



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APTB1612LSURKQBDC

Hyper Red
Blue

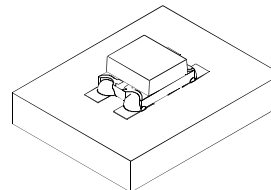
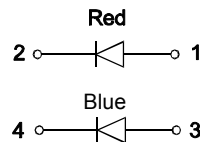
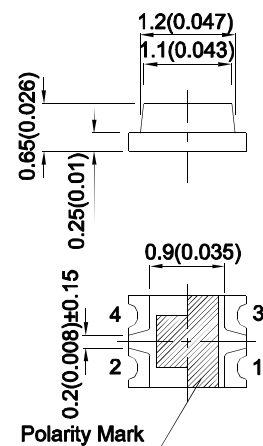
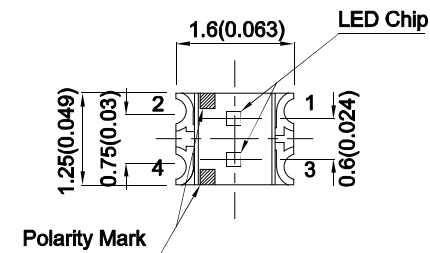
Features

- 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	150°
			*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 CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Min.	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red Blue		645 460		nm	If=2mA
λD [1]	Dominant Wavelength	Hyper Red Blue		630 465		nm	If=2mA
Δλ1/2	Spectral Line Half-width	Hyper Red Blue		28 25		nm	If=2mA
C	Capacitance	Hyper Red Blue		35 100		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Hyper Red Blue	1.5 2.2	1.75 2.65	2.1 3.0	V	If=2mA
I _R	Reverse Current	Hyper Red Blue			10 50	uA	V _R = 5V

Notes:

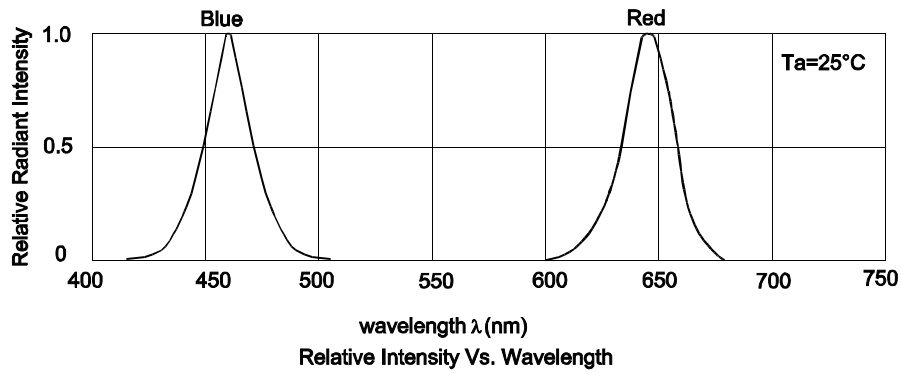
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

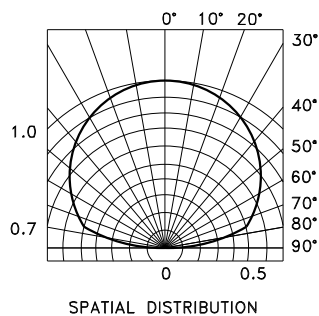
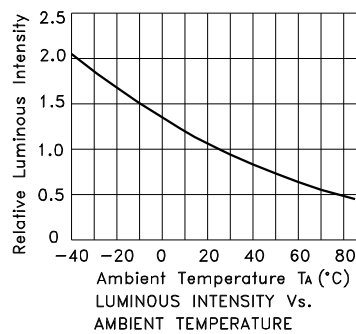
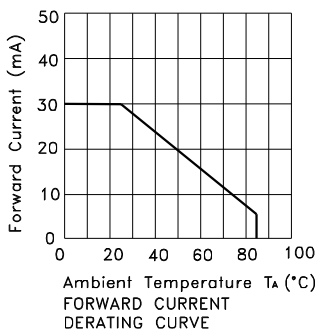
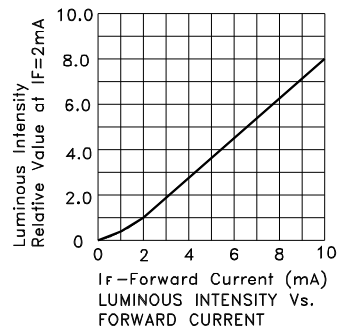
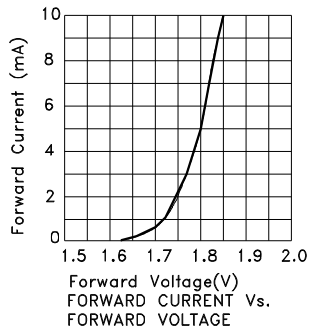
Parameter	Hyper Red	Blue	Units
Power dissipation	63	90	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	185	150	mA
Reverse Voltage	5		V
Electrostatic Discharge Threshold (HBM)	3000	250	V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

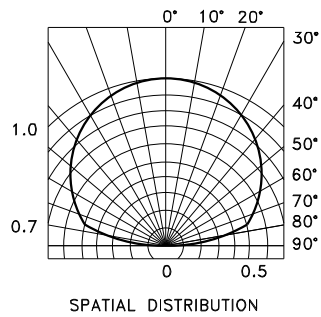
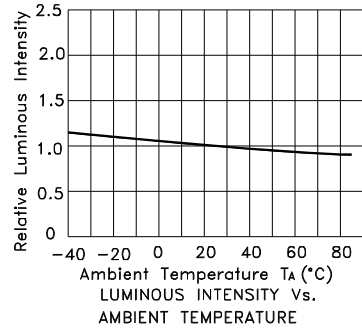
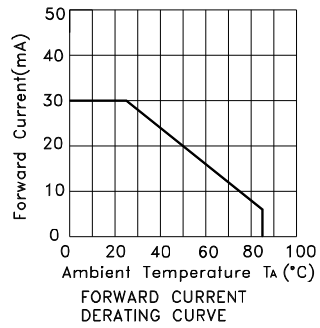
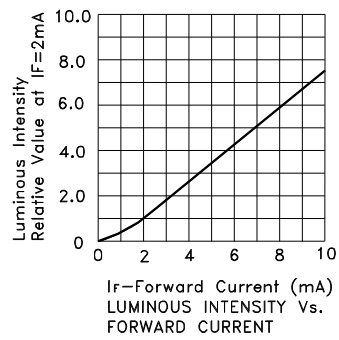
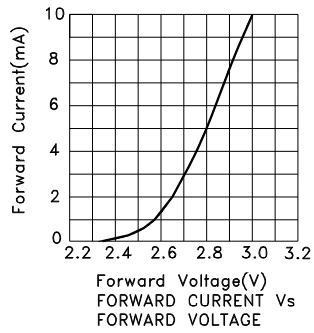


APTB1612LSURKQBDC Hyper Red



Kingbright

Blue



APTB1612LSURKQBC

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.



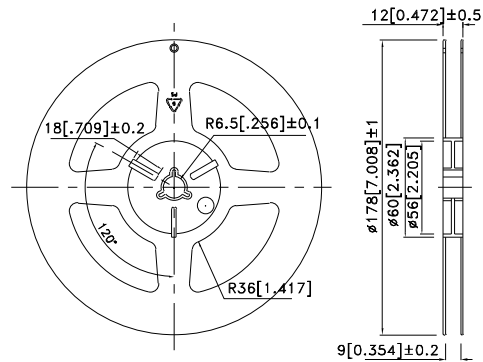
NOTES:

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.

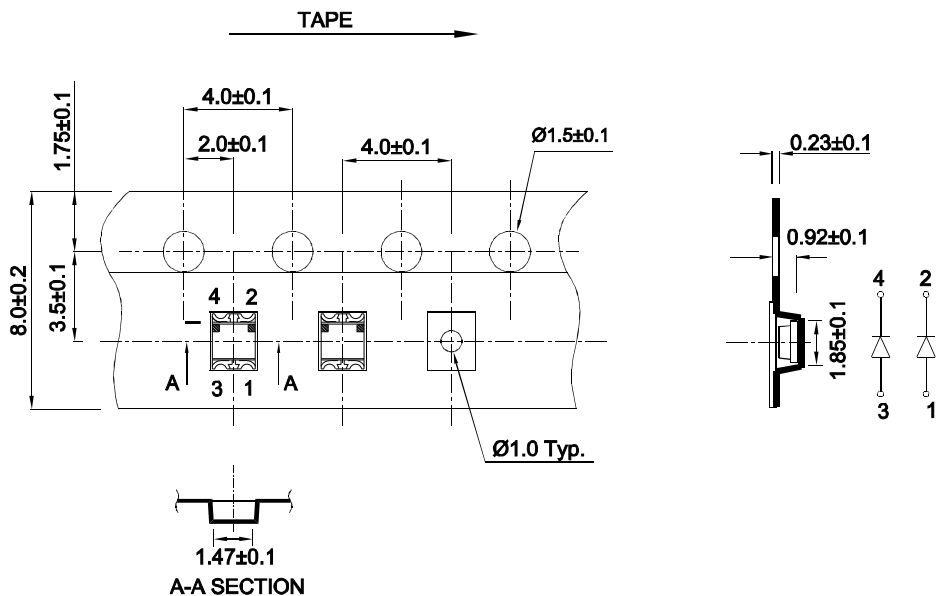
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

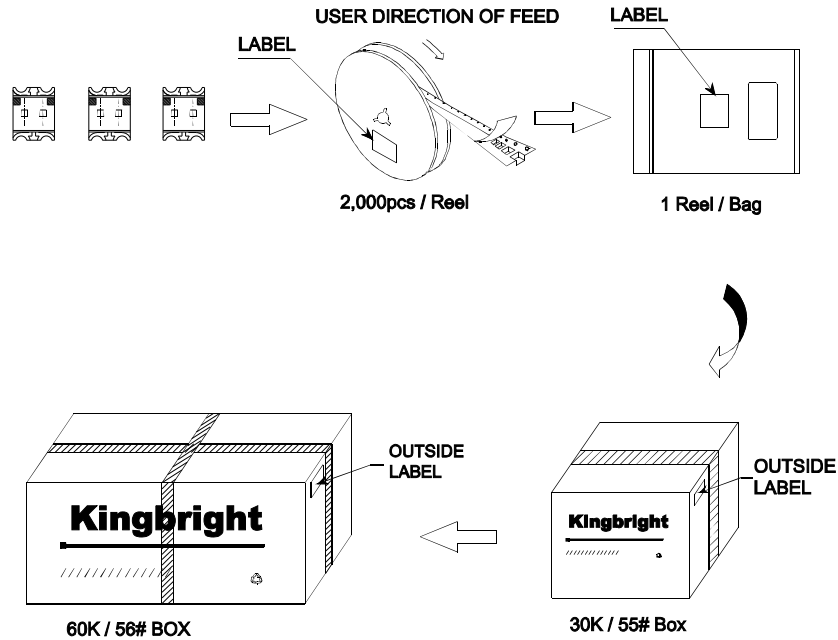



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APTB1612LSURKQBDC



Kingbright	
P/NO: APTB1612xxx	
QTY: 2,000 pcs	Q.C.
S/N: XXXX	QC XXXX:XXXX PASSED
CODE: XXX	
LOT NO:	
	
RoHS Compliant	

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