



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### PRELIMINARY SPEC

Part Number: APT3216QWF/D

White



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

### Features

- 3.2mmx1.6mm SMT LED, 0.75mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

### Description

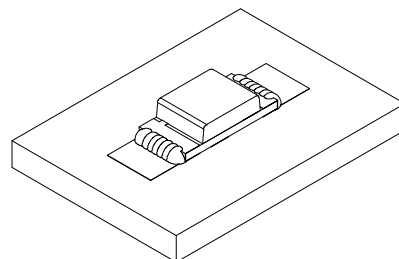
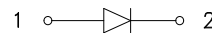
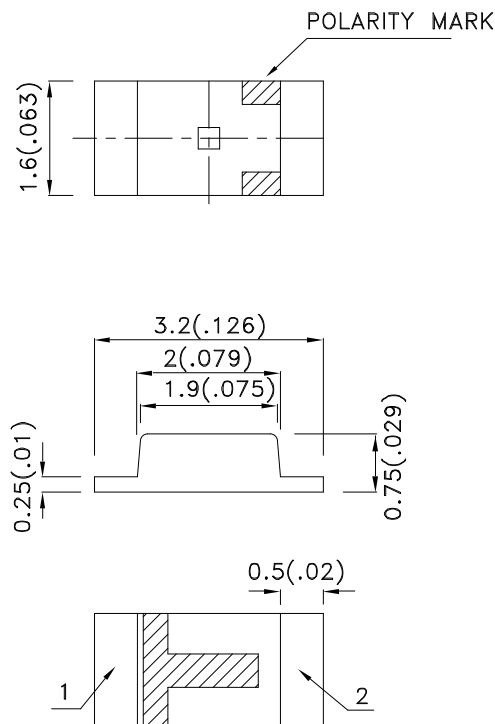
The source color devices are made with AlInGaN on Sapphire Light Emitting Diode.

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



#### 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
APT3216QWF/D	White (AlInGaN)	YELLOW FLUORESCENT	110	250	120°

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	White	3.3	4.0	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	White		10	μA	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.

## Absolute Maximum Ratings at TA=25°C

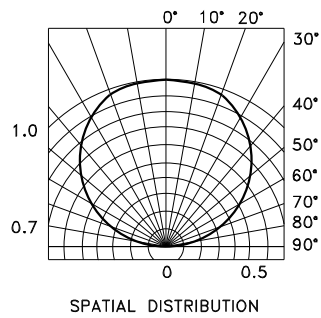
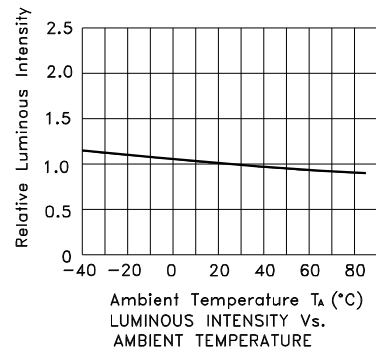
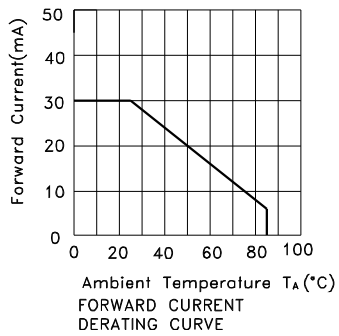
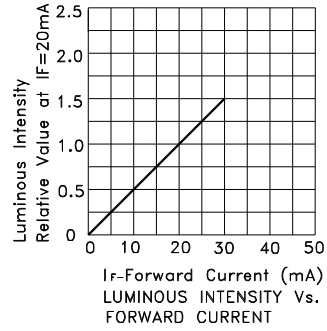
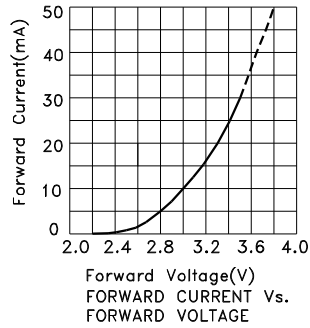
Parameter	White	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

Note:

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

White

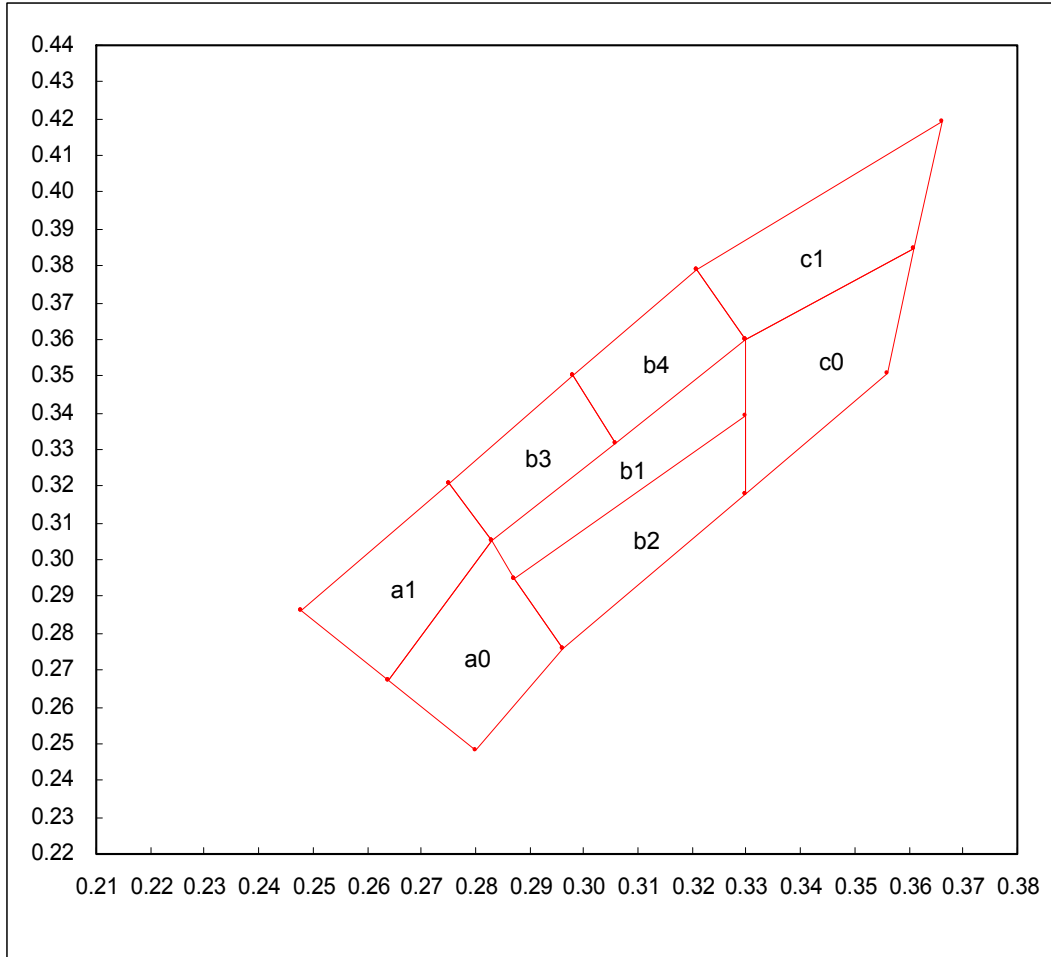
APT3216QWF/D



White

APT3216QWF/D

## White CIE



a0				
X	0.264	0.283	0.296	0.280
Y	0.267	0.305	0.276	0.248
Reference CCT: 14000~9000k				

a1				
X	0.248	0.275	0.283	0.264
Y	0.286	0.321	0.305	0.267
Reference CCT: 14000~9000k				

b1				
X	0.283	0.330	0.330	0.287
Y	0.305	0.360	0.339	0.295
Reference CCT: 9000~5600k				

b2				
X	0.287	0.330	0.330	0.296
Y	0.295	0.339	0.318	0.276
Reference CCT: 9000~5600k				

b3				
X	0.275	0.298	0.306	0.283
Y	0.321	0.350	0.332	0.305
Reference CCT: 9000~7000k				

b4				
X	0.298	0.321	0.330	0.306
Y	0.350	0.379	0.360	0.332
Reference CCT: 7600~5600k				

c0				
X	0.330	0.361	0.356	0.330
Y	0.360	0.385	0.351	0.318
Reference CCT: 5600~4600k				

c1				
X	0.321	0.366	0.361	0.330
Y	0.379	0.419	0.385	0.360
Reference CCT: 6000~4600k				

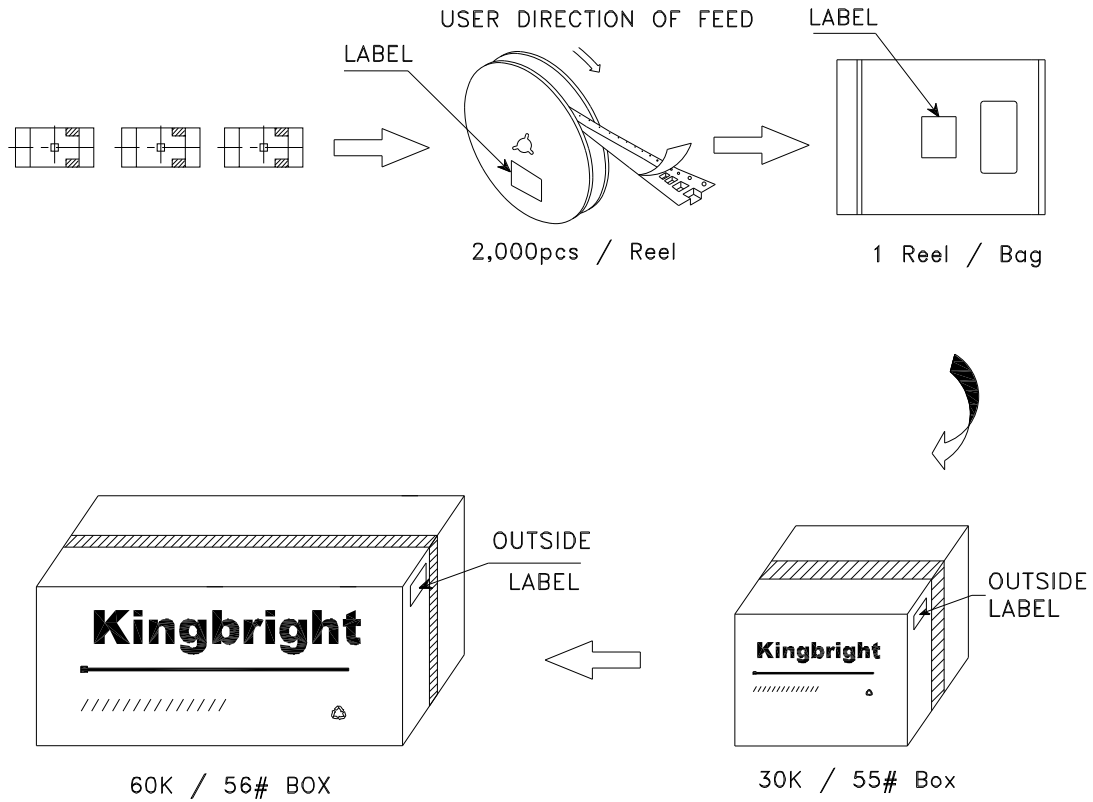





# Kingbright

## PACKING & LABEL SPECIFICATIONS

APT3216QWF/D



<h1>Kingbright</h1>	
P/NO: APT3216xxx	
QTY: 2,000 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:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	