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[Kingbright](#)  
[APECVA3010MGC](#)

For any questions, you can email us directly:

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# Kingbright

## 3.0x1.0 mm SMD CHIP LED LAMP

PRELIMINARY SPEC

Part Number: APECVA3010MGC

Mega Green

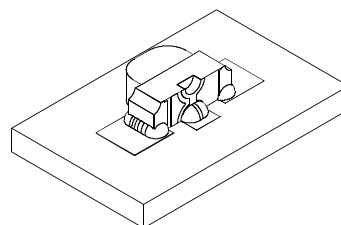
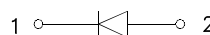
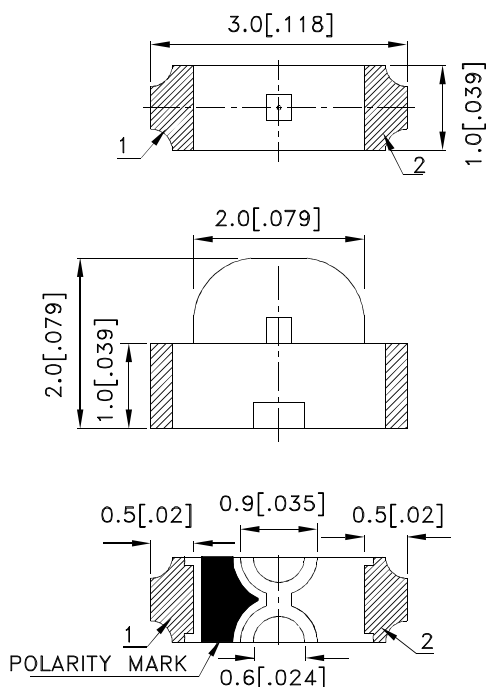
### Features

- 3.0mmx1.0mm SMT LED, 2.0mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for back light and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

The Mega Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.15(0.006)$  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.



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## Selection Guide

| Part No.      | Dice                 | Lens Type   | Iv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|---------------|----------------------|-------------|------------------------|------|----------------------|
|               |                      |             | Min.                   | Typ. | θ1/2                 |
| APECVA3010MGC | Mega Green (AlGaInP) | WATER CLEAR | 36                     | 80   | 120°                 |

Notes:

- θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- Luminous intensity/ luminous Flux: +/-15%.

## Electrical / Optical Characteristics at TA=25°C

| Symbol                | Parameter                | Device     | Typ. | Max. | Units | Test Conditions           |
|-----------------------|--------------------------|------------|------|------|-------|---------------------------|
| $\lambda_{peak}$      | Peak Wavelength          | Mega Green | 574  |      | nm    | I <sub>F</sub> =20mA      |
| $\lambda_D$ [1]       | Dominant Wavelength      | Mega Green | 570  |      | nm    | I <sub>F</sub> =20mA      |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Mega Green | 26   |      | nm    | I <sub>F</sub> =20mA      |
| C                     | Capacitance              | Mega Green | 20   |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2]    | Forward Voltage          | Mega Green | 2.1  | 2.5  | V     | I <sub>F</sub> =20mA      |
| I <sub>R</sub>        | Reverse Current          | Mega Green |      | 10   | uA    | V <sub>R</sub> =5V        |

Notes:

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

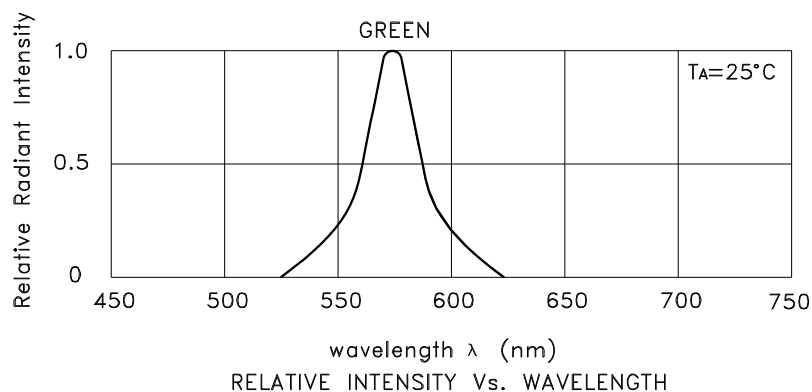
## Absolute Maximum Ratings at TA=25°C

| Parameter                | Mega Green     | Units |
|--------------------------|----------------|-------|
| Power dissipation        | 75             | 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:

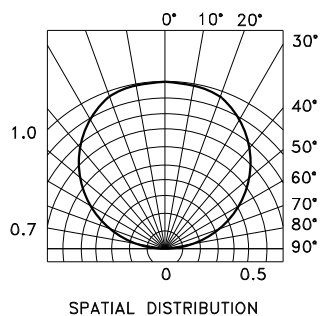
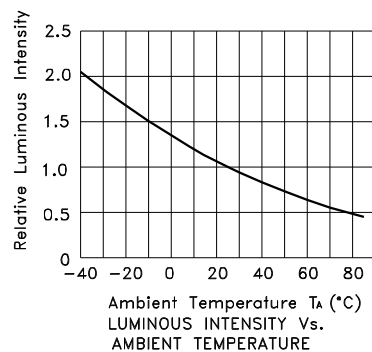
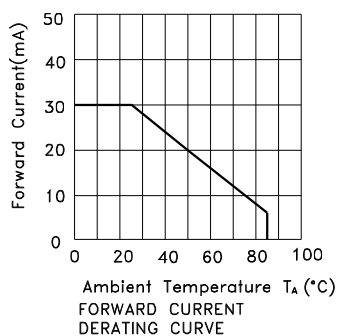
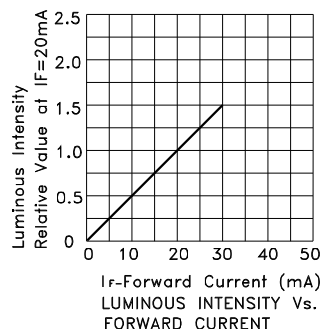
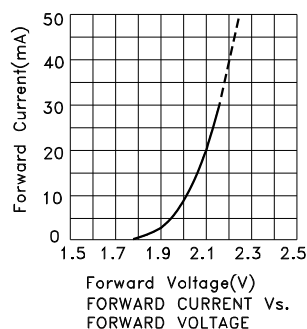
- 1/10 Duty Cycle, 0.1ms Pulse Width.

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## Mega Green

## APECVA3010MGC

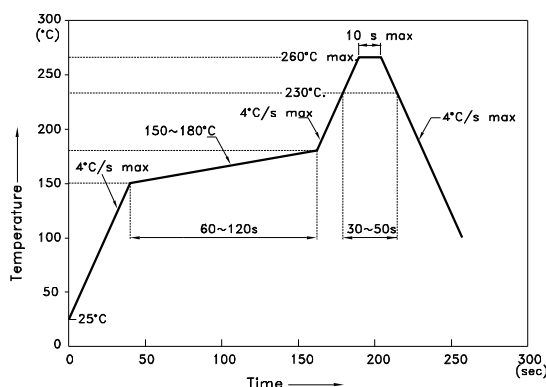


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## APECVA3010MGC

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.

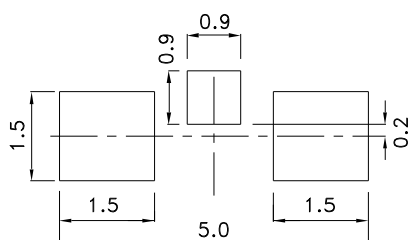
Reflow Soldering Profile For Lead-free SMT Process.



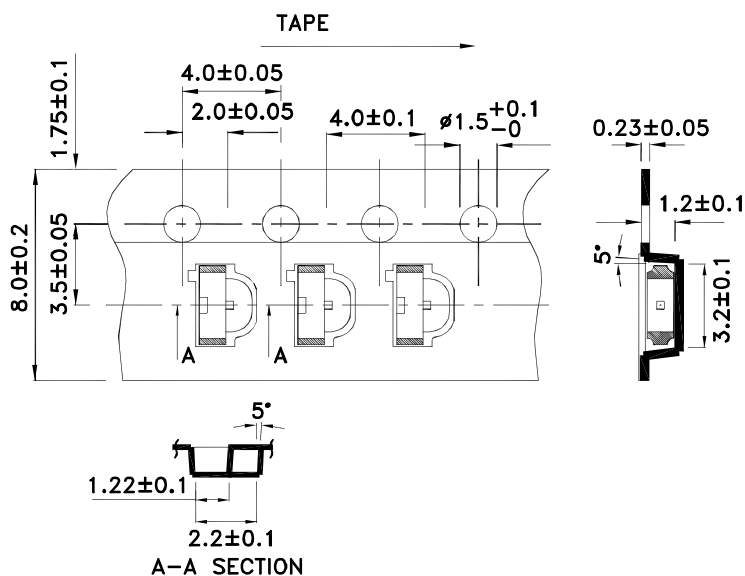
### NOTES:

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)



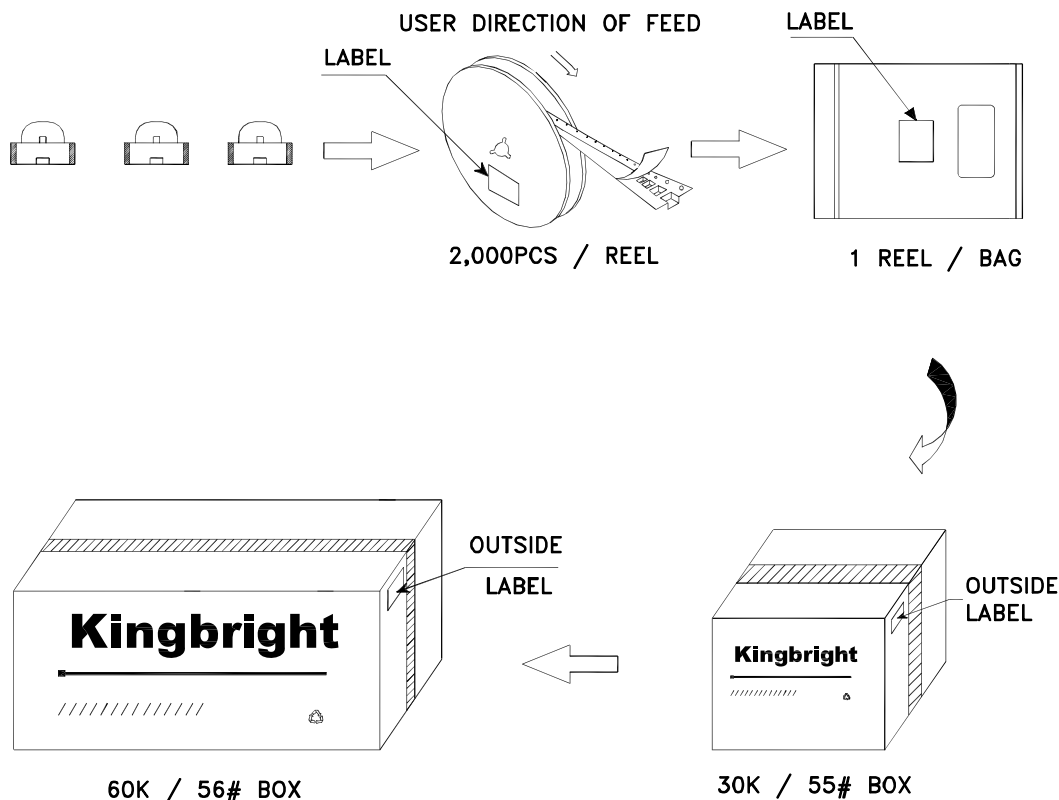
## Tape Dimensions (Units : mm)



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## PACKING & LABEL SPECIFICATIONS

## APECVA3010MGC



|                                                                                      |           |      |                                                                                                                                   |
|--------------------------------------------------------------------------------------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Kingbright</b>                                                                    |           |      |                                                                                                                                   |
| P/NO: APECVA3010xxx                                                                  |           |      |                                                                                                                                   |
| QTY:                                                                                 | 2,000 pcs | Q.C. | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> Q C<br/>XX XX XXXX<br/>PASSED </div> |
| S/N:                                                                                 | XXXX      |      |                                                                                                                                   |
| CODE:                                                                                | XXX       |      |                                                                                                                                   |
| LOT NO:                                                                              |           |      |                                                                                                                                   |
|  |           |      |                                                                                                                                   |
| RoHS Compliant                                                                       |           |      |                                                                                                                                   |