

PRELIMINARY SPEC

Part Number: AA3528PR4S/Z

WARM WHITE



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

### Features

- SINGLE COLOR.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- IDEAL FOR BACKLIGHTING.
- PACKAGE : 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 5.
- RoHS COMPLIANT.

### Description

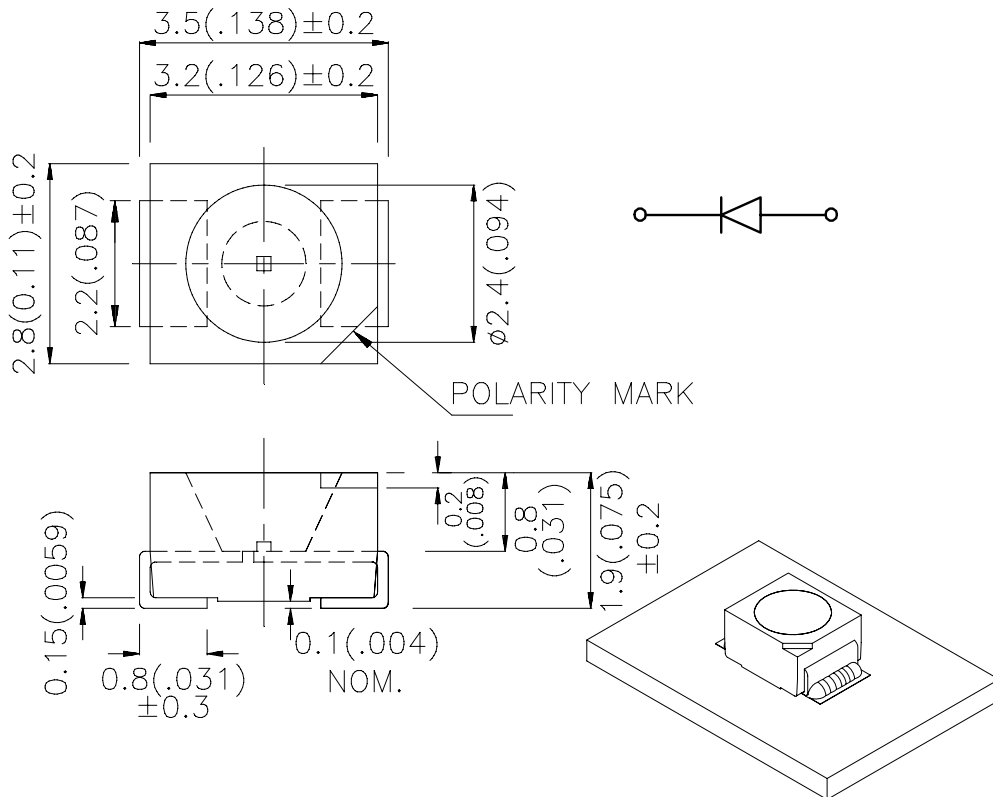
The source color devices are made with InGaN Light Emitting Diode.

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.

### 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.

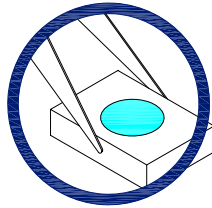


## Handling Precautions

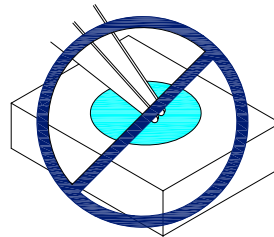
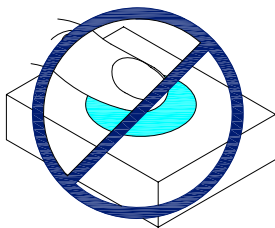
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might leads to damage and premature failure of the LED.

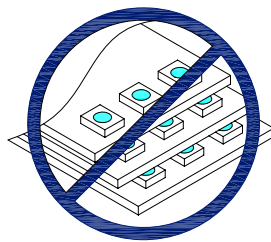
1. Handle the component along the side surfaces by using forceps or appropriate tools.



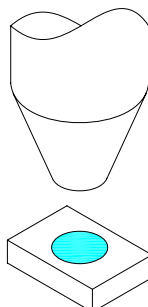
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. Outside impact may scratch the silicone lens or damage the internal circuitry.



4. During surface-mounting, the pickup capillary diameter should be larger than the silicone lens to insure the capillary does not scratch or damage the lens.



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
AA3528PR4S/Z	WARM WHITE (InGaN)	WATER CLEAR	380	620	110°

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%.

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
V <sub>F</sub> [1]	Forward Voltage	Warm White	3.2	3.7	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Warm White		10	uA	V <sub>R</sub> = 5V
X	Chromaticity Coordinates	Warm White	0.41			
Y			0.39			
C	Capacitance	Warm White	110		pF	V <sub>F</sub> =0V;f=1MHz

Note:

1. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

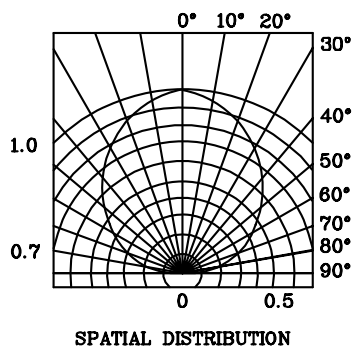
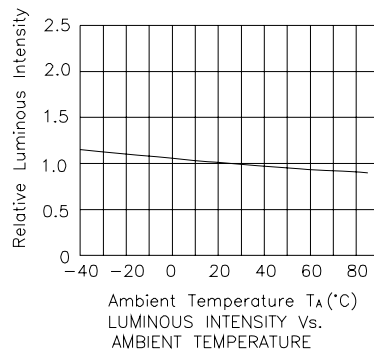
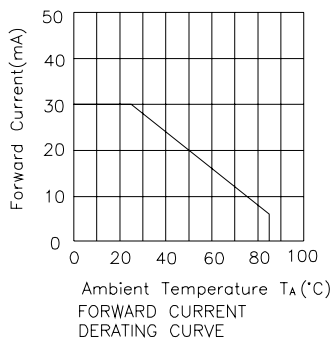
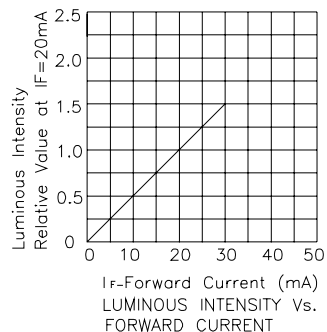
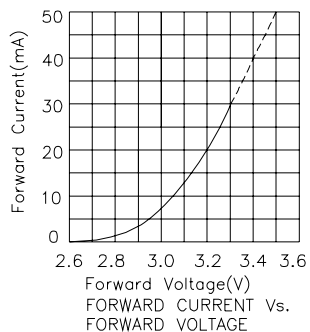
Parameter	Warm White	Units
Power dissipation	111	mW
DC Forward Current	30	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.

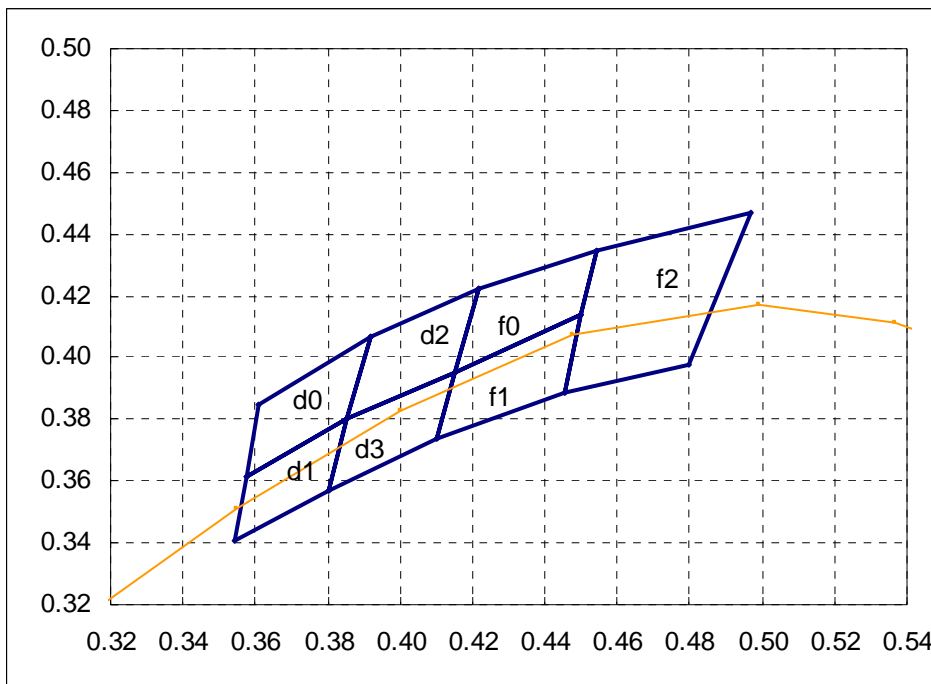
Warm White

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## Warm White CIE

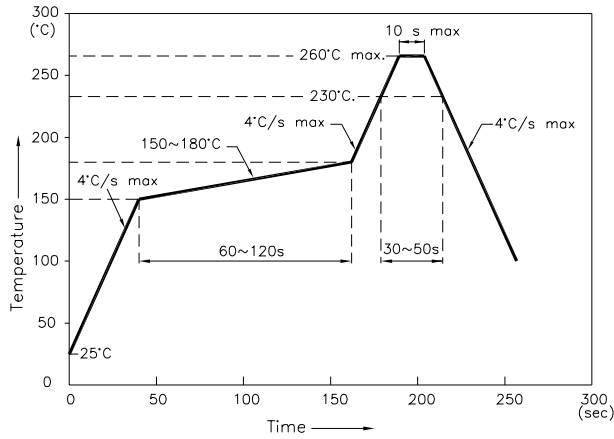


d0					
x	0.361	0.3575	0.3870	0.3942	
y	0.385	0.3612	0.382	0.4068	
Reference CCT : 4700~3900K					
d2					
x	0.3870	0.4254	0.4350	0.3942	
y	0.3820	0.4044	0.4260	0.4068	
Reference CCT : 3900~3200K					
f0					
x	0.435	0.4732	0.4600	0.4254	
y	0.426	0.4398	0.4152	0.4044	
Reference CCT : 3200~2700K					
f2					
x	0.4732	0.46	0.4440	0.4800	0.5165
y	0.4398	0.4152	0.3847	0.3960	0.451
Reference CCT : 2700~2300K					

d1				
x	0.3575	0.3545	0.3800	0.3870
y	0.3612	0.3408	0.358	0.3820
Reference CCT : 4700~3900K				
d3				
x	0.4254	0.387	0.3800	0.4119
y	0.4044	0.382	0.358	0.3730
Reference CCT : 3900~3200K				
f1				
x	0.46	0.4254	0.4119	0.4440
y	0.4152	0.4044	0.373	0.3847
Reference CCT : 3200~2700K				

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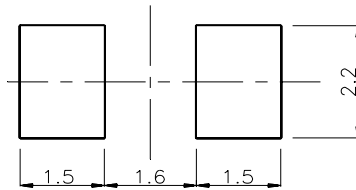
Reflow Soldering Profile For Lead-free SMT Process.



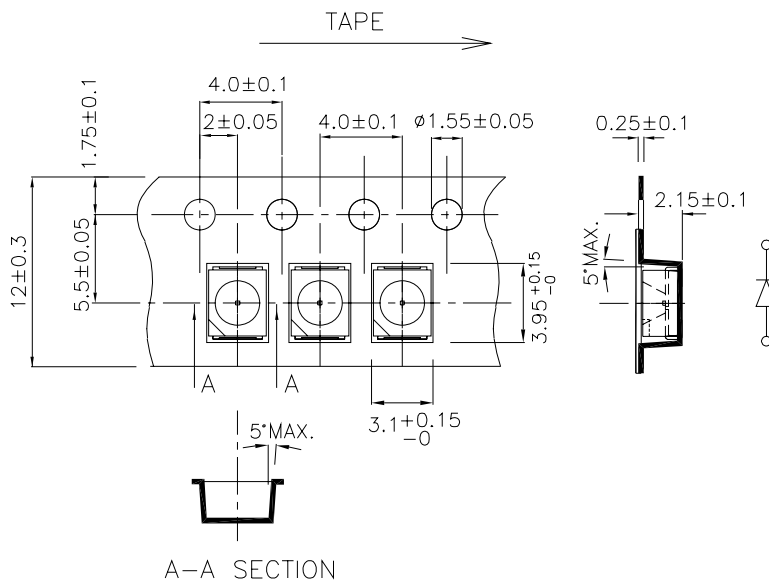
NOTES:

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)



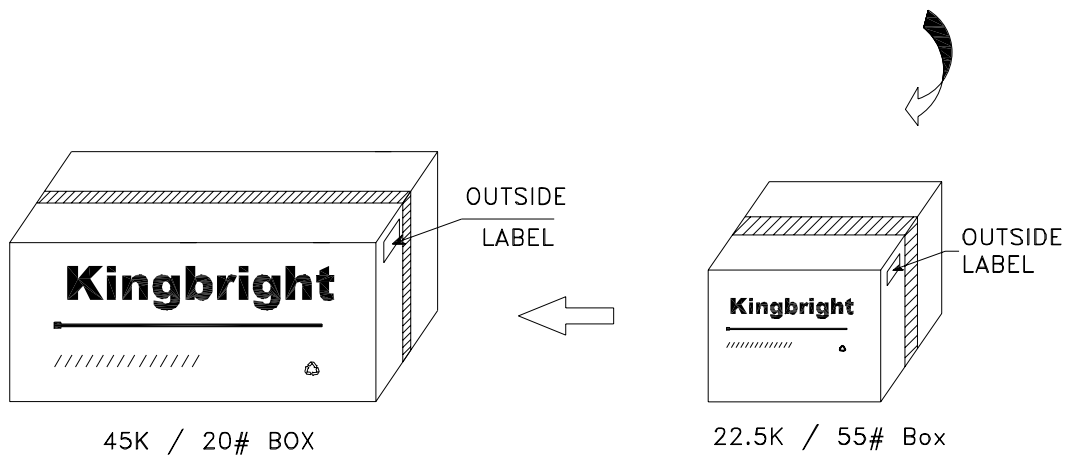
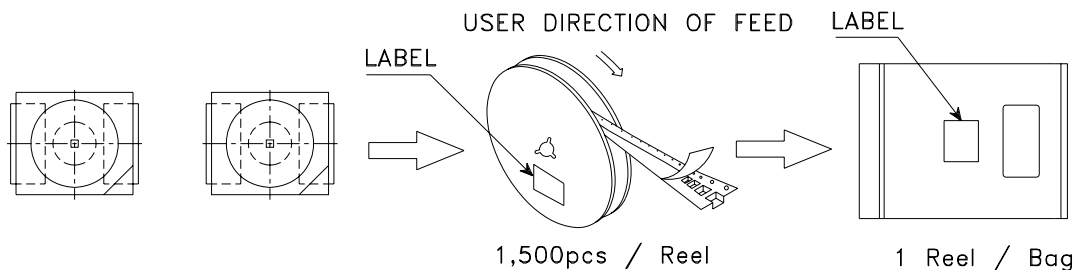
### Tape Specifications (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

AA3528PR4S/Z



<h1>Kingbright</h1>	
P/NO: AA3528XXX	
QTY: 1,500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C xx xx xxxx PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	