



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

Part Number: APTK2012PBC/A-F01

Blue

### Features

- 2.0mmx1.25mm SMT LED, 0.75mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for back light and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 4.
- RoHS compliant.

### Description

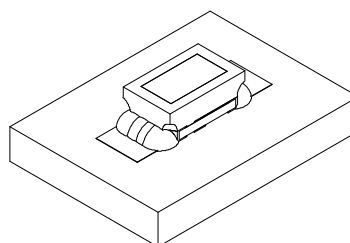
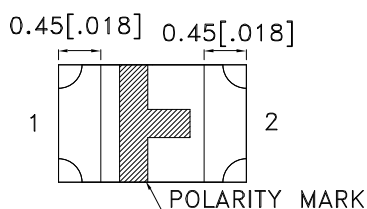
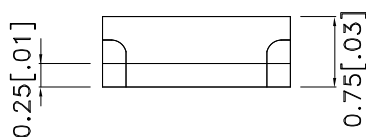
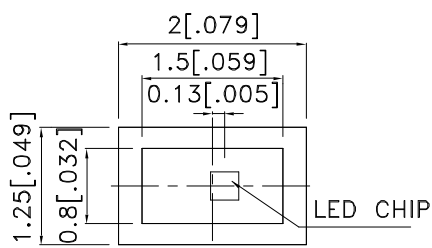
The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

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
APTK2012PBC/A-F01	Blue (InGaN)	WATER CLEAR	36	70	100°

### 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
$\lambda_{peak}$	Peak Wavelength	Blue	468		nm	I <sub>F</sub> =20mA
$\lambda_D$ [1]	Dominant Wavelength	Blue	470		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue	21		nm	I <sub>F</sub> =20mA
C	Capacitance	Blue	100		pF	V <sub>F</sub> =0V; f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Blue	3.2	4	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Blue		10	uA	V <sub>R</sub> =5V

### Notes:

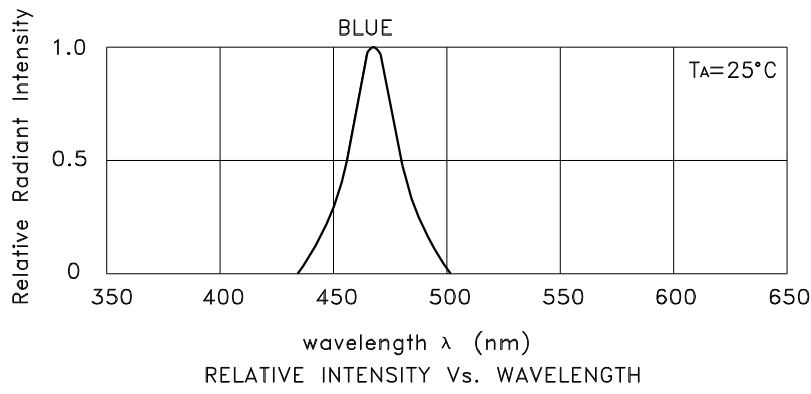
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

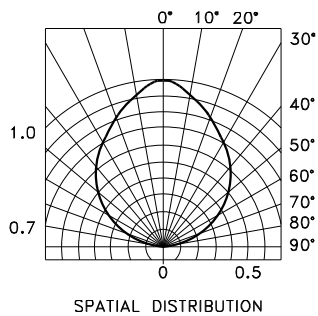
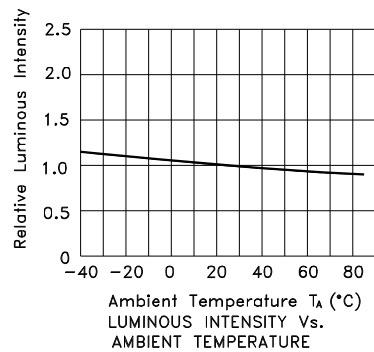
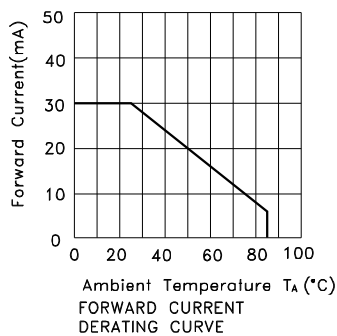
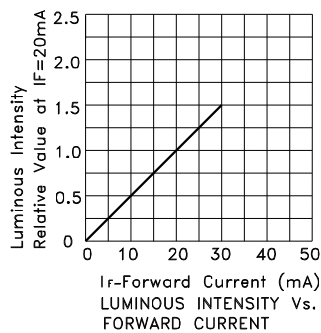
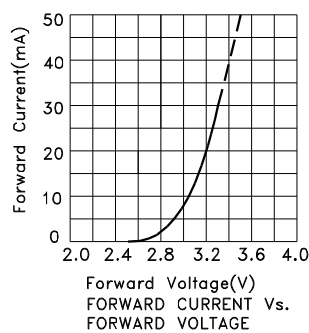
Parameter	Blue	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

### Note:

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



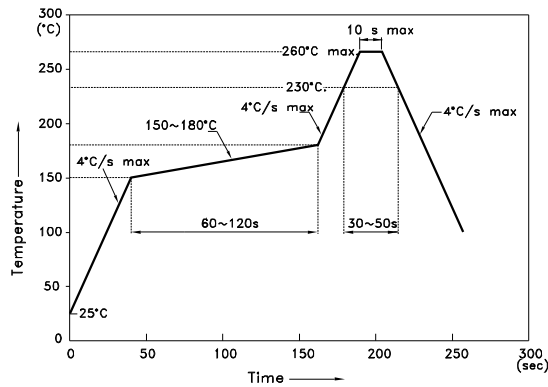
Blue APTK2012PBC/A-F01



## APTK2012PBC/A-F01

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.



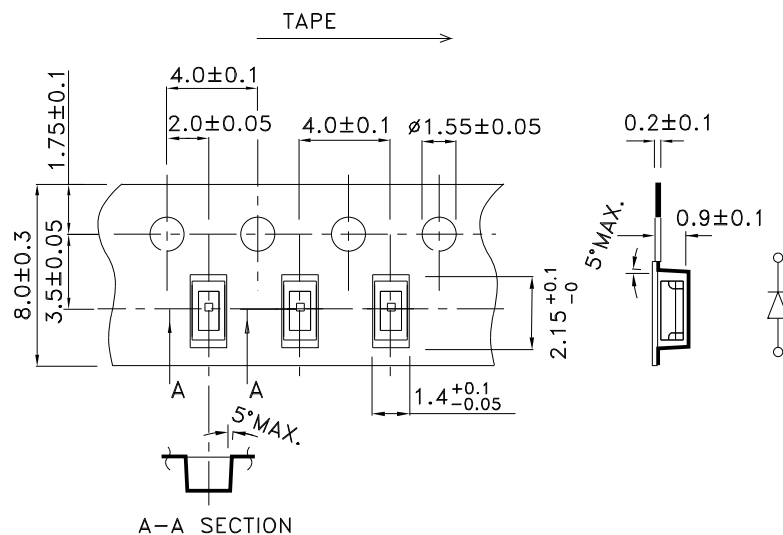
### NOTES:

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: $\pm 0.1$ )

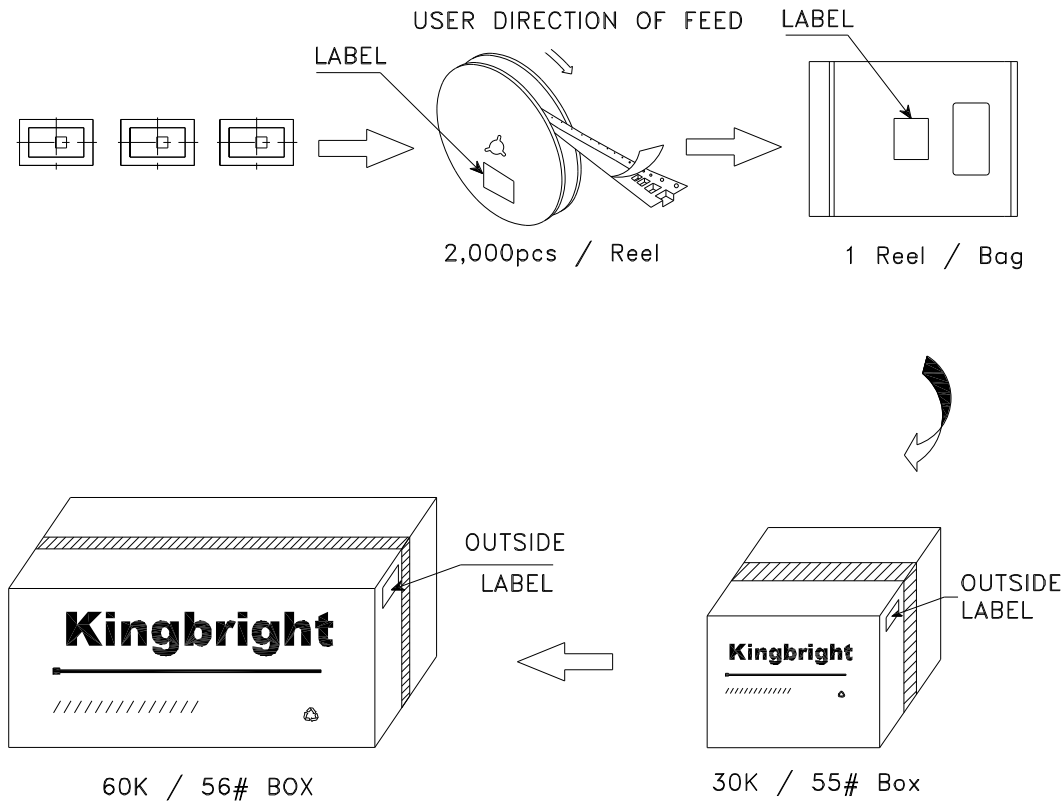



## Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APTK2012PBC/A-F01



<b>Kingbright</b>	
P/NO: APTK2012xxx	
QTY: 2,000 pcs	Q.C. <div>Q C xx xx xxxx PASSED</div>
S/N: XXXX	
CODE: XXX	
LOT NO:  xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Kingbright:](#)

[APTK2012PBC/A-F01](#)