### PRELIMINARY SPEC



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.

### XPower

### Part Number: AAD1-9090SY9ZC/2

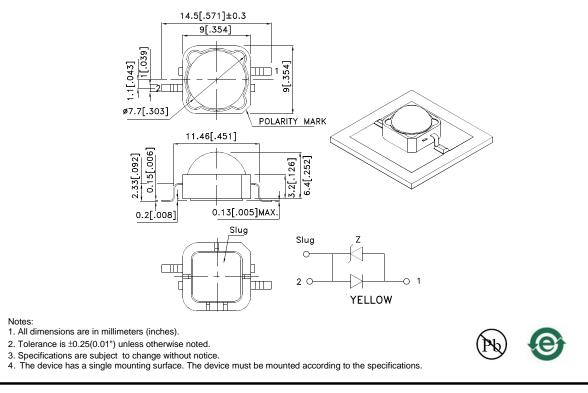
Super Bright Yellow



#### 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



SPEC NO: DSAH7161 APPROVED: WYNEC REV NO: V.2 CHECKED: Allen Liu DATE: MAR/18/2009 DRAWN: Ting.Li PAGE: 1 OF 6 ERP:1201200076

Selection Guide									
Part No.	Dice	Lens Type	luminous Intensity Iv (cd)@ 500 mA [2]		Φν (lm) @ 500 mA [2]		Viewing Angle [1]		
			Min.	Тур.	Min.	Тур.	201/2		
AAD1-9090SY9ZC/2	Super Bright Yellow (AlGaInP)	WATER CLEAR	16	20	46	58	100°		

Notes:

1.  $\theta$ 1/2 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	Pt	1.28	W		
Junction temperature	ΤJ	110	°C		
Operating Temperature	Тор	-40 To +100	°C		
Storage Temperature	Tstg	-40 To +100	°C		
DC Forward Current [1]	lF	500	mA		
Peak Forward Current [2]	lfм	700	mA		
Thermal resistance [1]	Rth j-slug	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

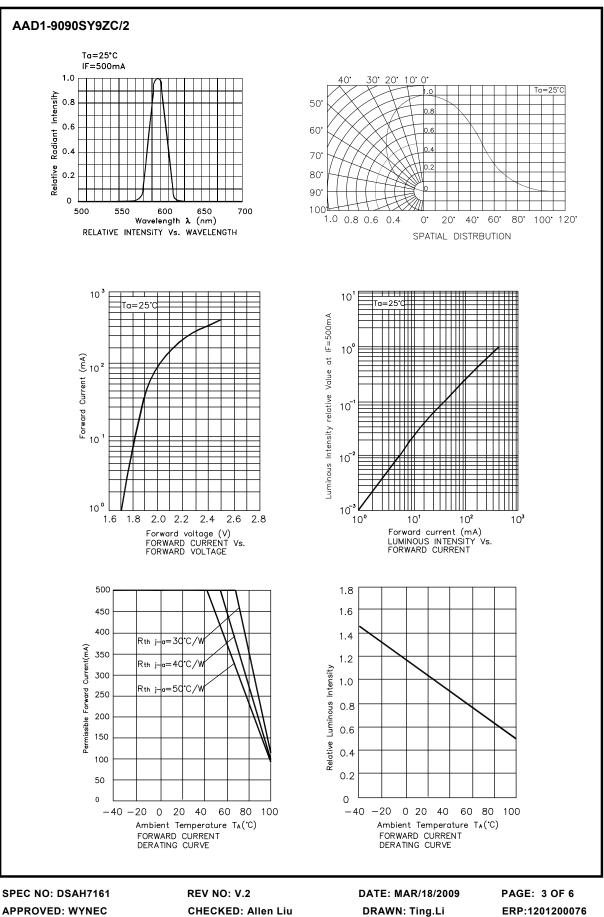
Parameter	Symbol	Value	Unit
Wavelength at peak emission IF=500mA [Typ.]	λpeak	598	nm
Dominant Wavelength IF=500mA [Typ.]	λ dom [1]	591	nm
Spectral bandwidth at 50% $\Phi_{\text{REL MAX}}$ IF=500mA [Typ.]	Δλ	23	nm
Forward Voltage IF=500mA [Min.]		2.0	V
Forward Voltage IF=500mA [Typ.]	VF [2]	2.5	
Forward Voltage IF=500mA [Max.]		3.1	
Temperature coefficient of λpeak I⊧=500mA, -10°C≤ T≤100°C [Typ.]	TCλpeak	0.12	nm/°C
Temperature coefficient of λdom I斥=500mA, -10°C≤T≤100°C [Typ.]	TCλdom	0.07	nm/°C
IF=500mA, -10°C≤ T≤100°C [Typ.]	TC∨	-2.6	mV/°C

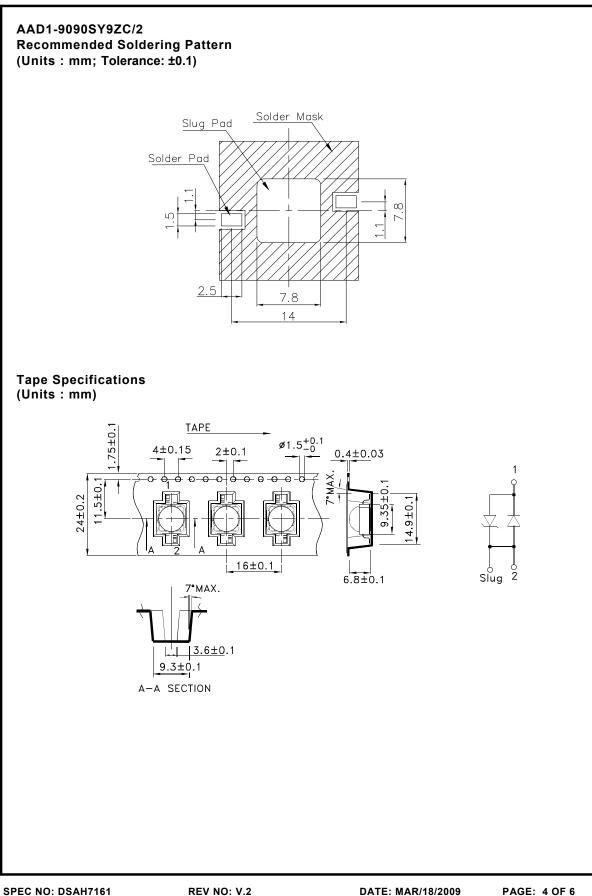
Notes:

1.Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

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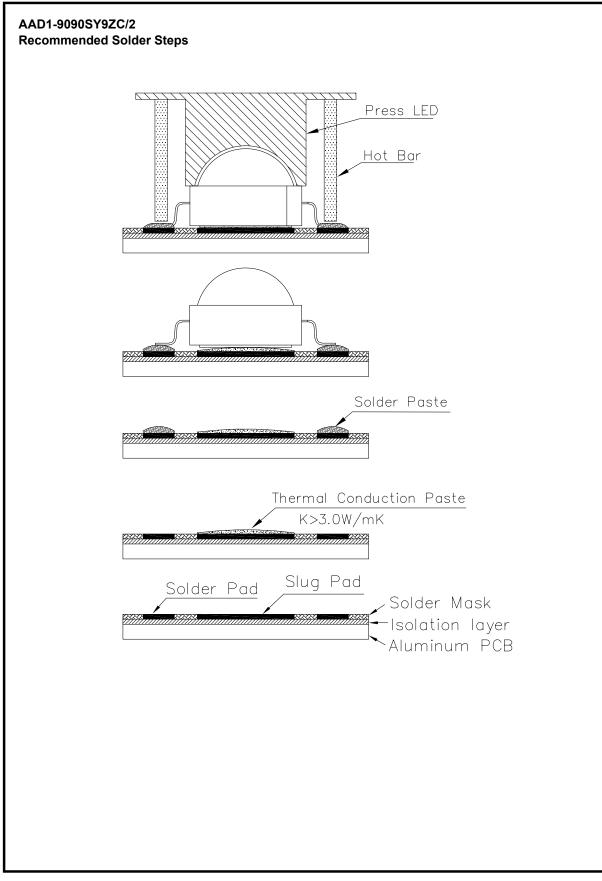




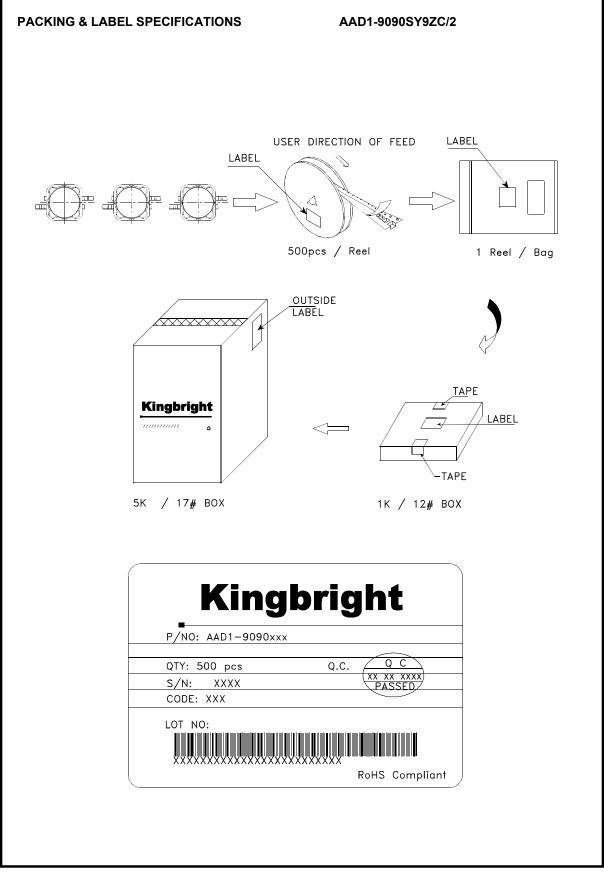
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