



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

Part Number: APED3820QWF/G

White

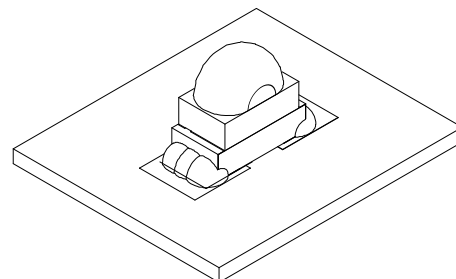
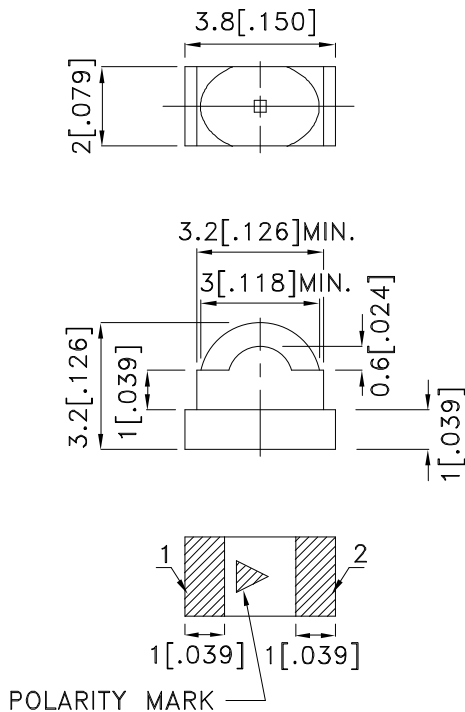
### Features

- 3.8mmx2.0mm SMT LED, 3.2mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Package : 500pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Descriptions

- The source color devices are made with InGaN Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2(0.008)$  unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior 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
APED3820QWF/G	White (InGaN)	Yellow Fluorescent	200	350	175°

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.
3. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
V <sub>F</sub> [1]	Forward Voltage	White	3.3	4.0	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	White		50	uA	V <sub>R</sub> = 5V
X [2]	Chromaticity Coordinates	White	0.31			
Y [2]			0.31			
C	Capacitance	White	100		pF	V <sub>F</sub> =0V;f=1MHz

Notes:

- 1.Forward Voltage: +/-0.1V.
- 2.Measurement tolerance of the chromaticity coordinates is ±0.01.
- 3.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

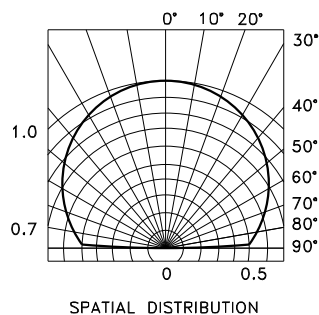
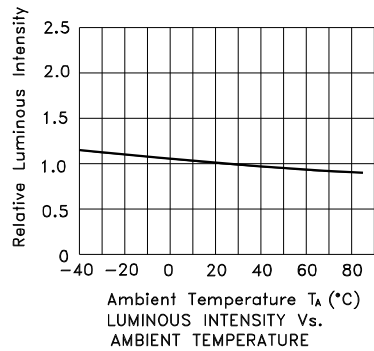
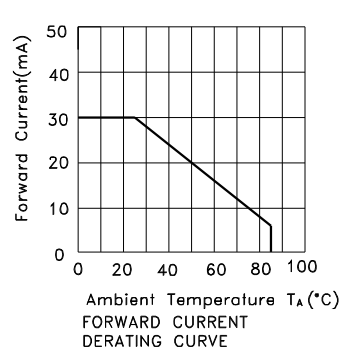
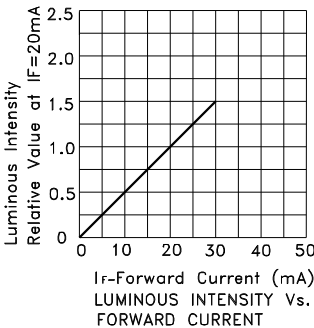
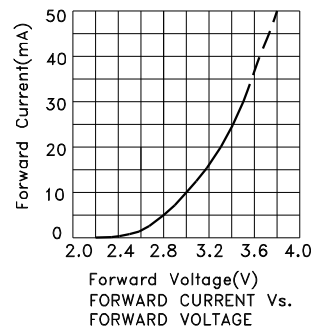
Parameter	White	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

Note:

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

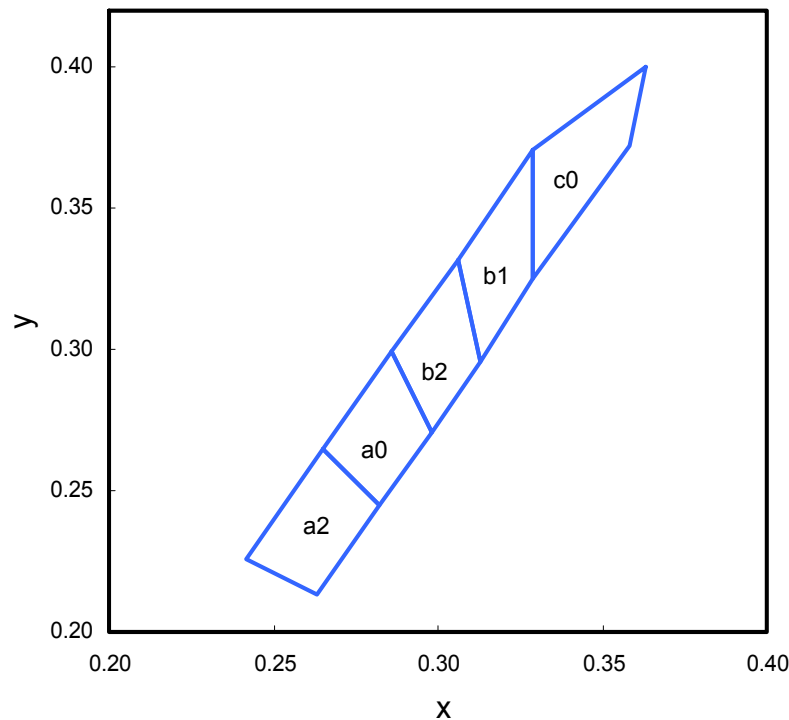
White

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White CIE



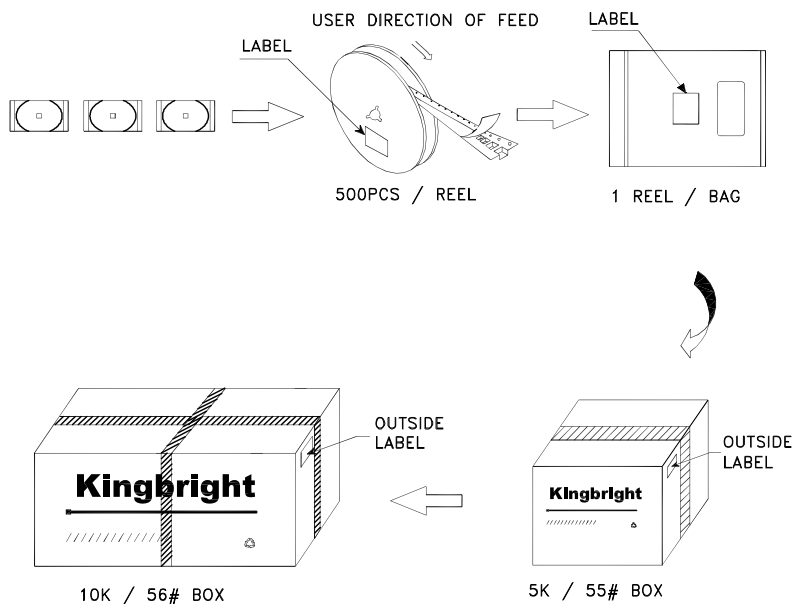
a2			a0			b2		
x	y		x	y		x	y	
0.263	0.213		0.282	0.245		0.298	0.271	
0.282	0.245		0.298	0.271		0.313	0.296	
0.265	0.265		0.286	0.299		0.306	0.332	
0.242	0.226		0.265	0.265		0.286	0.299	
b1			c0					
0.313	0.296		0.329	0.325				
0.329	0.325		0.358	0.372				
0.329	0.371		0.363	0.400				
0.306	0.332		0.329	0.371				

Notes:  
Shipment may contain more than one chromaticity regions.  
Orders for single chromaticity region are generally not accepted.  
Measurement tolerance of the chromaticity coordinates is ±0.01.



## PACKING & LABEL SPECIFICATIONS

APED3820QWF/G



<b>Kingbright</b>		
P/NO: APED3820xxx		
QTY: 500 pcs	Q.C.	Q C xx xx xxxx PASSED
S/N: XXXX		
CODE: XXX		
LOT NO:		
RoHS Compliant		

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