

### PRELIMINARY SPEC

Part Number: KPED-3820PBC-Z-SI

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

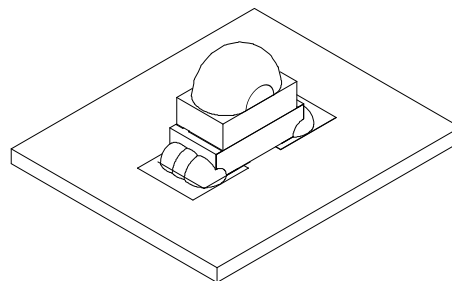
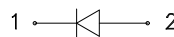
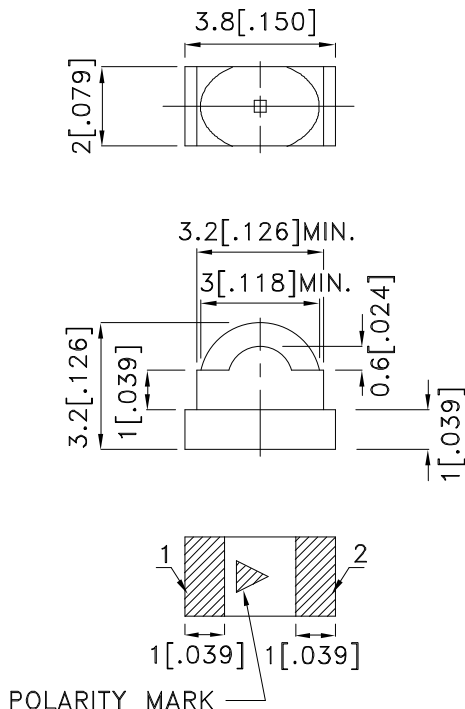
The Blue source color devices are made with InGaN Light Emitting Diode.

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. 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]<br>@ 20mA |      | Viewing<br>Angle [1] |
|-------------------|--------------|-------------|------------------------|------|----------------------|
|                   |              |             | Min.                   | Typ. | 2θ1/2                |
| KPED-3820PBC-Z-SI | Blue (InGaN) | WATER CLEAR | 480                    | 1100 | 60°(H)<br>35°(V)     |

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 |
|--------|--------------------------|--------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Blue   | 458  |      | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | Blue   | 465  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | Blue   | 22   |      | nm    | IF=20mA         |
| C      | Capacitance              | Blue   | 110  |      | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | Blue   | 3.2  | 3.7  | V     | IF=20mA         |
| IR     | Reverse Current          | Blue   |      | 10   | uA    | VR=5V           |

Notes:

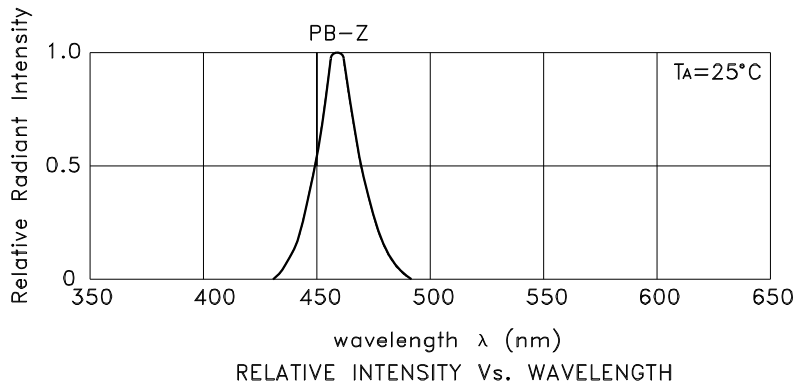
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

| Parameter                | Blue           | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 111            | 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 |       |

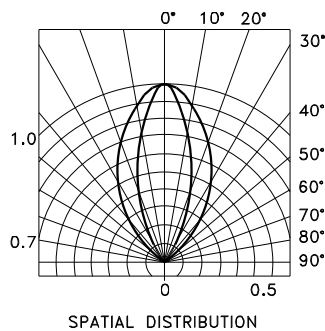
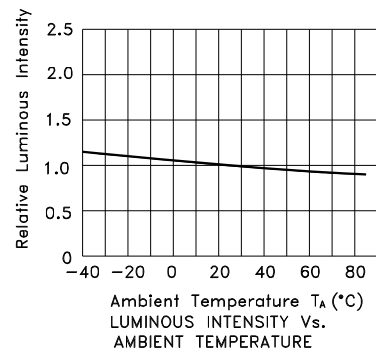
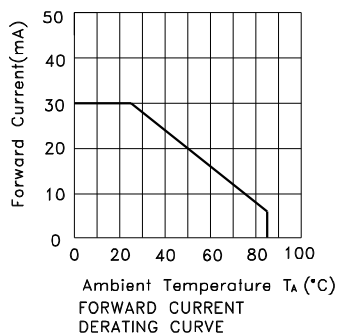
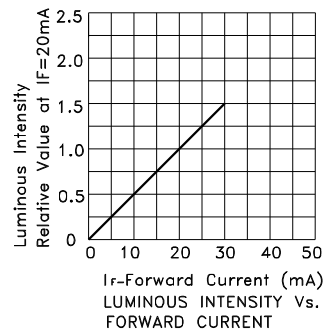
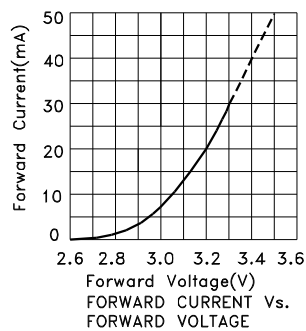
Note:

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



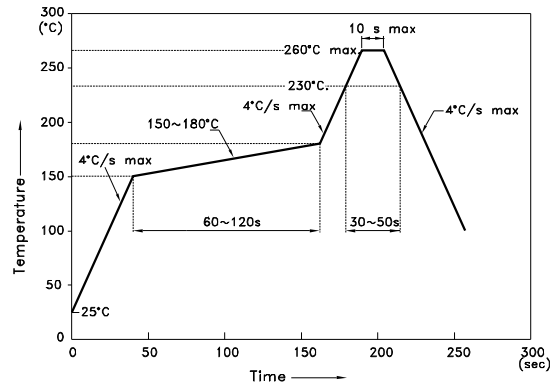
Blue

KPED-3820PBC-Z-SI



## KPED-3820PBC-Z-SI

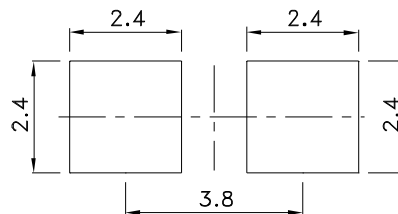
### Reflow Soldering Profile For Lead-free SMT Process.



#### 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 Specifications (Units : mm)

