

### 3.5x2.8mm SURFACE MOUNT LED LAMP

Part Number: AA3528EC High Efficiency Red

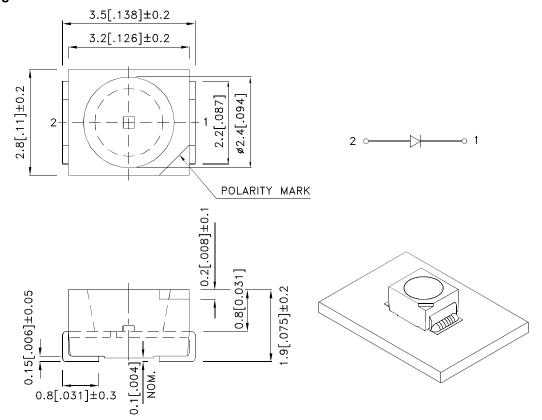
### **Features**

- Single color.
- Suitable for all SMD assembly and solder process.
- Available on tape and reel.
- Ideal for backlighting.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

### Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

### **Package Dimensions**



- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
- The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
   The device has a single mounting surface. The device must be mounted according to the specifications.

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### **Selection Guide**

| Part No. | Emitting Color (Material)       | Lens Type   | lv (mcd) [2]<br>@ 20mA |      | Viewing<br>Angle [1] |
|----------|---------------------------------|-------------|------------------------|------|----------------------|
|          |                                 |             | Min.                   | Тур. | 201/2                |
| AA252050 | High Efficiency Red (GaAsP/GaP) | Matan Class | 12                     | 25   | 120°                 |
| AA3528EC |                                 | Water Clear | *8                     | *12  |                      |

#### 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%.

  \* 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          | High Efficiency Red | 627  |      | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | High Efficiency Red | 617  |      | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | High Efficiency Red | 45   |      | nm    | IF=20mA         |
| С      | Capacitance              | High Efficiency Red | 15   |      | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | High Efficiency Red | 2    | 2.5  | V     | IF=20mA         |
| lr     | Reverse Current          | High Efficiency Red |      | 10   | uA    | VR=5V           |

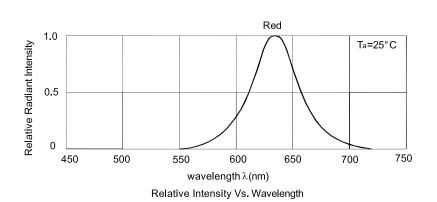
- 1. Wavelength: +/-1nm.
- 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to CIE127-2007 standards.
- 4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

### Absolute Maximum Ratings at TA=25°C

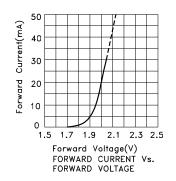
| Parameter                | Values         | Units          |  |  |
|--------------------------|----------------|----------------|--|--|
| Power dissipation        | 75             | mW             |  |  |
| DC Forward Current       | 30             | mA             |  |  |
| Peak Forward Current [1] | 160            | mA             |  |  |
| Reverse Voltage          | 5              | V              |  |  |
| Operating Temperature    | -40°C To +85°C | -40°C To +85°C |  |  |
| Storage Temperature      | -40°C To +85°C | -40°C To +85°C |  |  |

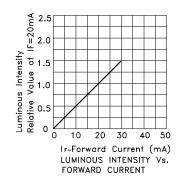
- 1.1/10 Duty Cycle, 0.1ms Pulse Width.
   Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

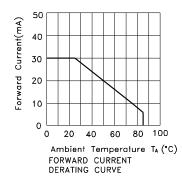
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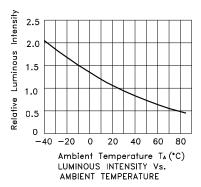


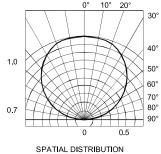
High Efficiency Red AA3528EC











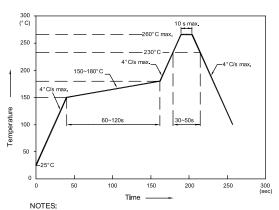
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### **AA3528EC**

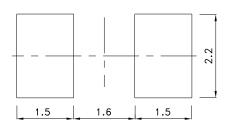
Reflow soldering is recommended and the soldering profile is shown below. Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.



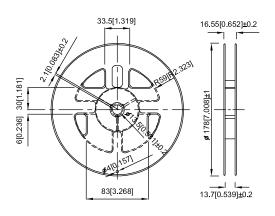
- 1.We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
- 2.Don't cause stress to the epoxy resin while it is exposed to high temperature
- to high temperature.
  3.Number of reflow process shall be 2 times or less.

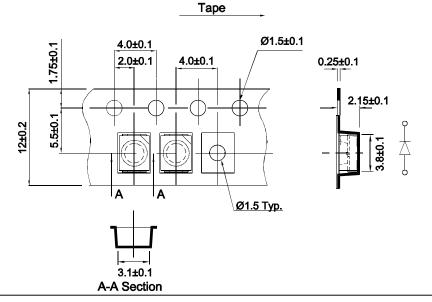
### Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



### Tape Dimensions (Units : mm)

### **Reel Dimension**

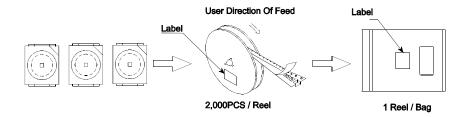


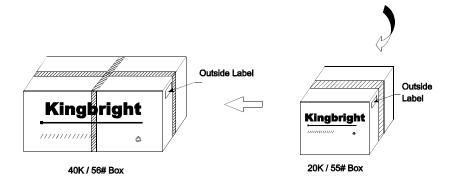


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### **PACKING & LABEL SPECIFICATIONS**

#### **AA3528EC**







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