

1.6X0.8mm SMD CHIP LED LAMP

Part Number: KP-1608QBC-D



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

Features

- 1.6mmX0.8mm SMD LED, 1.1mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- · RoHS compliant.

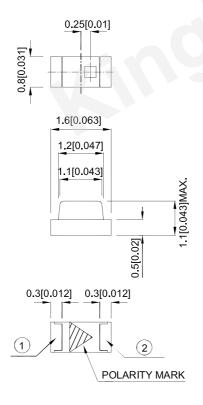
Descriptions

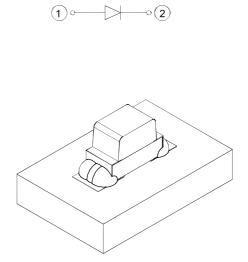
• The Blue source color devices are made with InGaN Light Emitting Diode.

Blue

- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

Package Dimensions





- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.1(0.004") 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.





SPEC NO: DSAA8751 **REV NO: V.19B DATE: MAY/10/2016** PAGE: 1 OF 5 **APPROVED: Wynec CHECKED: Allen Liu** DRAWN: M.Liu ERP: 1203000050



Selection Guide

Part No.	Emitting Color (Material)	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
		2.	Min.	Тур.	201/2
KP-1608QBC-D	Blue (InGaN)	Water Clear	40	100	130°

Notes:

- 1. 01/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
 2. Luminous intensity / luminous Flux: +/-15%.
 3. Luminous intensity value is traceable to CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	460		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue	465		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue	25		nm	IF=20mA
С	Capacitance	Blue	100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue	3.3	4	V	IF=20mA
lR	Reverse Current	Blue		50	uA	V _R =5V

- Notes:
 1. Wavelength: +/-1nm.
 2. Forward Voltage: +/-0.1V.
 3. Wavelength value is traceable to CIE127-2007 standards.
- 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

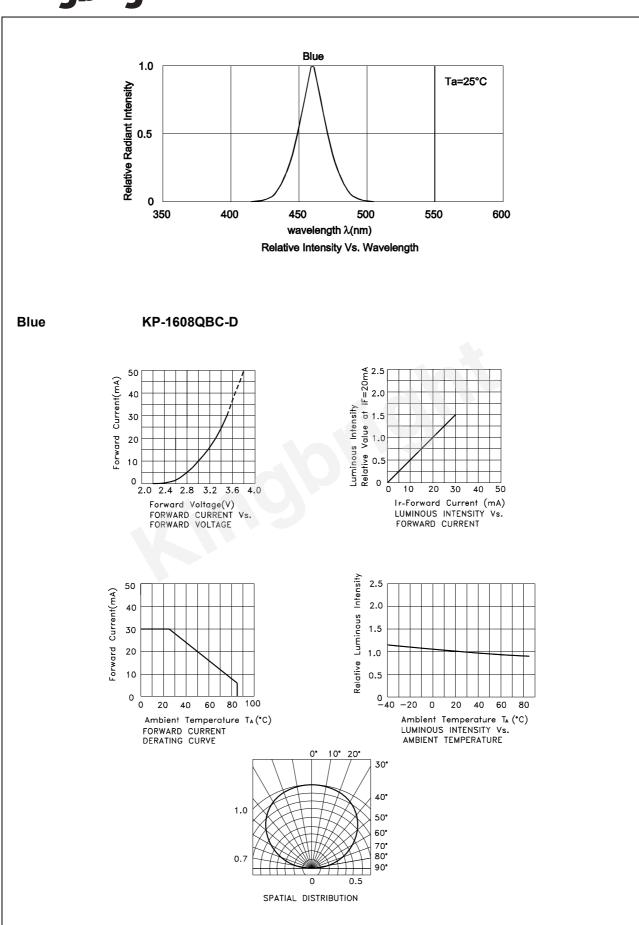
Parameter	Values	Units	
Power dissipation	120	mW	
DC Forward Current	30	mA	
Peak Forward Current [1]	150	mA	
Electrostatic Discharge Threshold (HBM)	250	V	
Reverse Voltage	5	V	
Operating Temperature	-40°C To +85°C		
Storage Temperature	rage Temperature -40°C To +85°C		

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.

SPEC NO: DSAA8751 **REV NO: V.19B DATE: MAY/10/2016** PAGE: 2 OF 5 **APPROVED: Wynec CHECKED: Allen Liu** DRAWN: M.Liu ERP: 1203000050

Kingbright



 SPEC NO: DSAA8751
 REV NO: V.19B
 DATE: MAY/10/2016
 PAGE: 3 OF 5

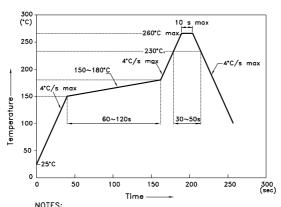
 APPROVED: Wynec
 CHECKED: Allen Liu
 DRAWN: M.Liu
 ERP: 1203000050

Kingbright

KP-1608QBC-D

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.

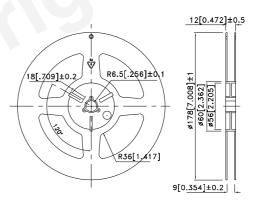
 2.Don't cause stress to the epoxy resin while it is exposed to high temperature.

 3.Number of reflow process shall be 2 times or less.

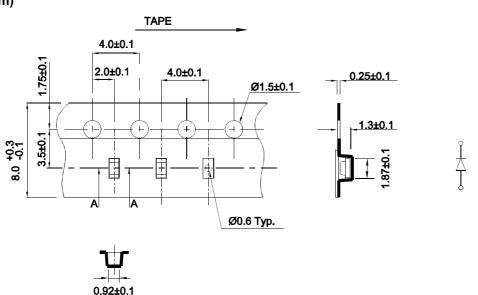
Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



Reel Dimension



Tape Dimensions (Units: mm)



SPEC NO: DSAA8751 **APPROVED: Wynec**

REV NO: V.19B CHECKED: Allen Liu

A-A SECTION

DATE: MAY/10/2016 DRAWN: M.Liu

PAGE: 4 OF 5 ERP: 1203000050

Kingbright

PACKING & LABEL SPECIFICATIONS KP-1608QBC-D User Direction of Feed 2,000pcs / Reel 1Reel / Bag Outside Outside Label **Kingbright** Kingbright 60K / 56# Box 30K / 55# Box Kingbright P/NO: KP-1608XXX QC QTY: 2,000 pcs Q.C. XXXXXX PASSED S/N: XXXX CODE: XXX

Terms and conditions for the usage of this document

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.

RoHS Compliant

- 2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- 3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- 4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
- 5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
- 6. All design applications should refer to Kingbright application notes available at http://www.kingbright.com/application notes

 SPEC NO: DSAA8751
 REV NO: V.19B
 DATE: MAY/10/2016
 PAGE: 5 OF 5

 APPROVED: Wynec
 CHECKED: Allen Liu
 DRAWN: M.Liu
 ERP: 1203000050