

Part Number: KPED-3820QBC-D

Blue



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- 3.8mmx2.0mm SMT LED, 3.2mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 500pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

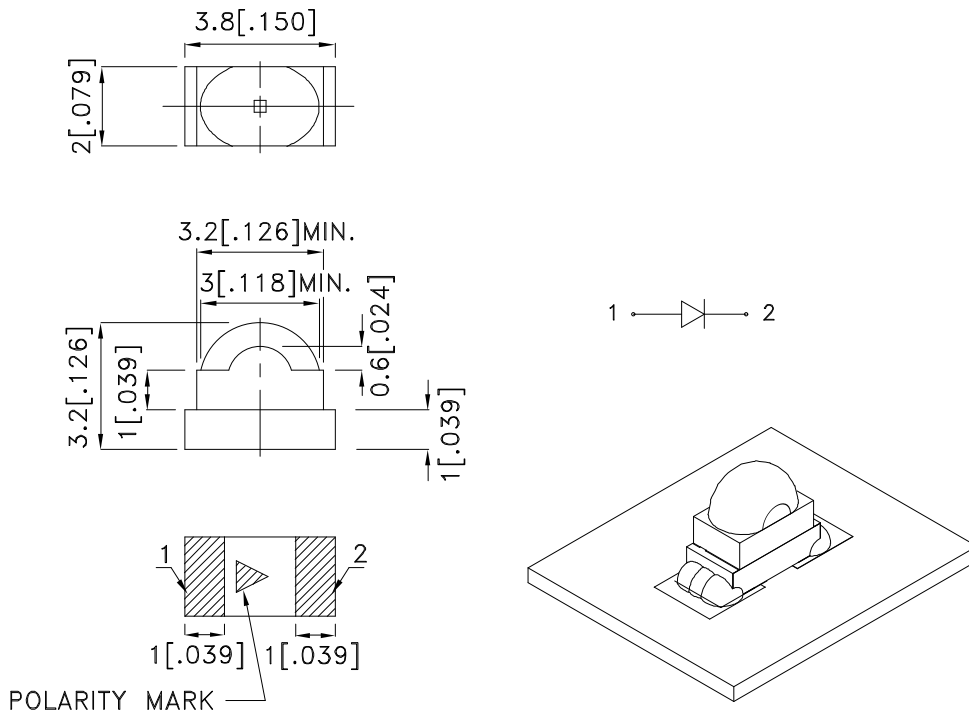
The Blue source color devices are made with InGaN Light Emitting Diode.

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 $\pm 0.2(0.008)$ 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.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPED-3820QBC-D	Blue (InGaN)	Water Clear	120	250	60°(H) 35°(V)

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

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.		Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Blue	468	*460		nm	I _F =20mA
λ _D [1]	Dominant Wavelength	Blue	470	*465		nm	I _F =20mA
Δλ _{1/2}	Spectral Line Half-width	Blue	25			nm	I _F =20mA
C	Capacitance	Blue	100			pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Blue	3.3		4	V	I _F =20mA
I _R	Reverse Current	Blue			50	uA	V _R = 5V

Notes:

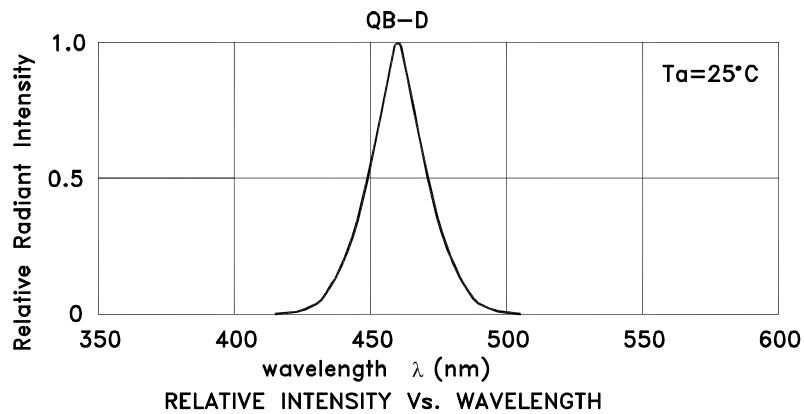
1. Wavelength: +/-1nm.
 2. Forward Voltage: +/-0.1V.
- *Wavelength value is traceable to the CIE127-2007 compliant national standards.

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	

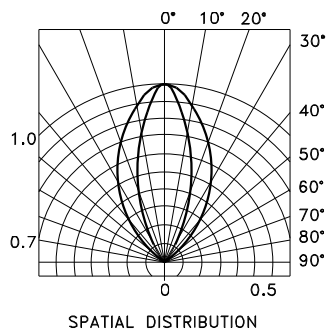
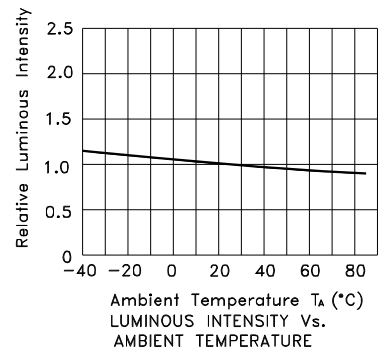
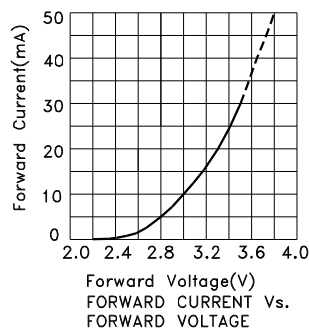
Note:

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



Blue

KPED-3820QBC-D



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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.

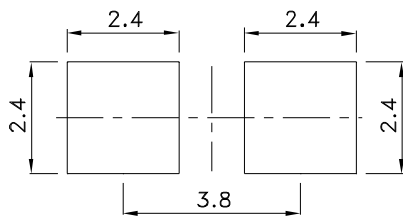
Reflow Soldering Profile For Lead-free SMT Process.



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.

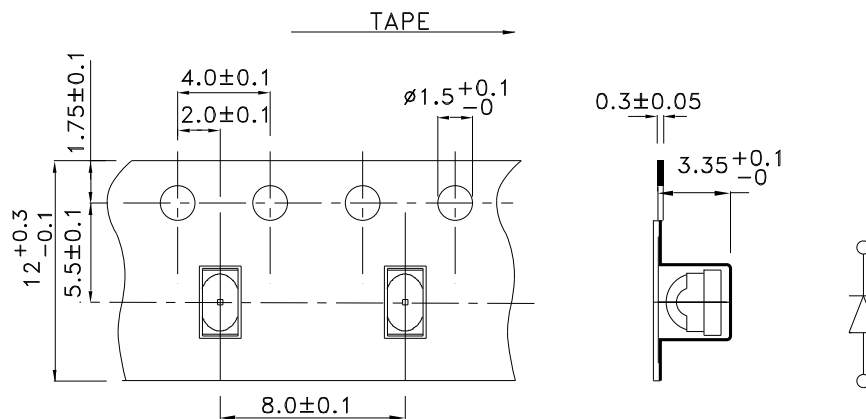
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



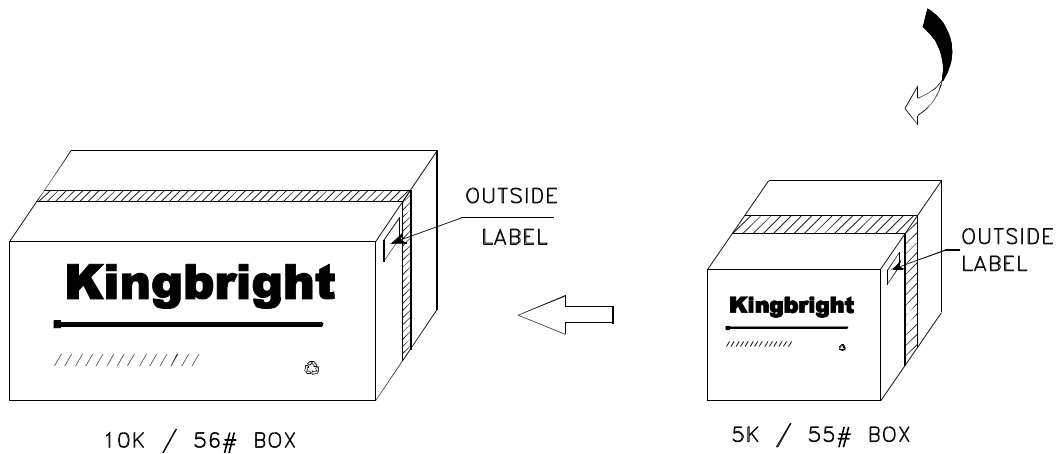
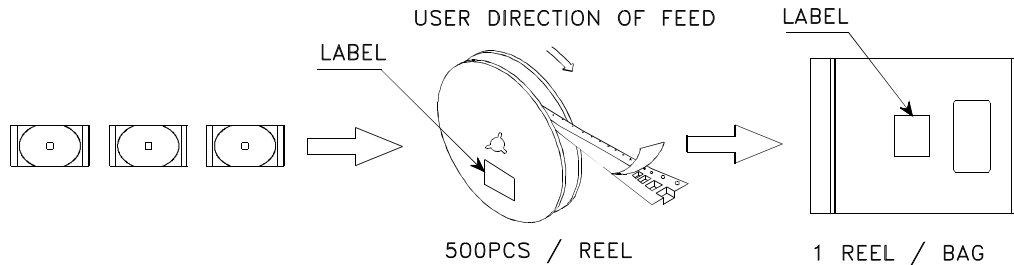
Tape Dimensions (Units : mm)




Kingbright

PACKING & LABEL SPECIFICATIONS

KPED-3820QBC-D



<h1>Kingbright</h1>	
P/NO: KPED-3820xxx	
QTY: 500 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

Detailed application notes are listed on our website.
http://www.kingbright.com/application_notes