

# Kingbright

## 3.5 x2.8mm SMD CHIP LED LAMP

### PRELIMINARY SPEC



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

Part Number: APED3528PBC/Z-F01

Blue

### Features

- SINGLE COLOR.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- IDEAL FOR BACKLIGHTING.
- AVAILABLE ON TAPE AND REEL.
- PACKAGE: 500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

### Description

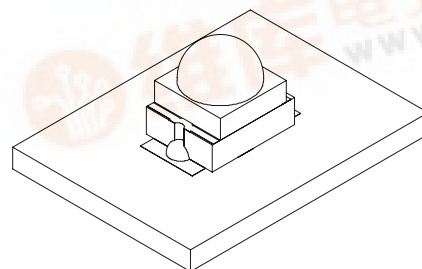
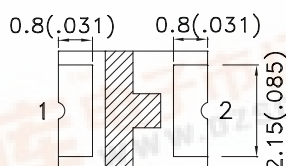
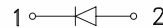
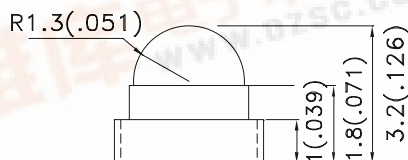
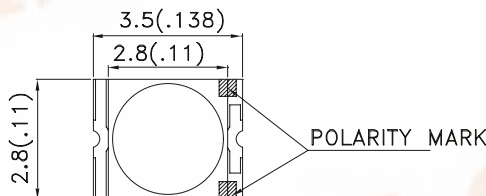
The Blue source color devices are made with InGaN Light Emitting Diode.

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                |
| APED3528PBC/Z-F01 | Blue (InGaN) | WATER CLEAR | 900                    | 1500 | 40°                  |

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.

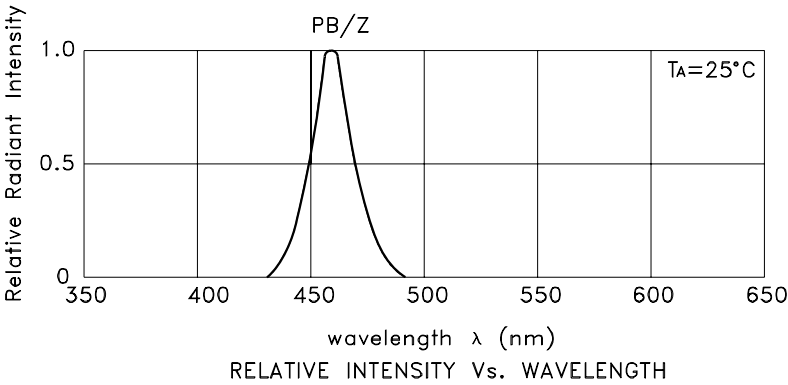
2. Forward Voltage: +/-0.1V.

## 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 |       |

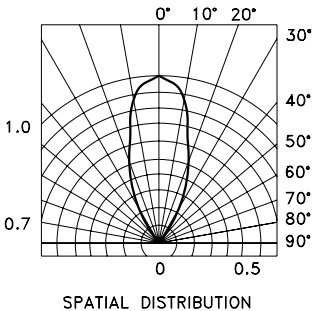
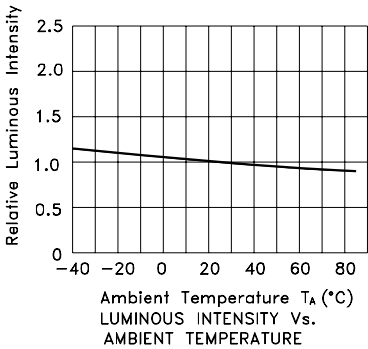
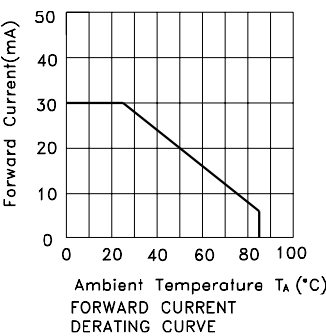
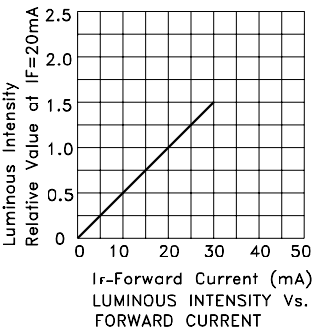
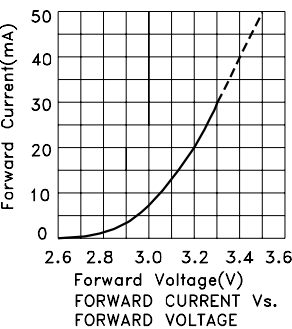
Note:

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



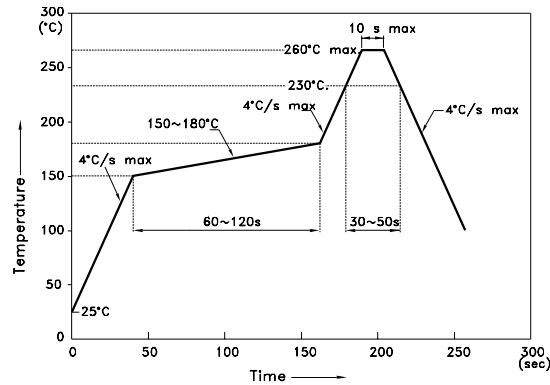
Blue

APED3528PBC/Z-F01



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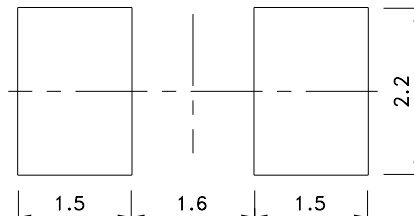
Reflow Soldering Profile For Lead-free SMT Process.



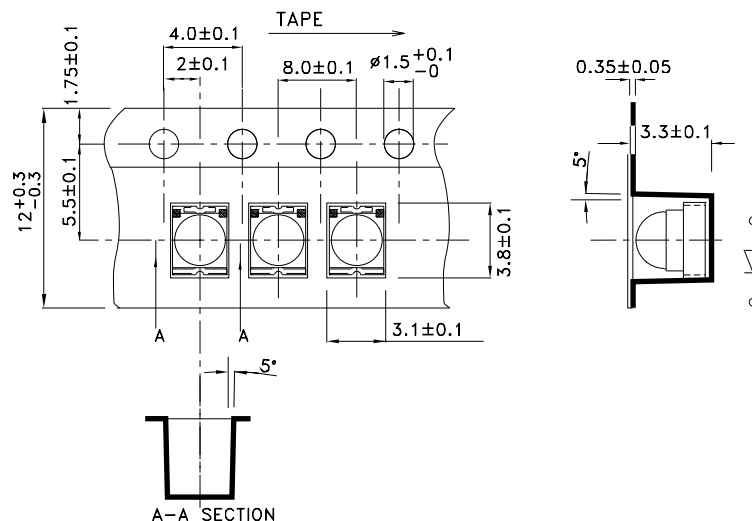
### NOTES:

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: $\pm 0.1$ )

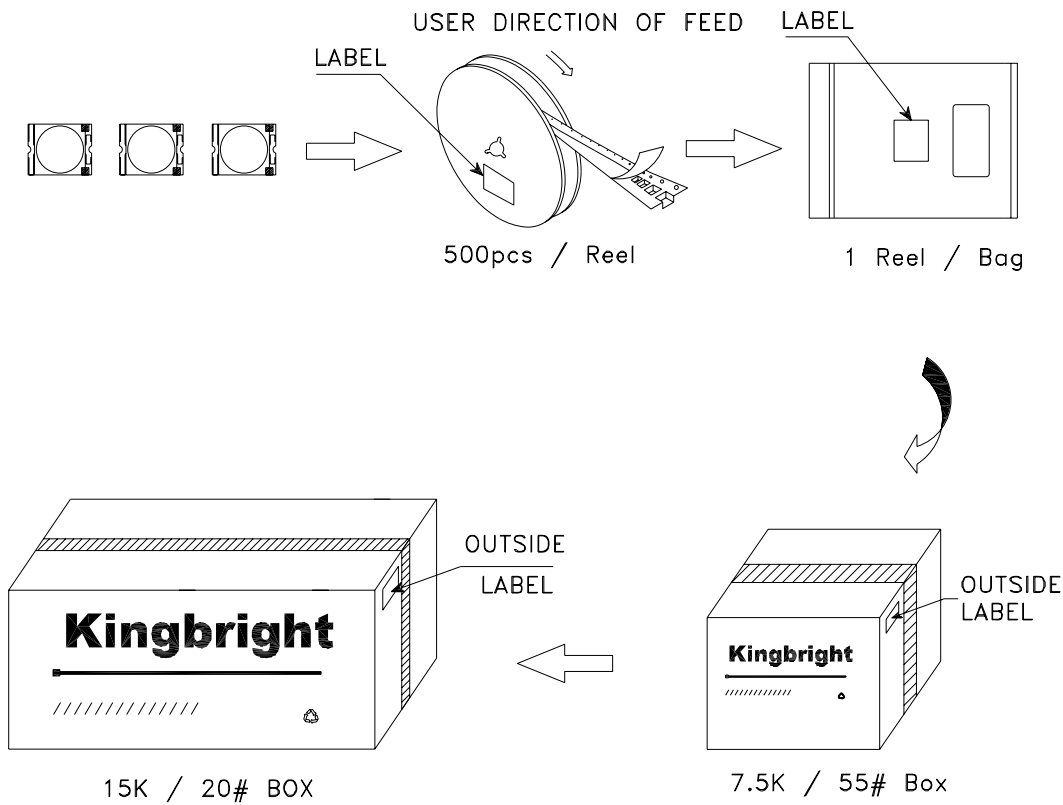


## Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

APED3528PBC/Z-F01



|                                                                                      |                             |
|--------------------------------------------------------------------------------------|-----------------------------|
| <b>Kingbright</b>                                                                    |                             |
| P/NO: APED3528xxx                                                                    |                             |
| QTY: 500 pcs                                                                         | Q.C.                        |
| S/N: XXXX                                                                            | Q C<br>XX XX XXXX<br>PASSED |
| CODE: XXX                                                                            |                             |
| LOT NO:                                                                              |                             |
|  |                             |
| RoHS Compliant                                                                       |                             |