



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

Part Number: APTB1612LSURKQBDC

Hyper Red  
Blue

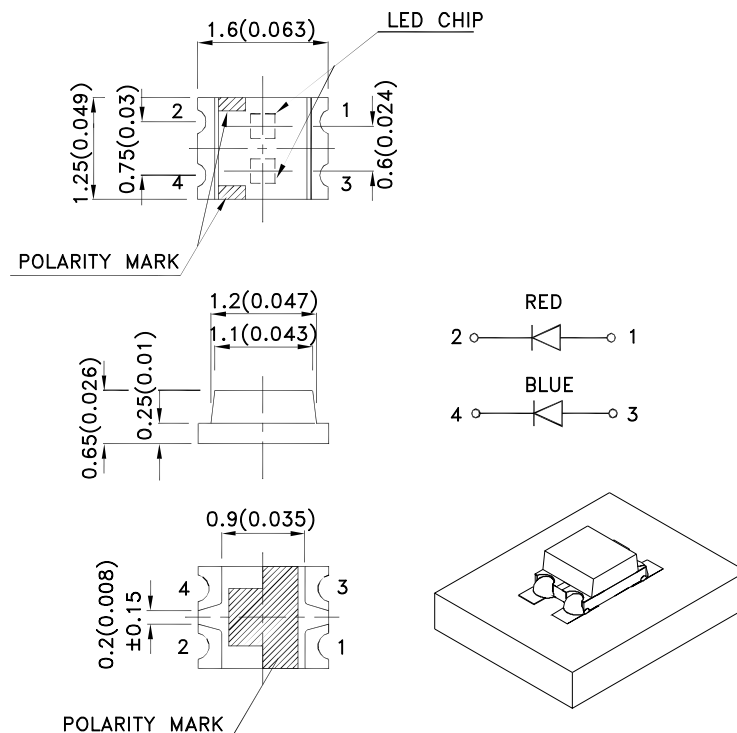
### Features

- 1.6mmx1.25mm SMD LED, 0.65mm thickness.
- Bi-color, low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Low current IF=2mA operating.
- RoHS compliant.

### Descriptions

- The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.
- The Blue 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.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 2mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APT B1612LSURKQBDC	Hyper Red (AlGaInP)	Water Clear	10	20	120°
			*4	*9	
	Blue (InGaN)		6	12	
			*6	*12	

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%.
- \* Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

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

Symbol	Parameter	Emitting Color	Min.	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Hyper Red Blue		645 460		nm	I <sub>F</sub> =2mA
λ <sub>D</sub> [1]	Dominant Wavelength	Hyper Red Blue		630 465		nm	I <sub>F</sub> =2mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Hyper Red Blue		28 25		nm	I <sub>F</sub> =2mA
C	Capacitance	Hyper Red Blue		35 100		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Red Blue	1.5 2.2	1.75 2.65	2.1 3.0	V	I <sub>F</sub> =2mA
I <sub>R</sub>	Reverse Current	Hyper Red Blue			10 50	uA	V <sub>R</sub> = 5V

Notes:

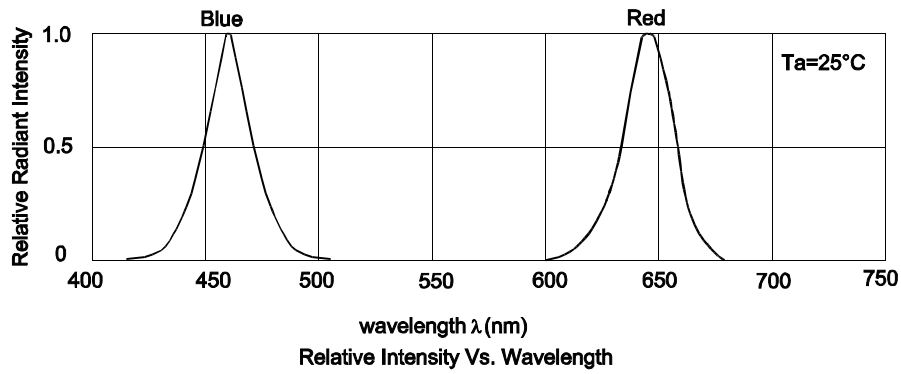
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

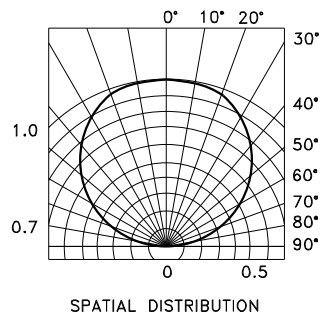
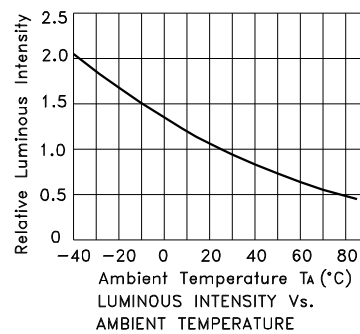
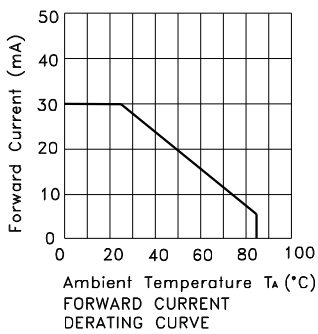
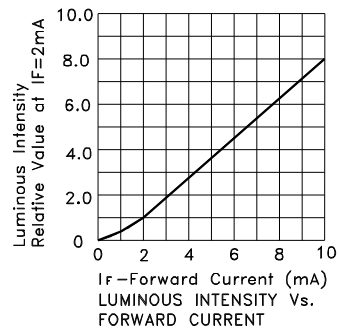
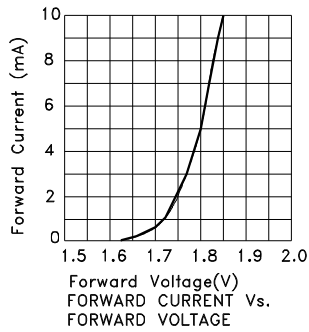
Parameter	Hyper Red	Blue	Units
Power dissipation	63	90	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	185	150	mA
Reverse Voltage	5		V
Electrostatic Discharge Threshold (HBM)	3000	250	V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

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

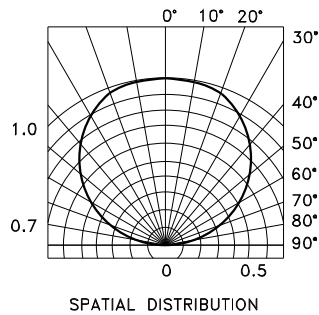
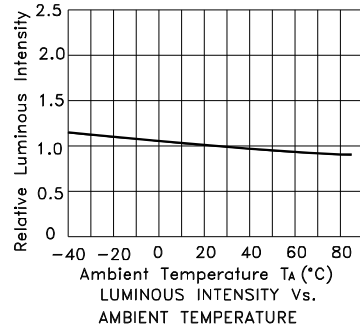
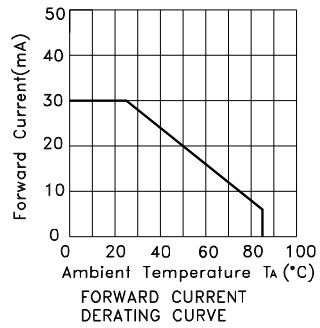
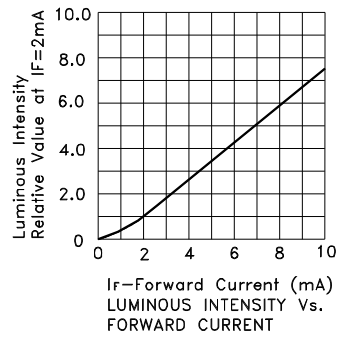
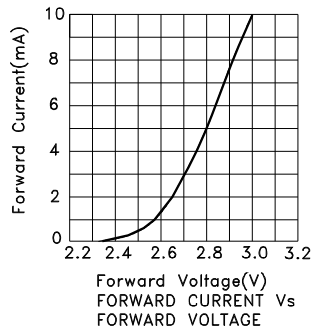


## APTB1612LSURKQBC Hyper Red



# Kingbright

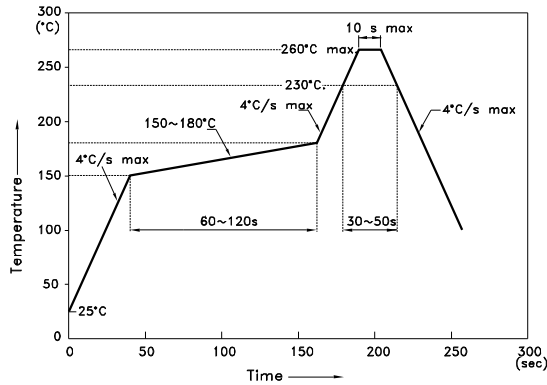
## Blue



## APTB1612LSURKQBDC

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.

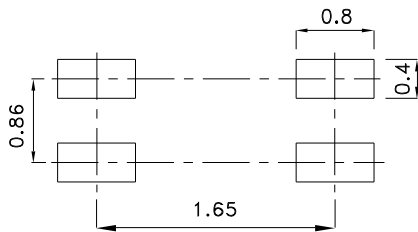
Reflow Soldering Profile For Lead-free SMT Process.



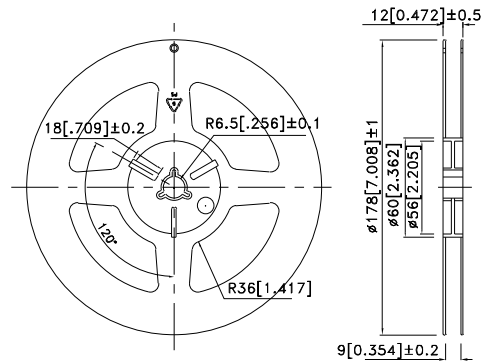
NOTES:

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.

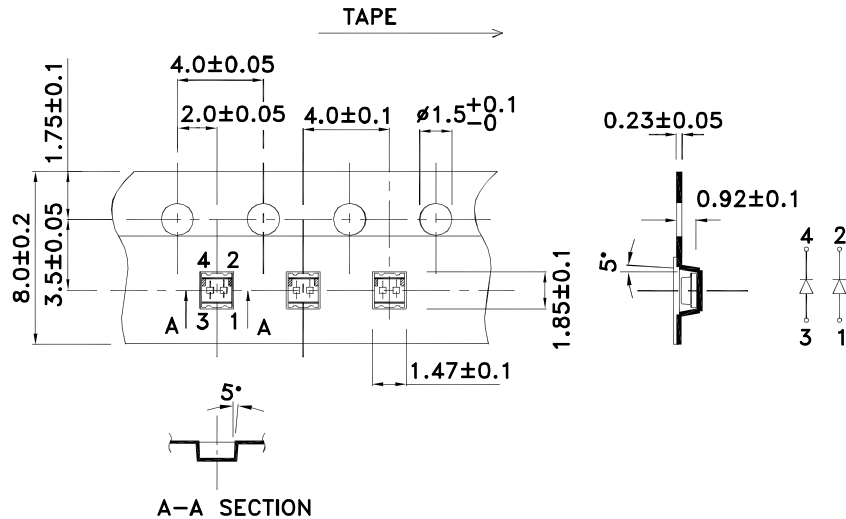
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

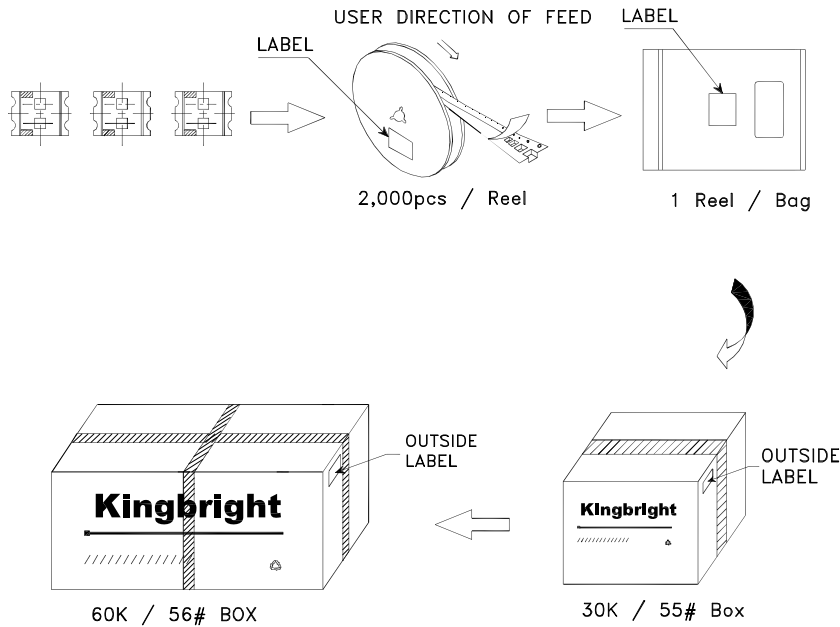



### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

APTB1612LSURKQBDC



<b>Kingbright</b>	
P/NO: APTB1612xxx	
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:	
	
RoHS Compliant	

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- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
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- Тестирование поставляемой продукции.
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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