### **XPower**

PRELIMINARY SPEC

Part Number: AA1010SY28ZC

SUPER BRIGHT YELLOW



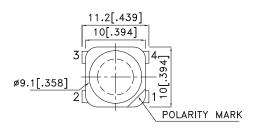
- PLCC-4 PACKAGE.
- SINGLE COLOR.
- HIGH LUMINANCE.
- HIGH POWER, OPERATING CURRENT @350mA.
- SUITABLE FOR ALL SMT ASSEMBLY METHODS.
- PACKAGE: 500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL: LEVEL 4.
- ●PATENT PENDING.
- RoHS COMPLIANT.

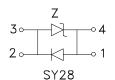


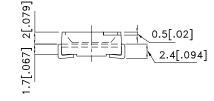
#### **Applications**

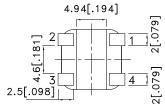
- •traffic signaling
- •backlighting (illuminated advertising, general lighting)
- •interior and exterior automotive lighting
- •substitution of micro incandescent lamps
- •portable light source (e.g. bicycle flashlight)
- •signal and symbol luminaire for orientation
- •marker lights (e.g. steps, exit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

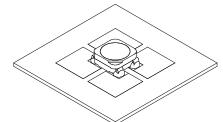












#### Notes

- 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.





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 APPROVED: WYNEC
 CHECKED: Allen Liu
 DRAWN: W.J.HUA
 ERP:1201003301

#### **Selection Guide**

Part No.	Dice	Lens Type	luminous Intensity [2] lv(cd)@ 350mA		Фv (lm) [2] @ 350mA		Viewing Angle [1]
			Min.	Тур.	Min.	Тур.	201/2
AA1010SY28ZC	SUPER BRIGHT YELLOW (InGaAIP)	WATER CLEAR	5.7	9	12.5	23	120°

#### Notes

### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Value	Unit	
Power dissipation	Pt	1.2	W	
Junction temperature	TJ	110	°C	
Operating Temperature	Тор	-40 To +85	°C	
Storage Temperature	Tstg	-40 To +85	°C	
DC Forward Current [1]	lF	350	mA	
Peak Forward Current [2]	lғм	500	mA	
Thermal resistance [1]	Rth	80	°C/W	

#### Notes

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

Parameter	Symbol	Value	Unit	
Wavelength at peak emission IF=350mA [Typ.]	λpeak	590	nm	
Dominant Wavelength IF=350mA [Typ.]	λdom [1]	588	nm	
Spectral bandwidth at 50%ΦREL MAX IF=350mA [Typ.]	Δλ	20	nm	
Forward Voltage IF=350mA [Min.]	Forward Voltage Ir=350mA [Min.]			
Forward Voltage Ir=350mA [Typ.]	VF [2]	2.5	V	
Forward Voltage IF=350mA [Max.]		3.0		
Temperature coefficient of λpeak I <sub>F</sub> =350mA, -10°C≤ T≤100°C [Typ.]	TCλpeak	0.15	nm/°C	
Temperature coefficient of λdom I <sub>F</sub> =350mA, -10°C≤ T≤100°C [Typ.]	TCλdom	0.13	nm/°C	
Temperature coefficient of VF IF=350mA, -10°C≤ T≤100°C [Typ.]	TCv	-2.0	mV/°C	

#### Notes

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<sup>1.</sup>  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

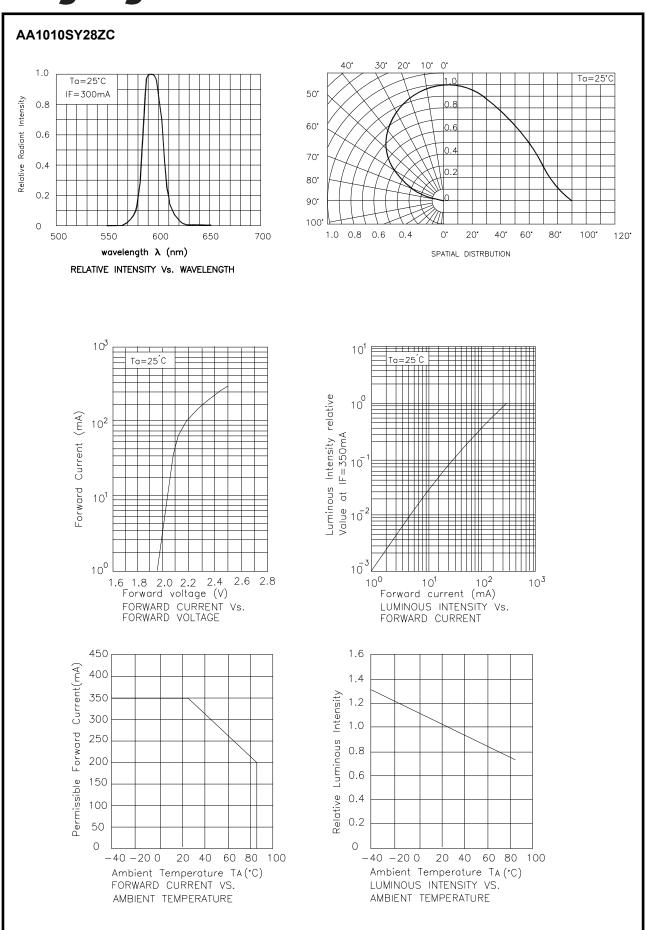
<sup>2.</sup> Luminous intensity / luminous flux: +/-15%.

<sup>1.</sup>Results from mounting on PC board FR4(pad size≥100mm² per pad), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.

<sup>2.1/10</sup> Duty Cycle, 0.1ms Pulse Width.

<sup>1.</sup>Wavelength: +/-1nm.

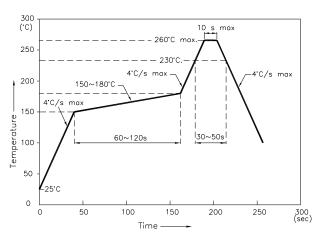
<sup>2.</sup> Forward Voltage: +/-0.1V.



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#### **AA1010SY28ZC**

Reflow Soldering Profile For Lead-free SMT Process.

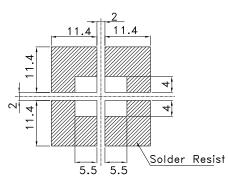


NOTES

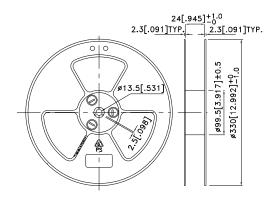
- 1.We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
- 2.Don't cause stress to the epoxy resin while it  $\,$  is exposed to high temperature.
- 3. Number of reflow process shall be 2 times or less.

## Recommended Soldering Pattern

### (Units : mm; Tolerance: ±0.1)

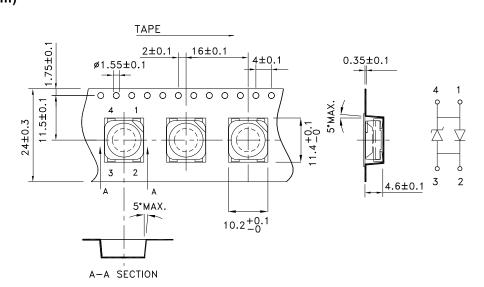


#### **Reel Dimension**

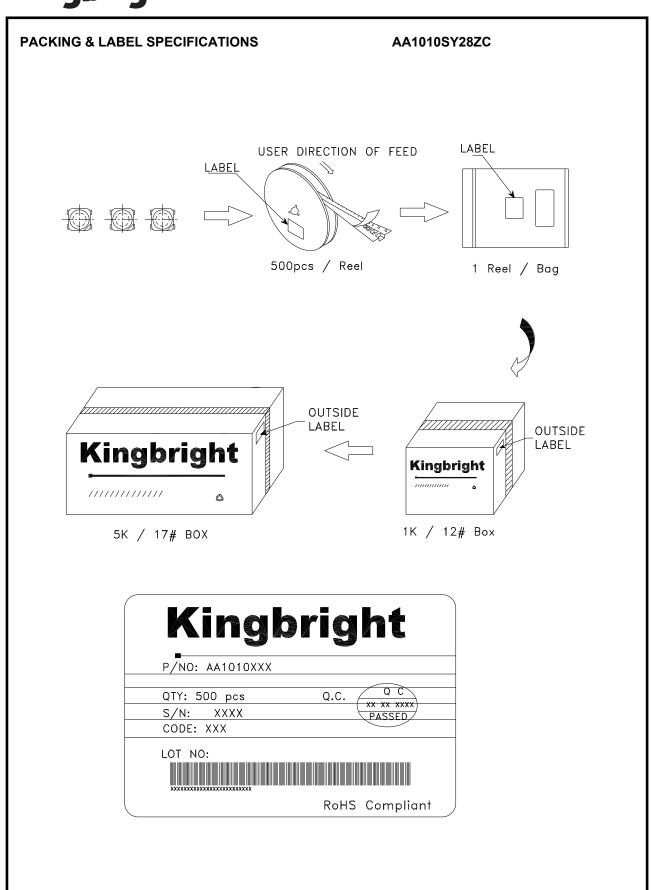


## Tape Specifications

(Units: mm)



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