

PRELIMINARY SPEC

Part Number: APT2012QBC/G

Blue



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

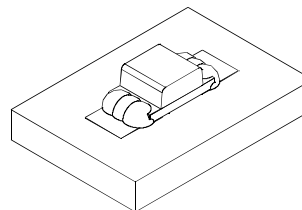
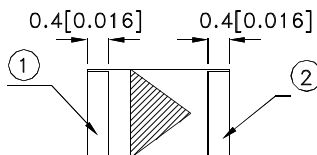
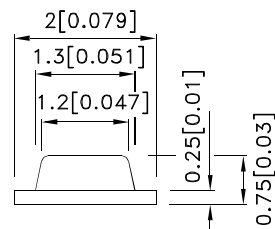
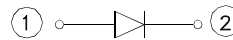
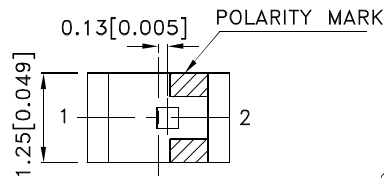
### Features

- 2.0mm x1.25mm 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 Blue 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  $\pm 0.1$  (0.004") 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
APT2012QBC/G	Blue (InGaN)	WATER CLEAR	70	180	120°

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%.

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	461		nm	If=20mA
λD [1]	Dominant Wavelength	Blue	465		nm	If=20mA
Δλ1/2	Spectral Line Half-width	Blue	25		nm	If=20mA
C	Capacitance	Blue	100		pF	Vf=0V;f=1MHz
Vf [2]	Forward Voltage	Blue	3.3	4	V	If=20mA
IR	Reverse Current	Blue		10	uA	VR=5V

Notes:

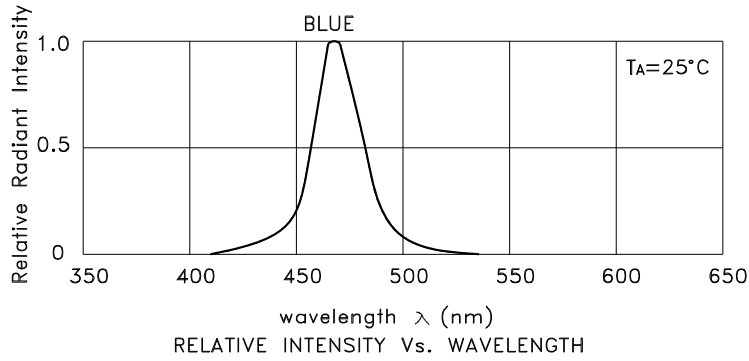
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

Parameter	Blue	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	

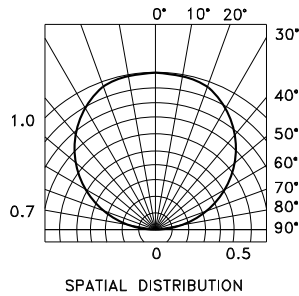
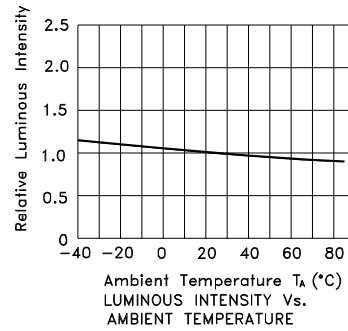
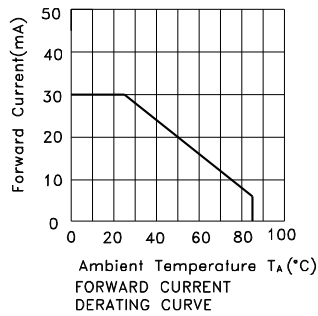
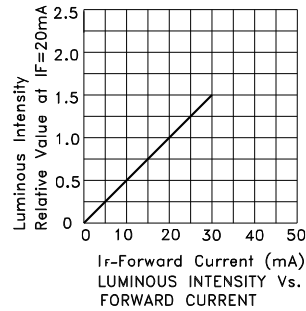
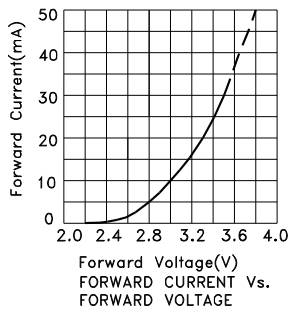
Note:

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



Blue

APT2012QBC/G



## APT2012QBC/G

Reflow soldering is recommended and the soldering profile is shown below.  
Other soldering methods are not recommended as they might cause damage to the product.

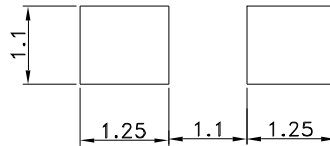
Reflow Soldering Profile For Lead-free SMT Process.



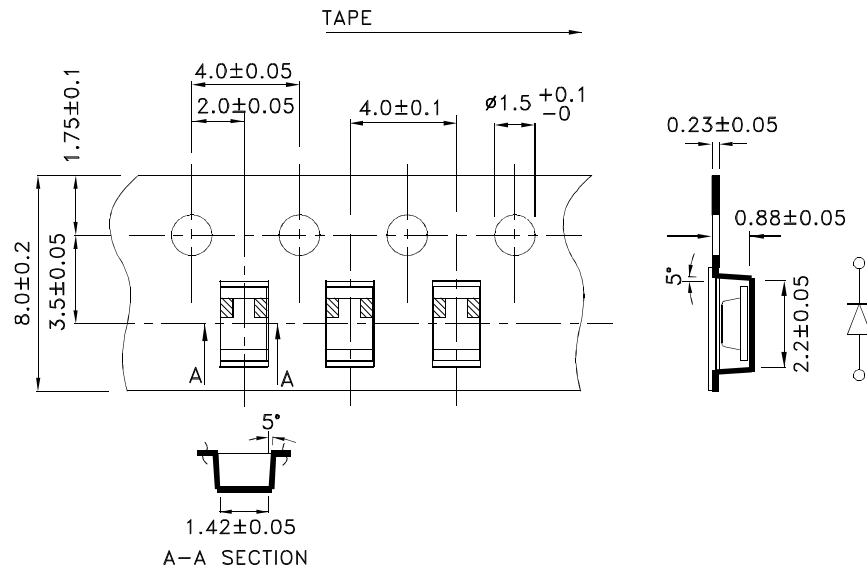
NOTES:

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)



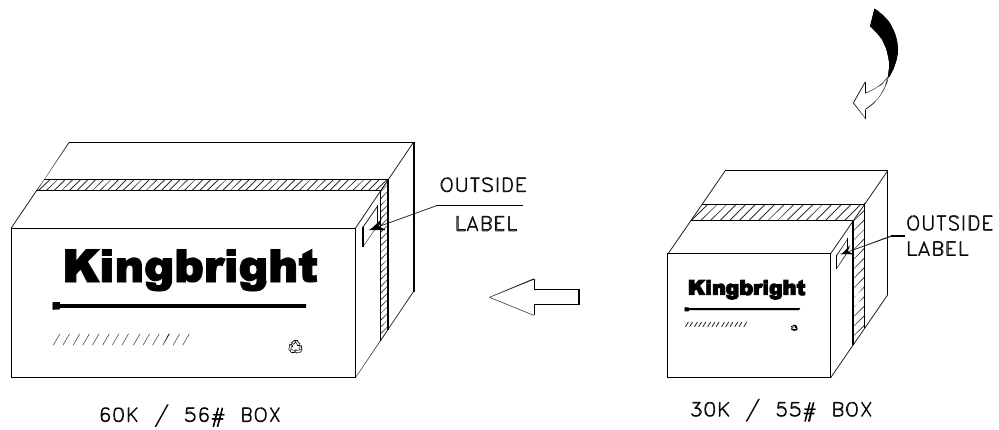
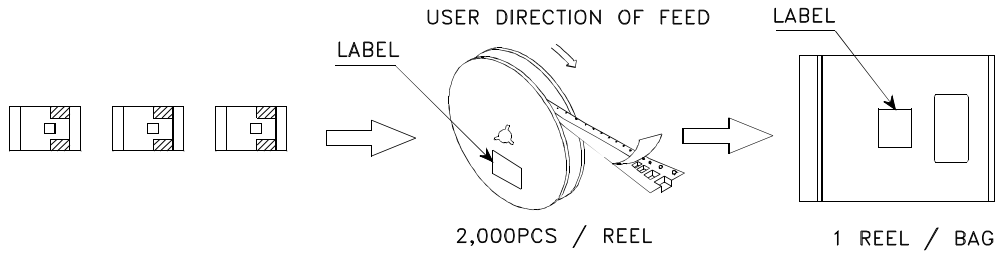
### Tape Dimensions (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

## APT2012QBC/G



<b>Kingbright</b>	
P/NO: APT2012xxx	
QTY: 2,000 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C</span>
S/N: XXXX	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">XX XX XXXX PASSED</span>
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	