

Part Number: APBA3210EYC-F01

High Efficiency Red  
Yellow

### Features

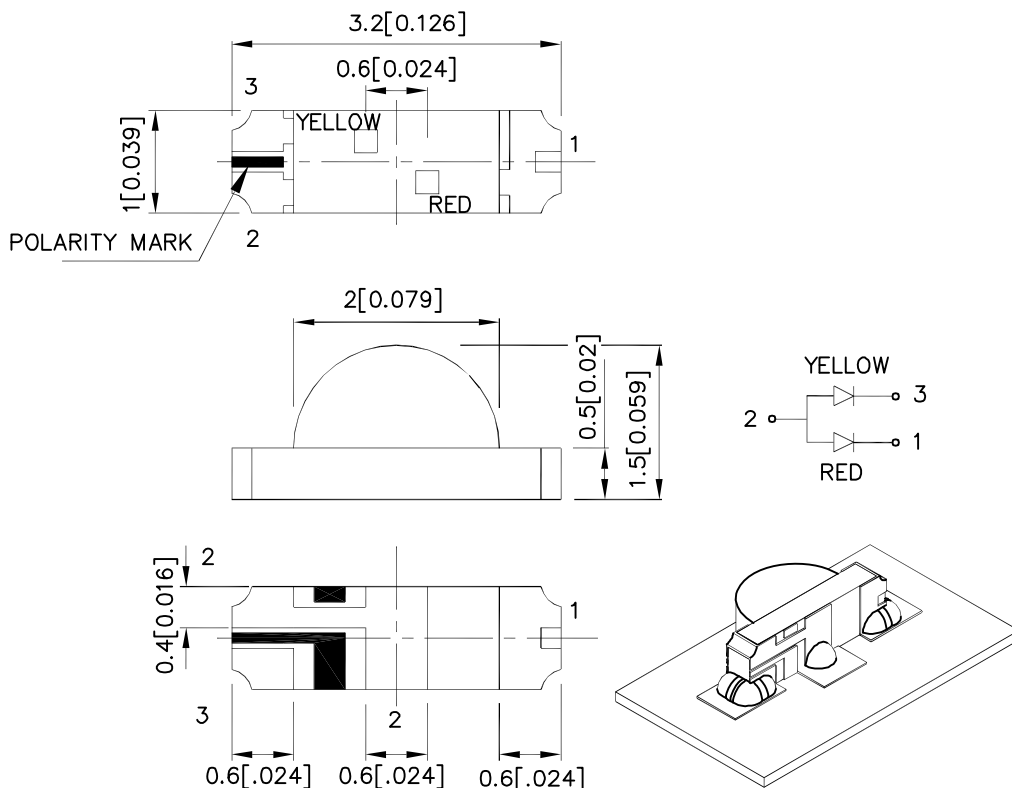
- 3.2mmx1.0mm right angle SMT LED, 1.5mm thickness.
- Low power consumption.
- Wide viewing angle.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHs compliant.

### Description

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

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1(0.004)$  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                |
| APBA3210EYC-F01 | High Efficiency Red (GaAsP/GaP) | WATER CLEAR | 4                      | 12   | 120°                 |
|                 | Yellow (GaAsP/GaP)              |             | 2.6                    | 8    |                      |

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          | High Efficiency Red<br>Yellow | 627<br>590 |            | nm    | IF=20mA         |
| λD [1] | Dominant Wavelength      | High Efficiency Red<br>Yellow | 625<br>588 |            | nm    | IF=20mA         |
| Δλ1/2  | Spectral Line Half-width | High Efficiency Red<br>Yellow | 45<br>35   |            | nm    | IF=20mA         |
| C      | Capacitance              | High Efficiency Red<br>Yellow | 15<br>20   |            | pF    | VF=0V;f=1MHz    |
| VF [2] | Forward Voltage          | High Efficiency Red<br>Yellow | 2<br>2.1   | 2.5<br>2.5 | V     | IF=20mA         |
| IR     | Reverse Current          | High Efficiency Red<br>Yellow |            | 10<br>10   | uA    | VR = 5V         |

Notes:

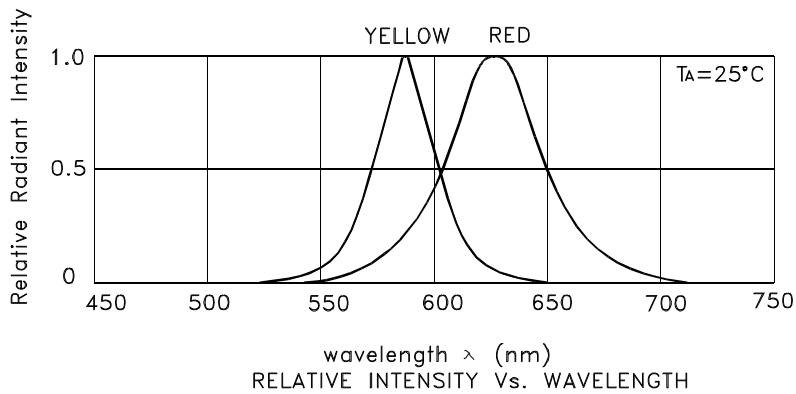
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

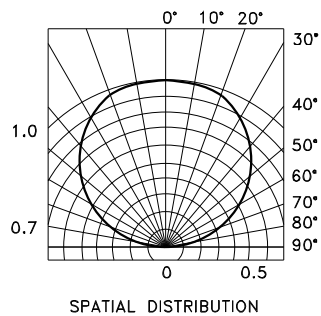
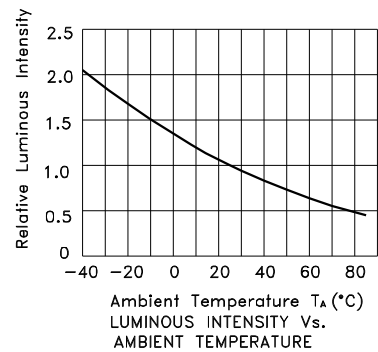
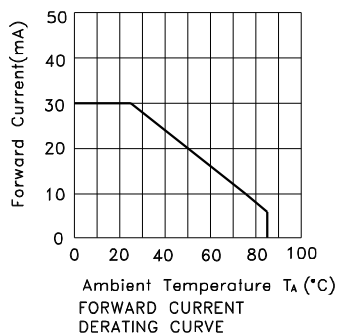
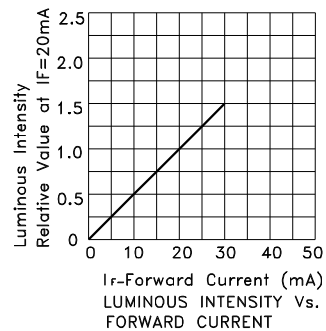
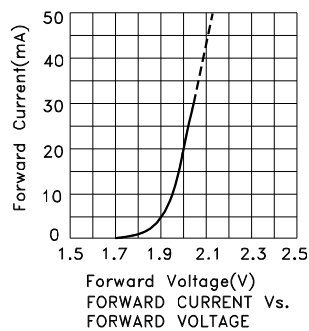
| Parameter                | High Efficiency Red | Yellow | Units |
|--------------------------|---------------------|--------|-------|
| Power dissipation        | 75                  | 75     | mW    |
| DC Forward Current       | 30                  | 30     | mA    |
| Peak Forward Current [1] | 160                 | 140    | 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.

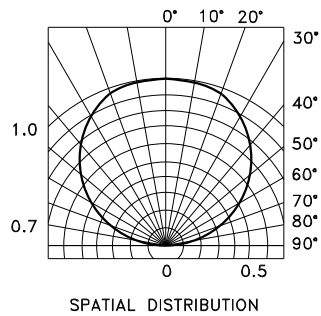
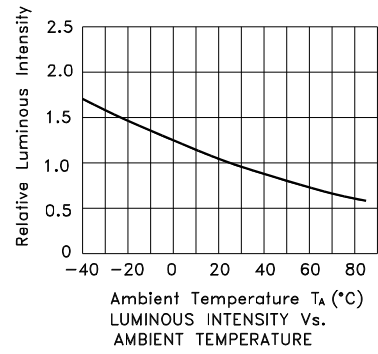
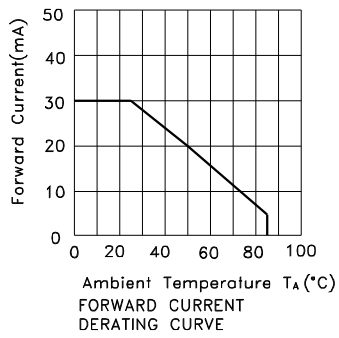
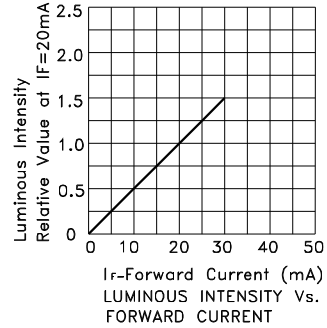
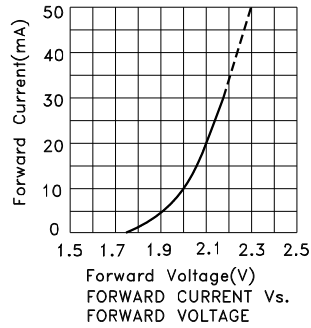


## APBA3210EYC-F01 High Efficiency Red



# Kingbright

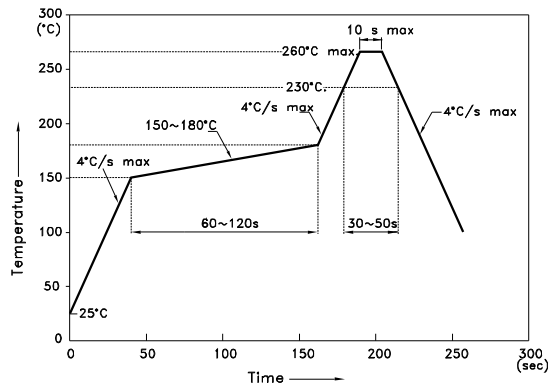
## Yellow



## APBA3210EYC-F01

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.

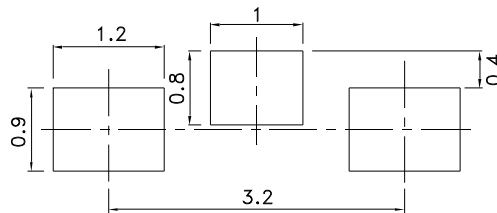
Reflow Soldering Profile For Lead-free SMT Process.



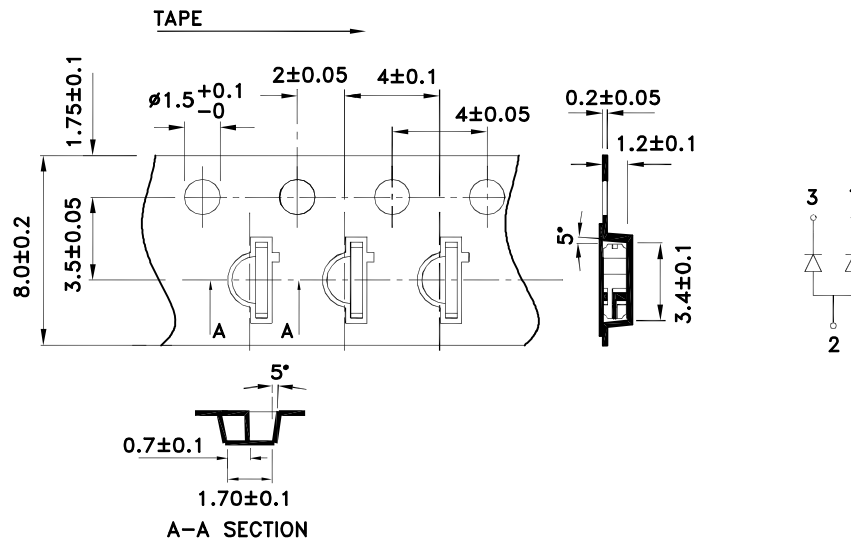
NOTES:

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)



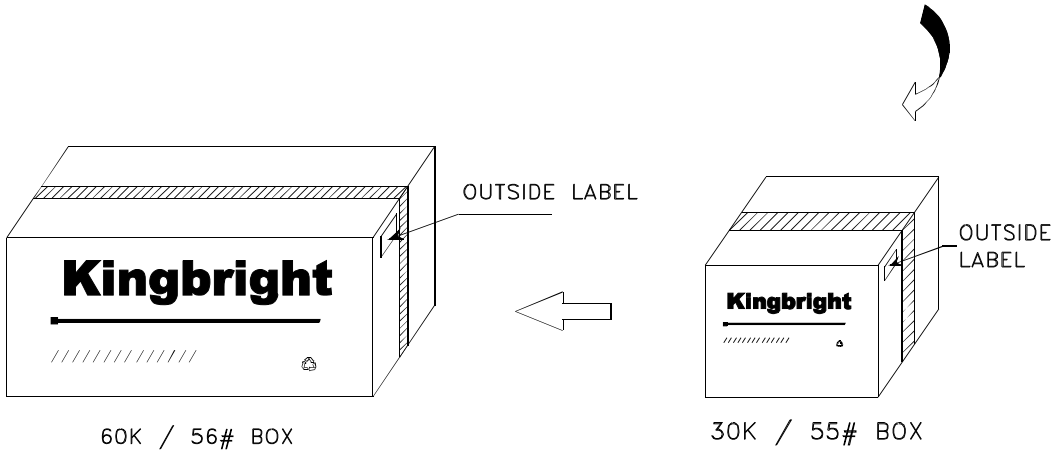
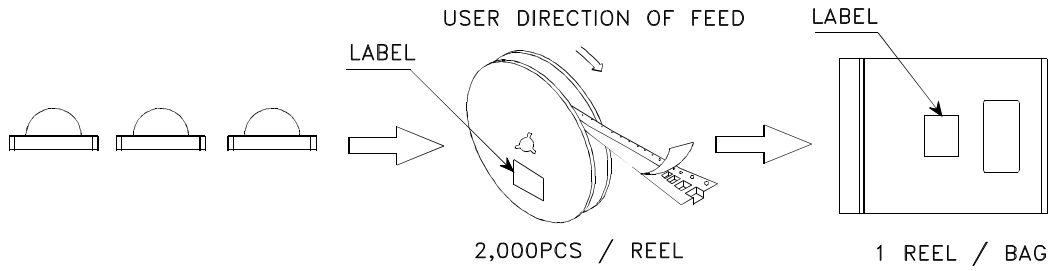
### Tape Dimensions (Units : mm)



# Kingbright

PACKING & LABEL SPECIFICATIONS

APBA3210EYC-F01



|   |   |     |            |        |
|---|---|-----|------------|--------|
| <h2 style="margin: 0;">Kingbright</h2>                        |   |     |            |        |
| P/NO: APBA3210xxx   |   |     |            |        |
| QTY: 2,000 pcs  | Q.C.  |     |            |        |
| S/N: XXXX   | <table border="1" style="margin: auto; border-radius: 50%; padding: 5px;"> <tr> <td style="text-align: center;">Q C</td> </tr> <tr> <td style="text-align: center;">XX XX XXXX</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table> | Q C | XX XX XXXX | PASSED |
| Q C   |   |     |            |        |
| XX XX XXXX  |   |     |            |        |
| PASSED  |   |     |            |        |
| CODE: XXX   |   |     |            |        |
| LOT NO:   |   |     |            |        |
|   |   |     |            |        |
| <small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</small><br>RoHS Compliant |   |     |            |        |