

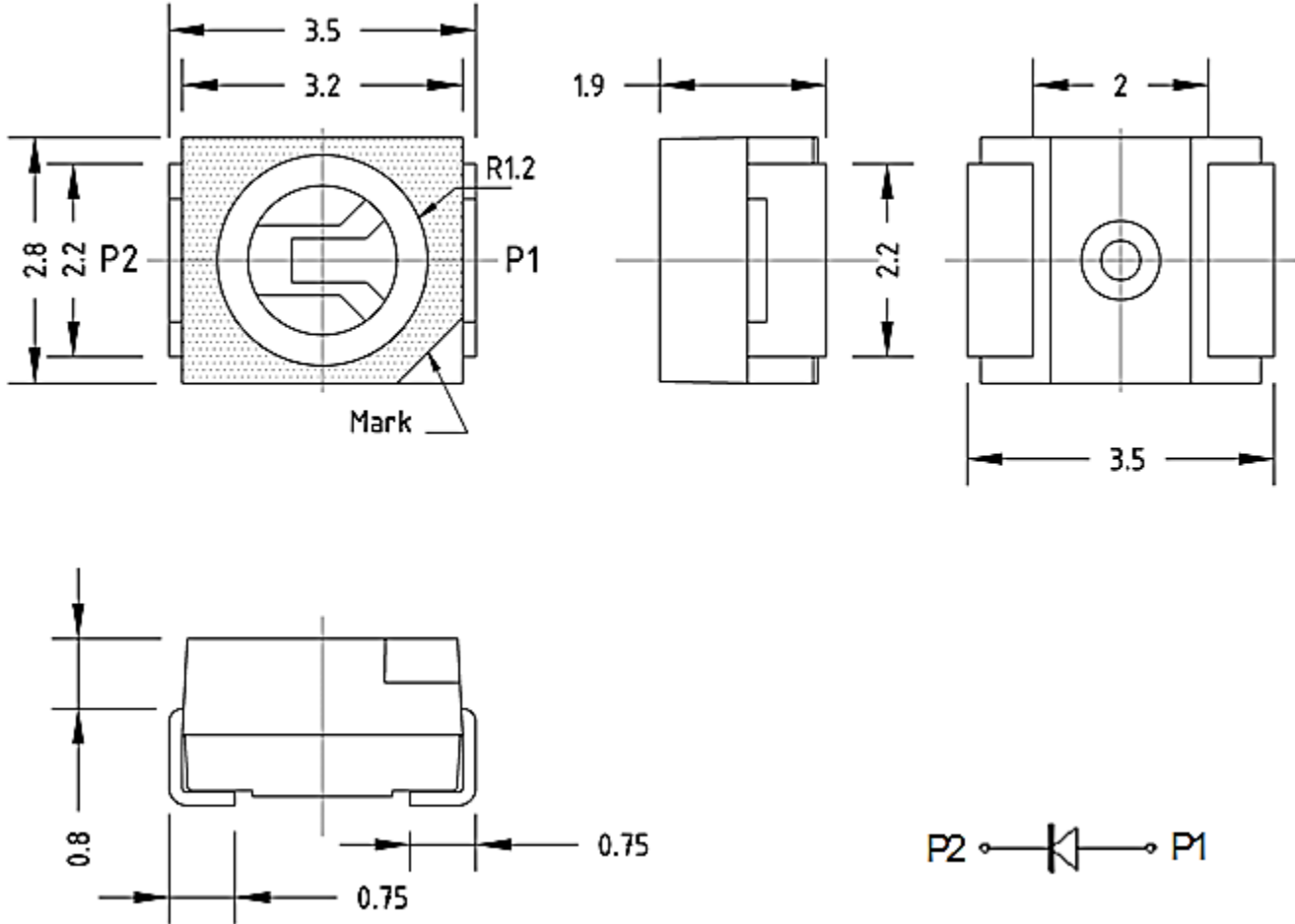


American Opto Plus LED Corp.

L955NAC-S

3.5 x 2.8 x 1.9mm Amber SMD LED PLCC-2

PACKAGE OUTLINES



ITEM	MATERIALS
Dice	AlInGaP/Si
Resin (mold)	Silicone
Emitted Color	Amber
Electrodes	Ag Plating Copper Alloy

Notes:

1. All dimensions are in millimeters
2. Electrical connections between all cathodes are recommended.



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ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Parameter	Symbol	Maximum Rating	Unit
Power Dissipation	P _D	150	mW
DC Forward Current	I _F	50	mA
Peak Pulsed Forward Current	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{OPR}	-30 ~ +85	°C
Storage Temperature Range	T _{STG}	-40 ~ +100	°C
Solder Temperature	T _{SOL}	265°C for 10sec	

OPTICAL-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V _F	I _F =20mA	--	2.1	2.4	V
Reverse Current	I _R	V _R =5V	--	--	50	μA
Luminous Intensity	I _V	I _F =20mA	400	500	880	mcd
Dominant Wavelength	λ _D	I _F =20mA	610	615	620	nm
Peak Wavelength	λ _P	I _F =20mA	--	630	--	nm
Spectral Half Width	Δλ _{1/2}	I _F =20mA	--	16	--	nm
Viewing Angle	2θ _{1/2}	I _F =20mA	--	120	--	deg

* Measurement uncertainty for Luminous Intensity: ±10%



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LUMINOUS INTENSITY BIN TABLE ($I_F=20mA$)

Rank	Min	Max	Unit
M	400	520	mcd
N	520	680	
P	680	880	

Tolerance is $\pm 15\%$

COLOR BIN TABLE ($I_F=20mA$)

Rank	Min	Max	Unit
1	615	620	nm
2	620	625	

Tolerance is $\pm 1nm$

Note

1. One delivery will include several color ranks and I_v ranks of products.
The quantity-ratio of the different ranks is decided by AOP.
2. Bin Name typed on the Label: IV RANK + Color Rank.
For Example, BIN N2 Means IV: 520~680mcd and Color: 620nm~625nm
3. AOP has the right to update the information without notice.
Please double confirm the Spec details before place an order.



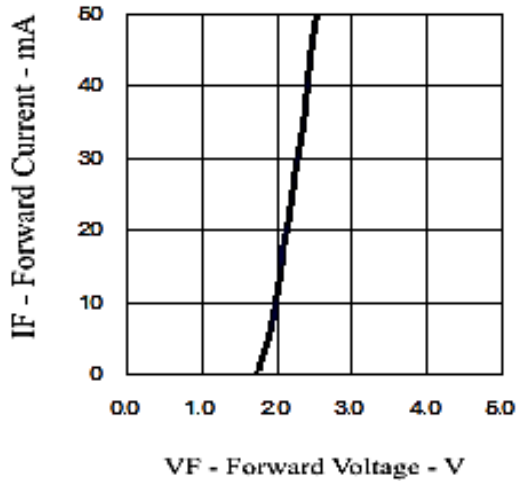
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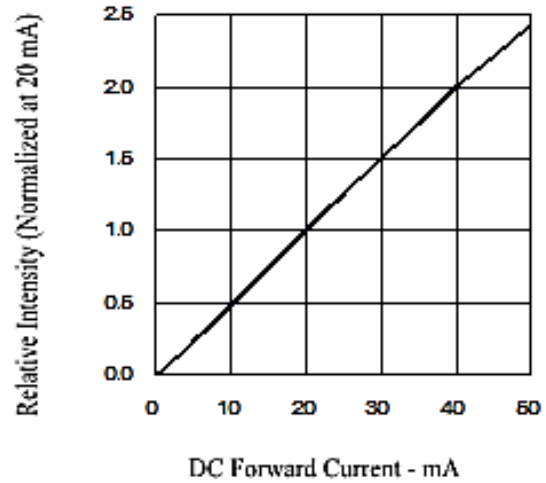
3.5 x 2.8 x 1.9mm Amber SMD LED PLCC-2

OPTICAL-ELECTRICAL CHARACTERISTICS

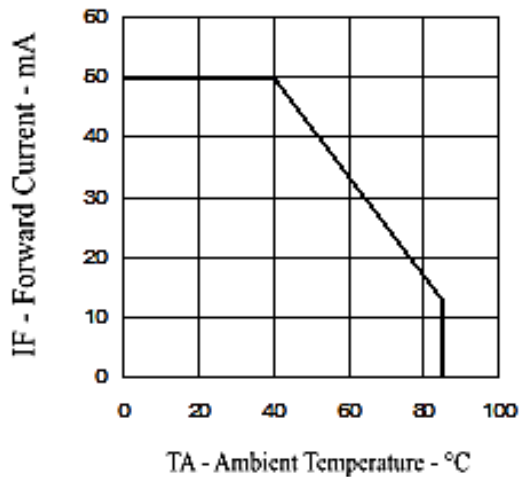
Forward Current vs. Forward Voltage



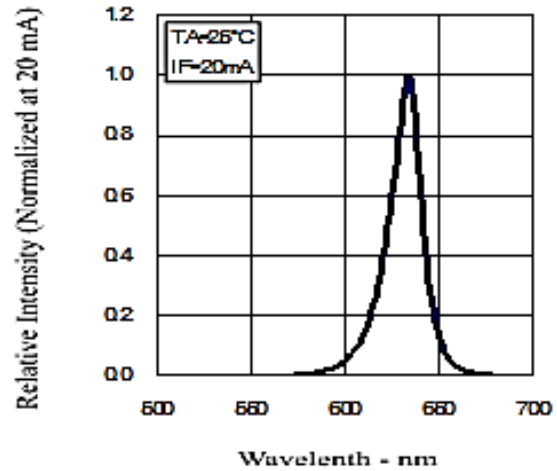
Relative Intensity vs. Forward Current



Forward Current vs. Ambient Temperature



Relative Intensity vs. Wavelength



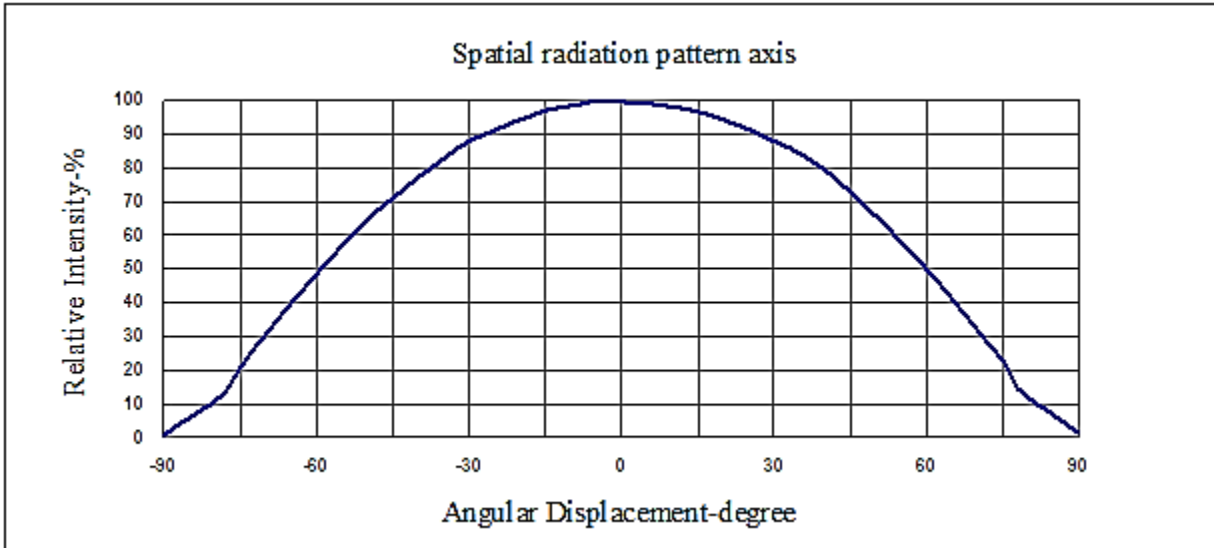


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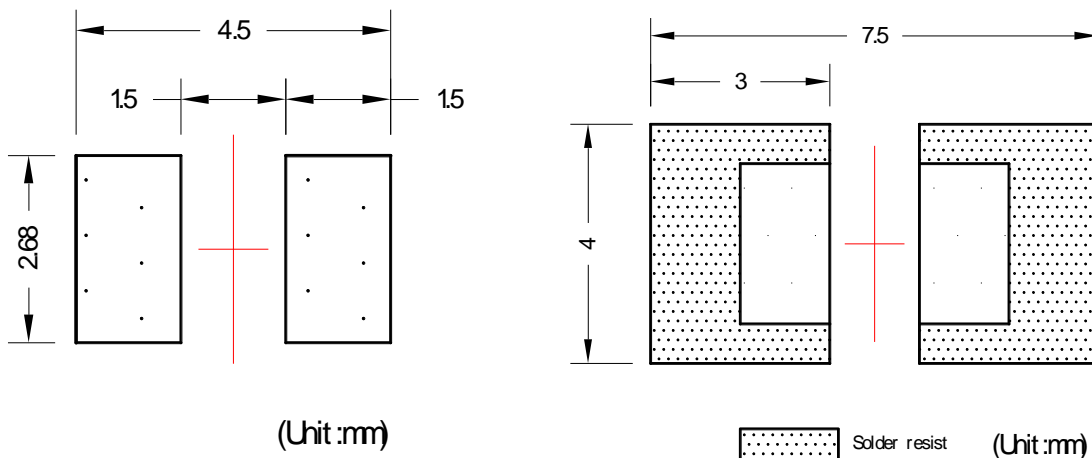
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RADIATION PATTERN



RECOMMENDED PAD LAYOUT





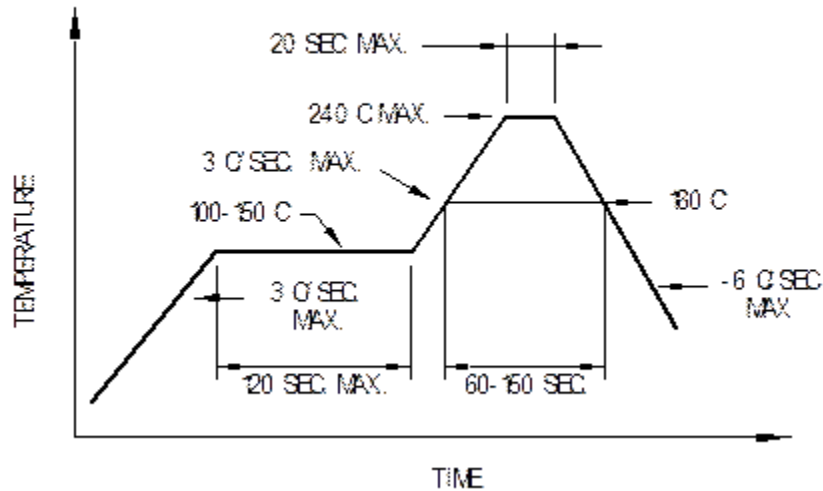
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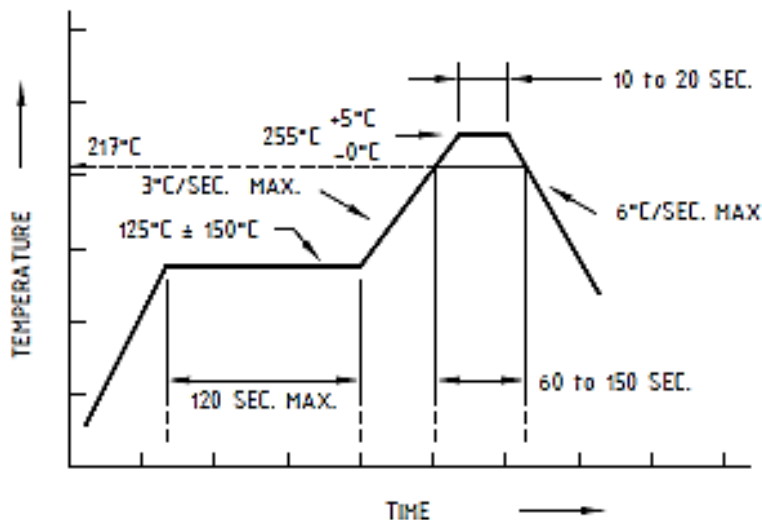
3.5 x 2.8 x 1.9mm Amber SMD LED PLCC-2

SOLDERING CONDITIONS

Recommended reflow soldering profile



Recommended Pb-free reflow soldering profile



- Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.
- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.

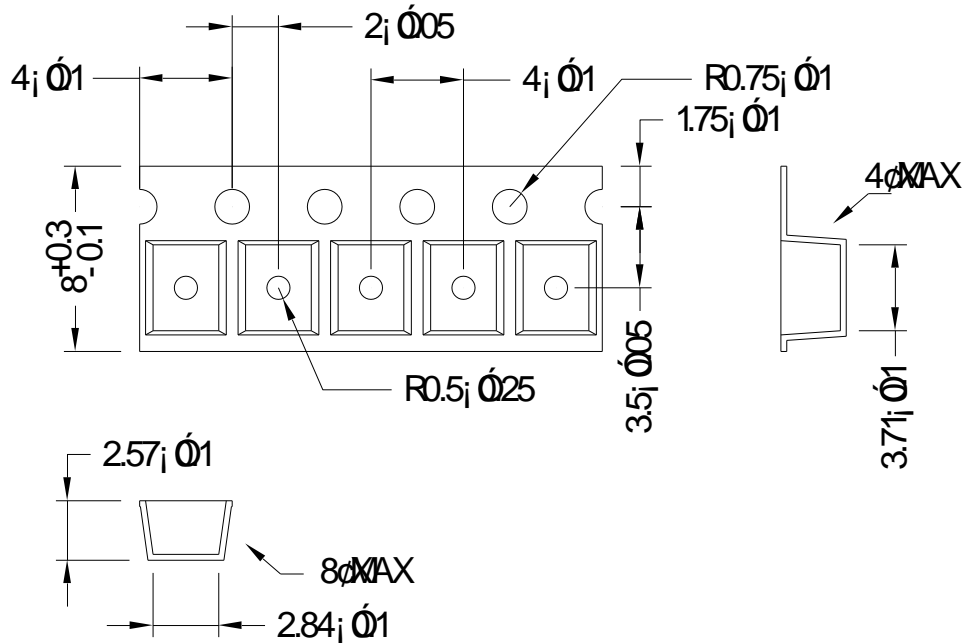


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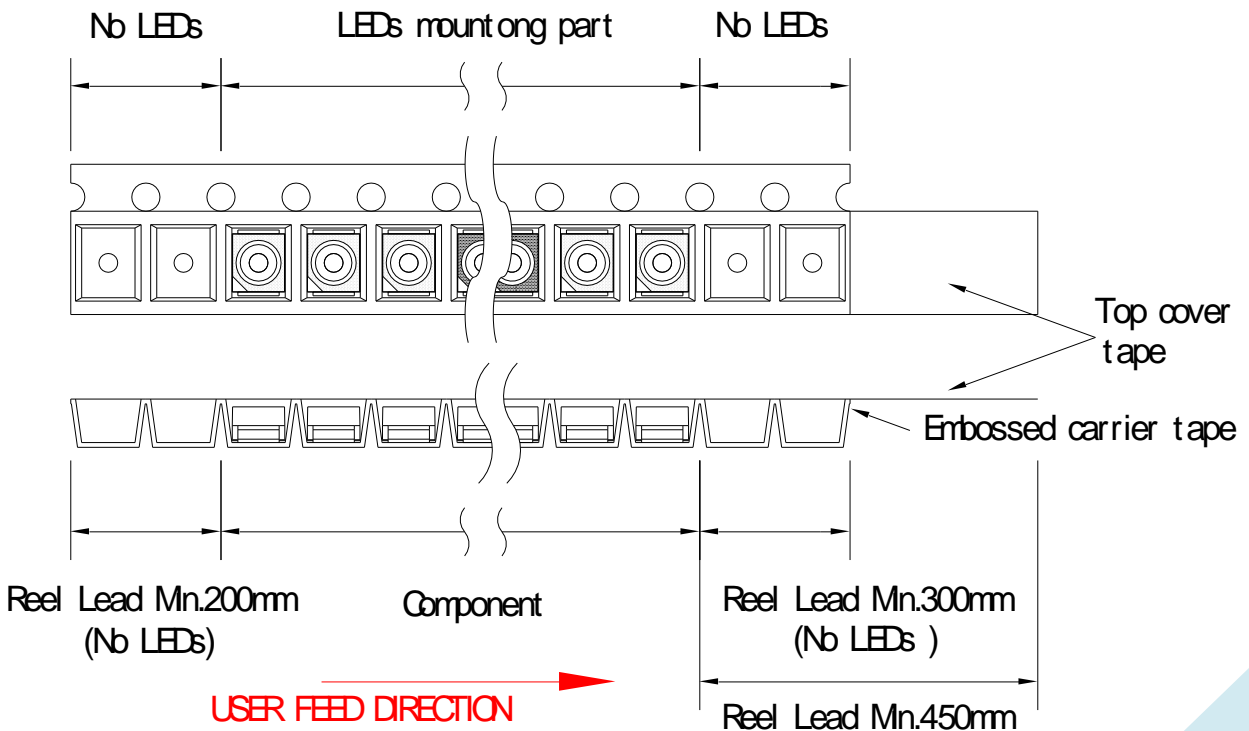
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DIMENSIONS OF TAPE (Unit: mm)



ARRANGEMENT OF TAPE



DIMENSIONS OF REEL (Unit: mm)

Ver 1.0 Date: 09-05-2012

Specifications are subject to change without notice.

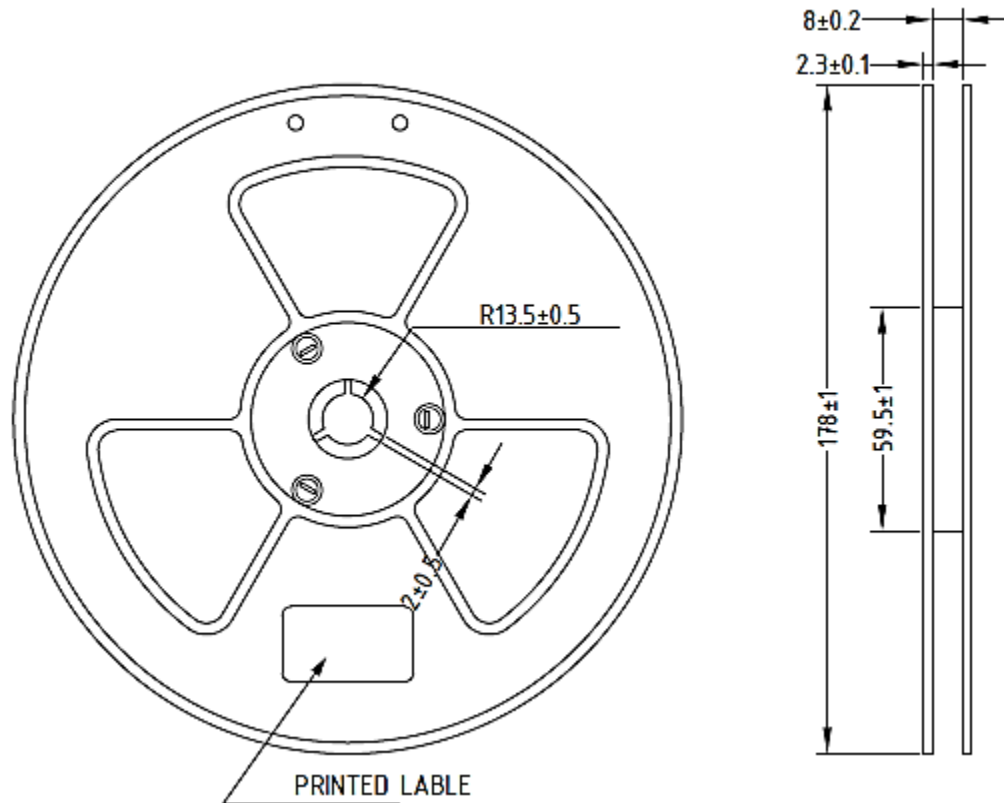
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Note: Baking is required under the following conditions:

- The pack has been opened for more than 48 hours.
- Recommended baking conditions:
60 ± 5°C for 20 hours



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Moisture Sensitivity

AOP's SMD LEDs are shipped in sealed, moisture-barrier bags (MBB) designed for long shelf life. If SMD LEDs have been exposed with moist environments before soldering, this may cause damage to SMD LEDs during soldering (reflow) operation.

Storage / Floor Time

Condition	Temperature (°C)	Humidity (RH)	Period of Time
Before Open	30	60	6 month from shipping date
After Open	30	60	Within 48 hours

- MSL of this product are MSL4, please see IPC/JEDEC STD020D for more detail.
- LEDs that have reached floor time may be damaged while soldering/reflow processing, please discard the LED.
- If RH indicator card shows 60% RH when unsealed in the package, please bake/discard the LED.

Reseal

- AOP's aluminum MBB may be reused to reseal the unused LED if MBB has not been damaged or had any holes on it.
- Moisture absorbent material (Silica gel) may be reused if it does not become pink.
- Proper resealed LED's Floor time will NOT RESET, only stop counting until open.
- If RH indicator card shows 60% RH when opening the package, please bake/discard the LED.