

Kingbright

3.8x2.0mm DOME LENS SMD CHIP LED LAMP

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APED3820ZGC-F01

Green

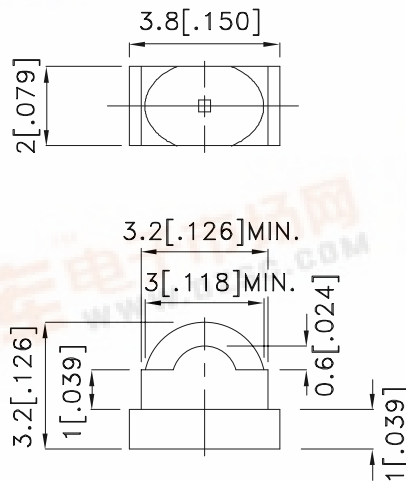
Features

- 3.8mmx2.0mm SMT LED, 3.2mm THICKNESS.
- LOW POWER CONSUMPTION.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

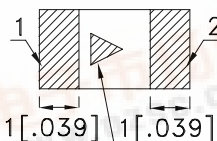
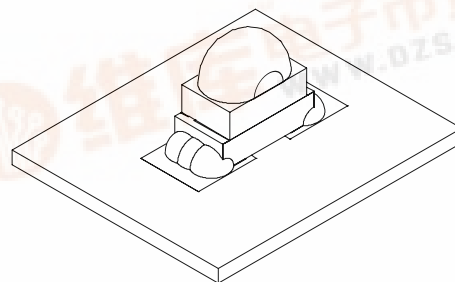
Description

The Green source color devices are made with AlInGaN on Sapphire 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



1 → → 2



POLARITY MARK

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ 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	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APED3820ZGC-F01	Green (AlInGaN)	WATER CLEAR	480	1200	60°(H) 35°(V)

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
λpeak	Peak Wavelength	Green	515		nm	IF=20mA
λD [1]	Dominant Wavelength	Green	525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Green	30		nm	IF=20mA
C	Capacitance	Green	45		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Green	3.3	4.1	V	IF=20mA
IR	Reverse Current	Green		10	uA	VR=5V

Notes:

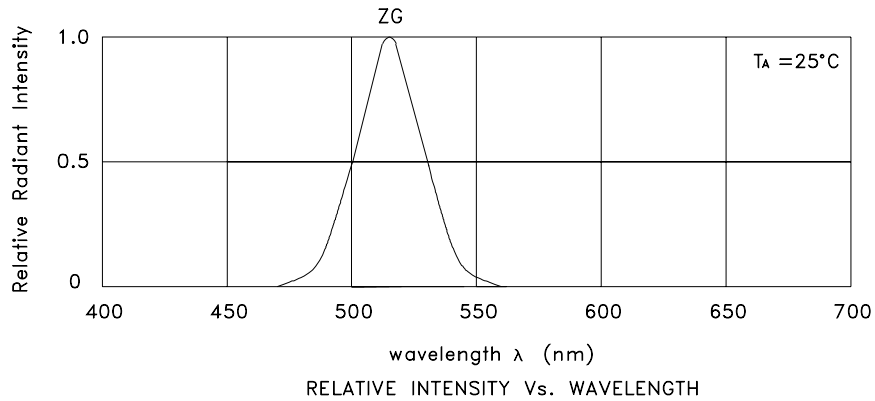
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

Parameter	Green	Units
Power dissipation	102.5	mW
DC Forward Current	25	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

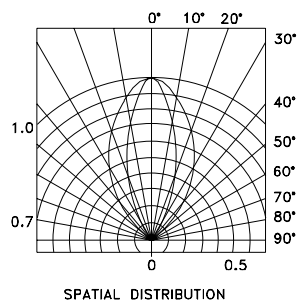
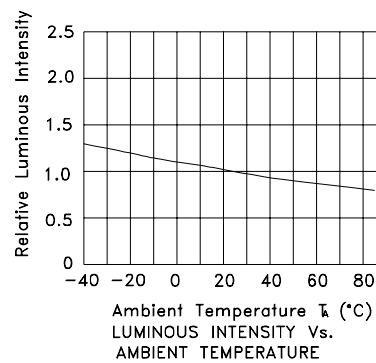
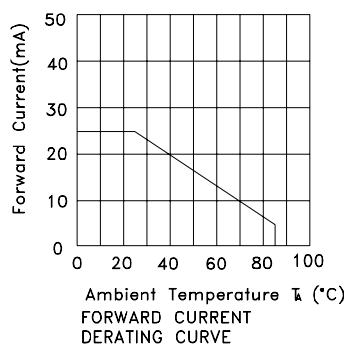
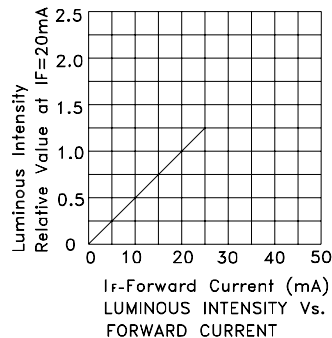
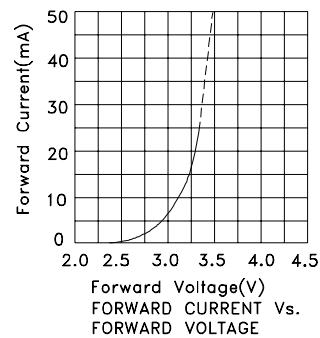
Note:

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



Green

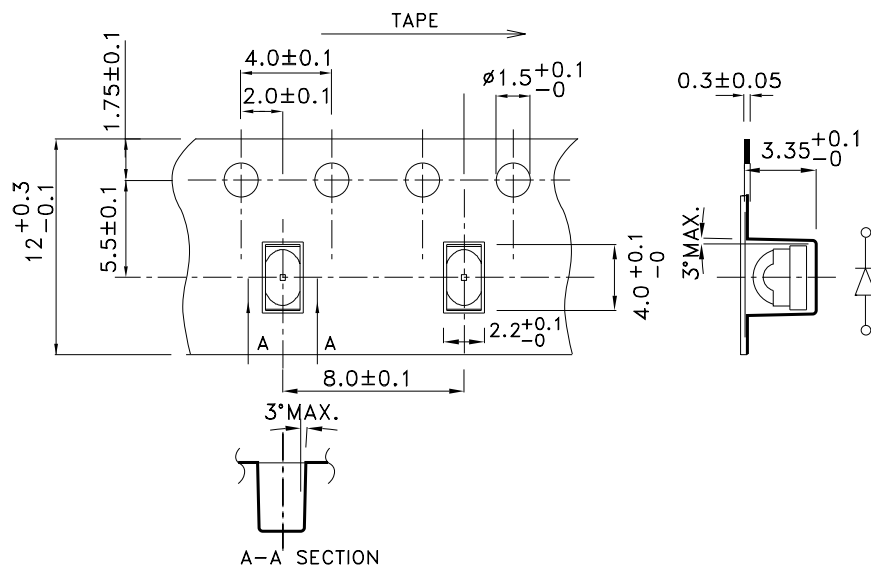
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The graph illustrates the temperature profile of the furnace over time. The temperature starts at 25°C and increases in several stages, each with a maximum heating rate of 4°C/s. The stages are: 1) Heating from 25°C to 150°C (approx. 40s). 2) Heating from 150°C to 180°C (60~120s). 3) Heating from 180°C to 230°C (30~50s). 4) Heating from 230°C to 260°C (10 s max). 5) A dwell at 260°C (10 s max). 6) Cooling from 260°C at 4°C/s.

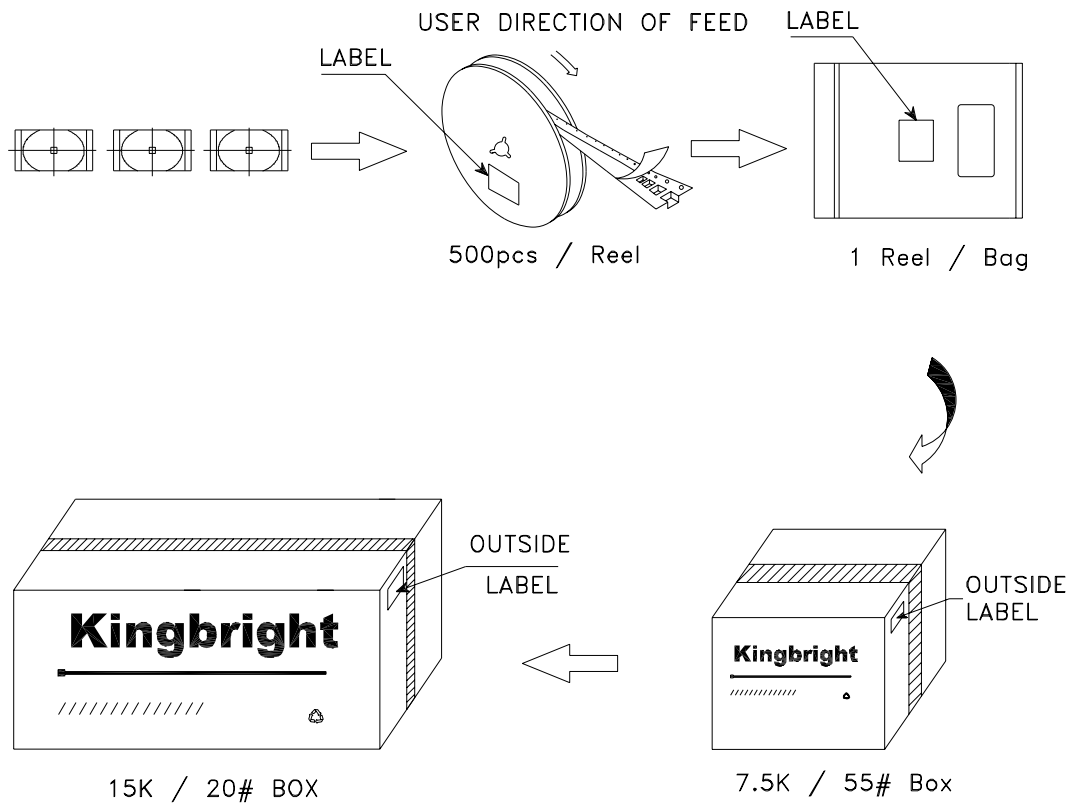
NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C} (+/-5^{\circ}\text{C})$. 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.



PACKING & LABEL SPECIFICATIONS

APED3820ZGC-F01



Kingbright	
P/NO: APED3820xxx	
QTY: 500 pcs	Q.C.
S/N: XXXX	Q C XX XX XXXX PASSED
CODE: XXX	
LOT NO:	
	
XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
MADE IN CHINA	RoHS Compliant