500K				
X	0.3144	0.3226	0.3229	0.3151
Y	0.3174	0.3251	0.3198	0.3124

C3-6 6000-6500K				
X	0.3151	0.3229	0.3232	0.3157
Y	0.3124	0.3198	0.3145	0.3074

C4-1 5700-6000K				
X	0.3206	0.3274	0.3275	0.3209
Y	0.3554	0.3615	0.3556	0.3498

C4-2 5700-6000K				
X	0.3209	0.3275	0.3277	0.3213
Y	0.3498	0.3556	0.3496	0.3440

C4-3 5700-6000K				
X	0.3213	0.3277	0.3278	0.3217
Y	0.3440	0.3496	0.3436	0.3382

C4-4 5700-6000K				
X	0.3217	0.3278	0.3280	0.3221
Y	0.3382	0.3436	0.3369	0.3317

C4-5 5700-6000K				
X	0.3221	0.3280	0.3281	0.3226
Y	0.3317	0.3369	0.3302	0.3251

C4-6 5700-6000K				
X	0.3226	0.3281	0.3283	0.3229
Y	0.3251	0.3302	0.3247	0.3198

C5-1-1 5500-5700K				
X	0.3274	0.3326	0.3326	0.3275
Y	0.3615	0.3660	0.3599	0.3556

C5-2-1 5500-5700K				
X	0.3275	0.3326	0.3326	0.3277
Y	0.3556	0.3599	0.3538	0.3496

C5-3-1 5500-5700K				
X	0.3277	0.3326	0.3326	0.3278
Y	0.3496	0.3538	0.3477	0.3436

C5-4-1 5500-5700K				
X	0.3278	0.3326	0.3325	0.3280
Y	0.3436	0.3477	0.3409	0.3369

C5-5-1 5500-5700K				
X	0.3280	0.3325	0.3325	0.3281
Y	0.3369	0.3409	0.3340	0.3302

C5-6-1 5500-5700K				
X	0.3281	0.3325	0.3324	0.3283
Y	0.3302	0.3340	0.3283	0.3247

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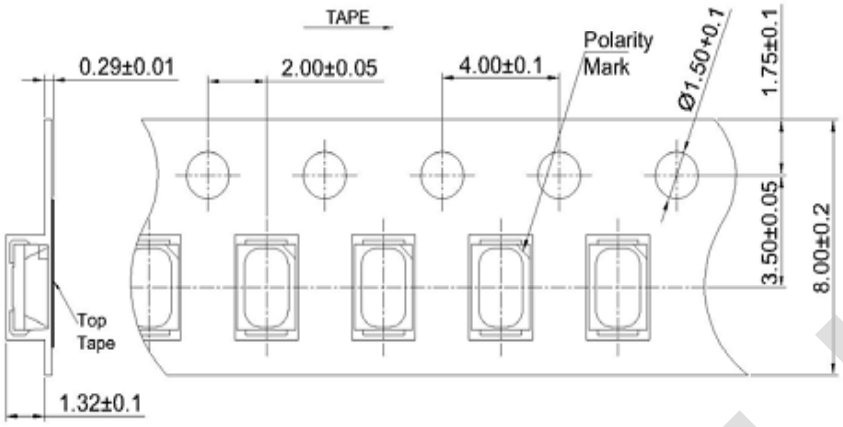
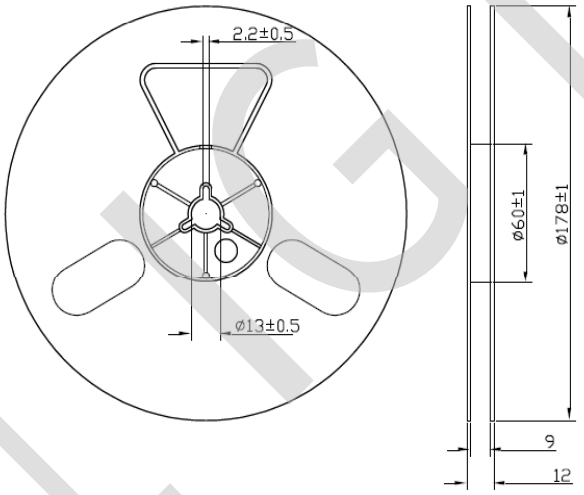
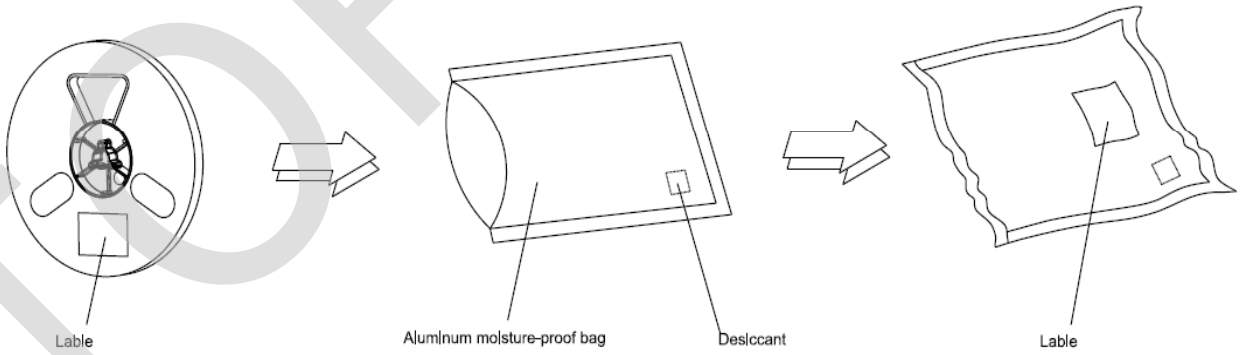
Package Outline Dimensions



Reel Dimensions



Moisture Resistant Packaging



Note: The tolerances unless mentioned is ±0.1mm , Unit: mm

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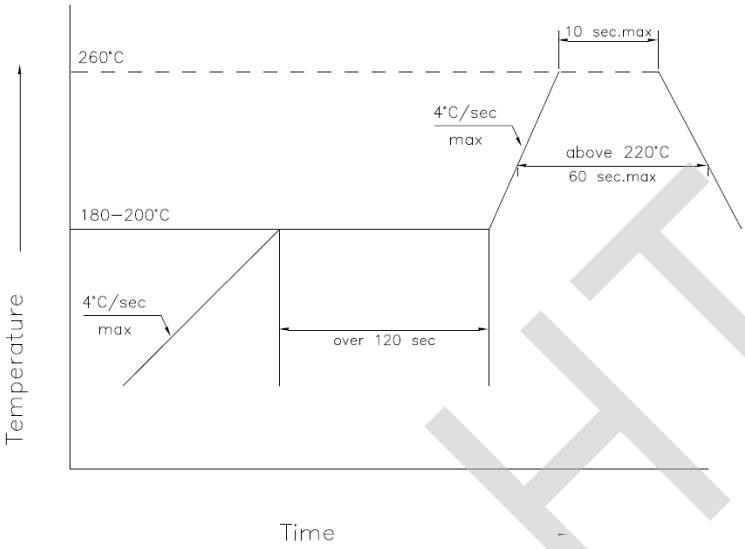
SMT Reflow Soldering Instructions

1.Reflow soldering should not be done more than two times
2.When soldering , do not put stress on t LEDs during heating

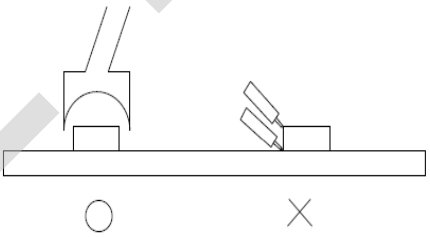


Soldering iron

1.When hand soldering, the temperature of the iron must less than 300℃ for 3 seconds
2.The hand solder should be done only one times

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as bel figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not damaged by repairing.



Cautions

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

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