



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



PRELIMINARY SPEC

Part Number: AAD1-9090SY9ZC/2

Super Bright Yellow



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

### Features

- Super high flux output and high luminance.
- Designed for high current operation.
- Low thermal resistance.
- Low voltage DC operated.
- Superior ESD protection.
- Package: 500pcs/reel.
- Not reflow compatible.
- The component is internally protected with silicone gel.
- RoHS compliant.

### Application Note

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

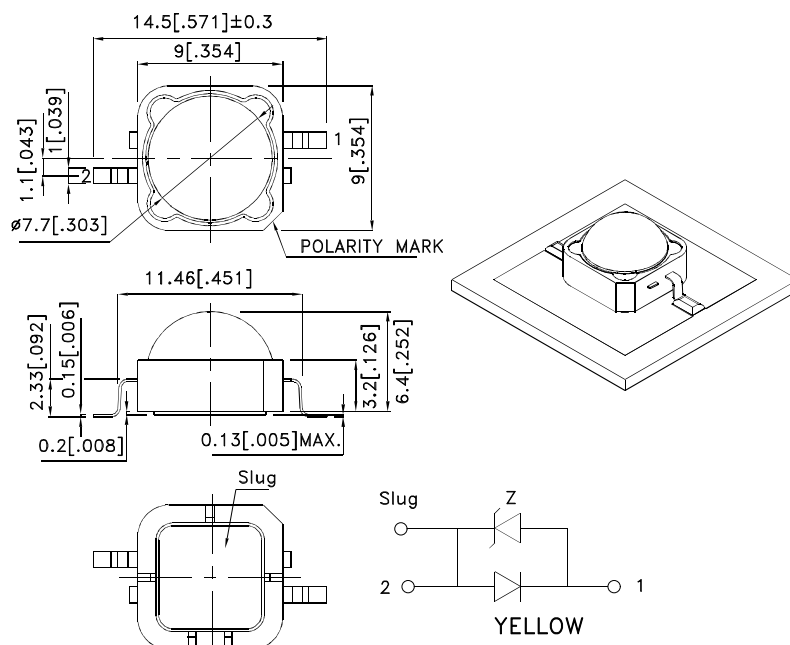
All devices, equipment and machinery must be electrically grounded.



### Applications

- traffic signaling.
- backlighting (illuminated advertising , general lighting).
- interior and exterior automotive lighting.
- substitution of micro incandescent lamps.
- portable light source (e.g. bicycle flashlight).
- signal and symbol luminaire for orientation.
- marker lights (e.g. steps, exit ways, etc).
- decorative and entertainment lighting.
- indoor and outdoor commercial and residential architectural lighting.

### Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

Part No.	Dice	Lens Type	luminous Intensity Iv (cd)@ 500 mA [2]		Φv (lm) @ 500 mA [2]		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2θ1/2
AAD1-9090SY9ZC/2	Super Bright Yellow (AlGaInP)	WATER CLEAR	16	20	46	58	100°

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity / luminous flux: +/-15%.

## Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power dissipation	P <sub>t</sub>	1.28	W
Junction temperature	T <sub>J</sub>	110	°C
Operating Temperature	T <sub>op</sub>	-40 To +100	°C
Storage Temperature	T <sub>stg</sub>	-40 To +100	°C
DC Forward Current [1]	I <sub>F</sub>	500	mA
Peak Forward Current [2]	I <sub>FM</sub>	700	mA
Thermal resistance [1]	R <sub>th j-slug</sub>	12	°C/W
Electrostatic Discharge Threshold (HBM)		8000	V
Iron Soldering [3]		350°C For 3 Seconds	

Notes:

1. Results from mounting on MCPCB.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.
3. 1.29mm distance from solder joint to package.

## Electrical / Optical Characteristics at TA=25°C

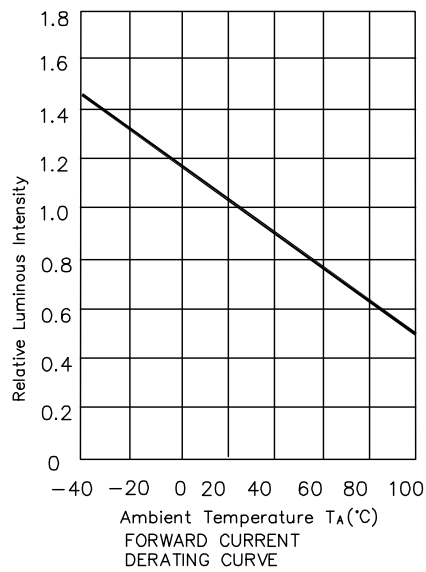
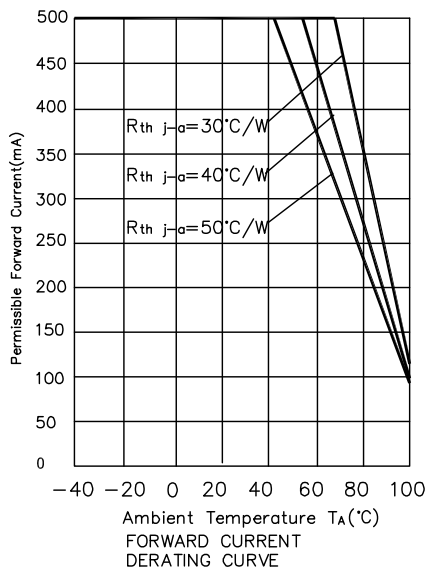
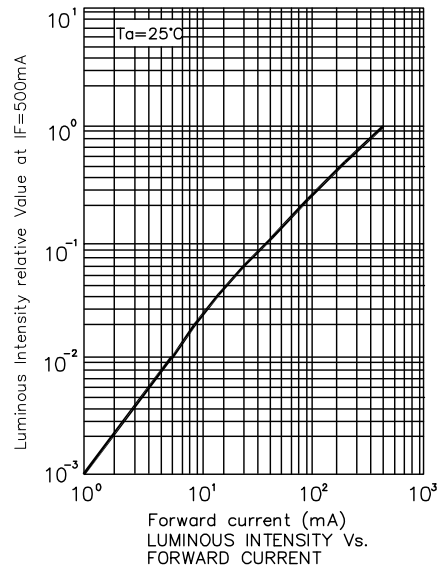
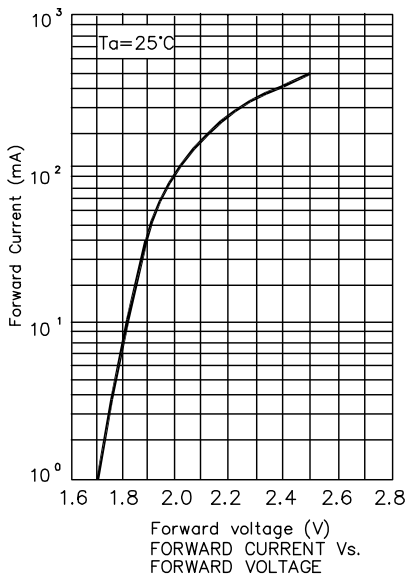
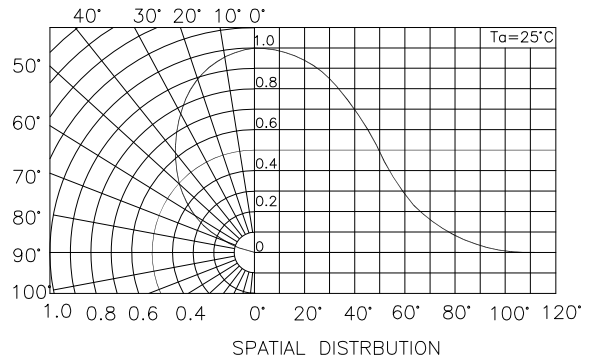
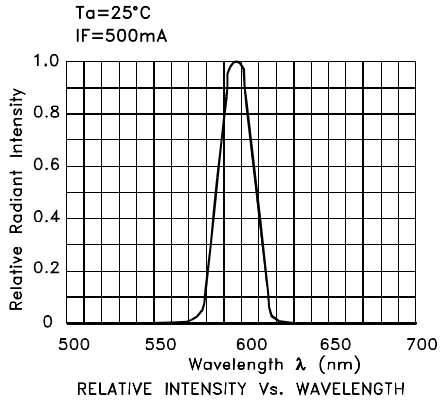
Parameter	Symbol	Value	Unit
Wavelength at peak emission I <sub>F</sub> =500mA [Typ.]	λ <sub>peak</sub>	598	nm
Dominant Wavelength I <sub>F</sub> =500mA [Typ.]	λ <sub>dom</sub> [1]	591	nm
Spectral bandwidth at 50%Φ <sub>REL MAX</sub> I <sub>F</sub> =500mA [Typ.]	Δλ	23	nm
Forward Voltage I <sub>F</sub> =500mA [Min.]	V <sub>F</sub> [2]	2.0	V
Forward Voltage I <sub>F</sub> =500mA [Typ.]		2.5	
Forward Voltage I <sub>F</sub> =500mA [Max.]		3.1	
Temperature coefficient of λ <sub>peak</sub> I <sub>F</sub> =500mA, -10°C ≤ T ≤ 100°C [Typ.]	TC <sub>λ<sub>peak</sub></sub>	0.12	nm/°C
Temperature coefficient of λ <sub>dom</sub> I <sub>F</sub> =500mA, -10°C ≤ T ≤ 100°C [Typ.]	TC <sub>λ<sub>dom</sub></sub>	0.07	nm/°C
I <sub>F</sub> =500mA, -10°C ≤ T ≤ 100°C [Typ.]	TC <sub>v</sub>	-2.6	mV/°C

Notes:

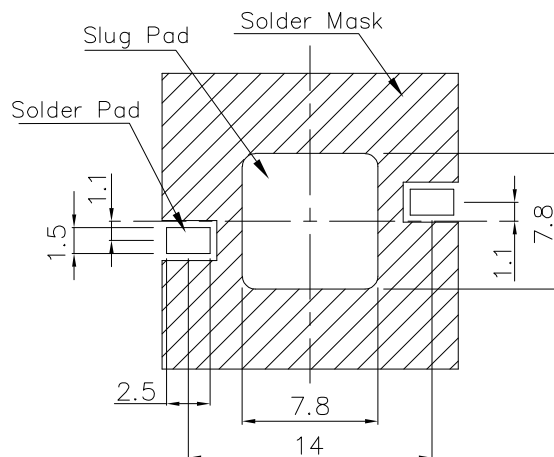
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.



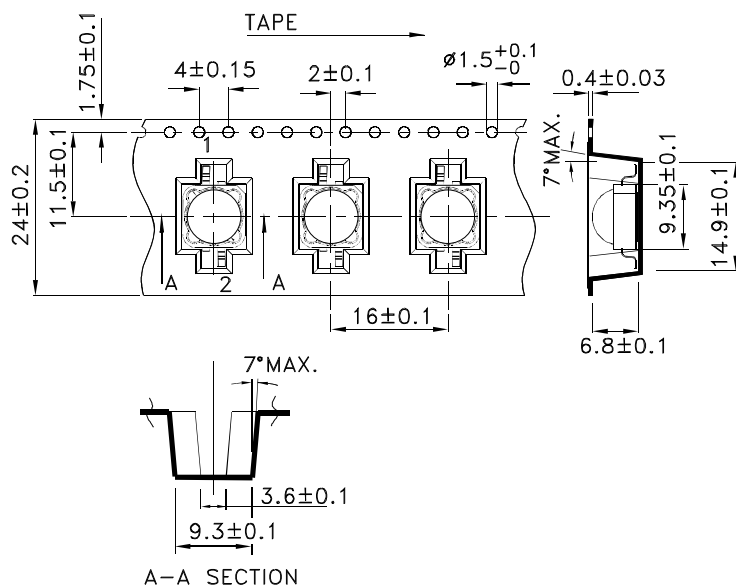
## AAD1-9090SY9ZC/2



**AAD1-9090SY9ZC/2**  
**Recommended Soldering Pattern**  
 (Units : mm; Tolerance:  $\pm 0.1$ )

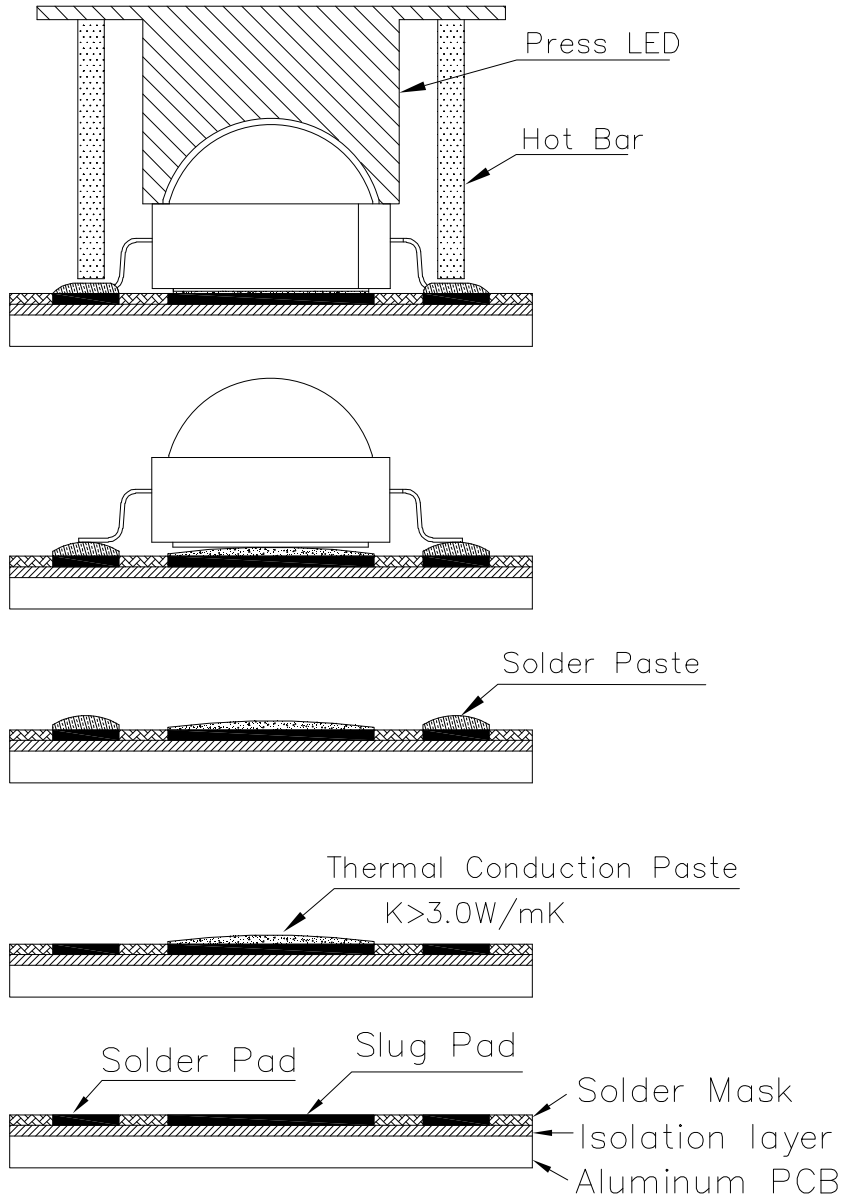


**Tape Specifications**  
 (Units : mm)



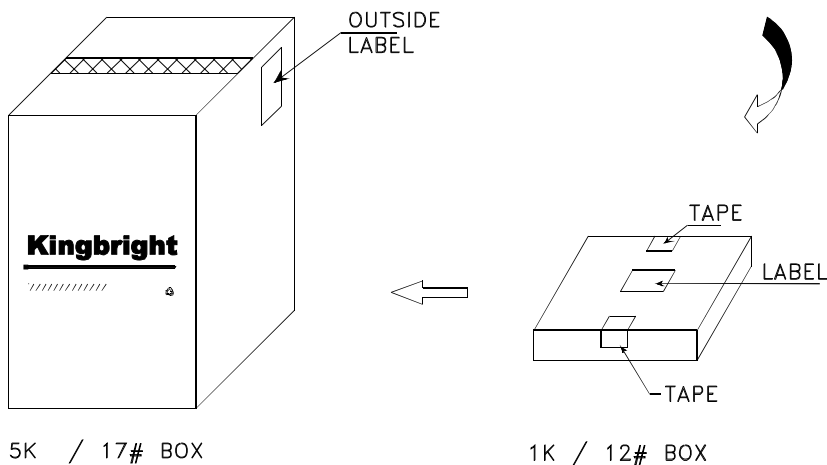
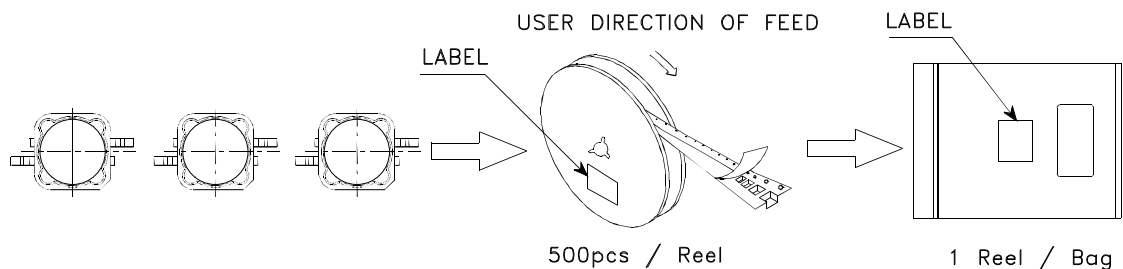
AAD1-9090SY9ZC/2


## Recommended Solder Steps



## PACKING & LABEL SPECIFICATIONS

AAD1-9090SY9ZC/2



<h1>Kingbright</h1>	
P/NO: AAD1-9090xxx	
QTY: 500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C</span>
S/N: XXXX	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">XX XX XXXX</span>
CODE: XXX	PASSED
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	