

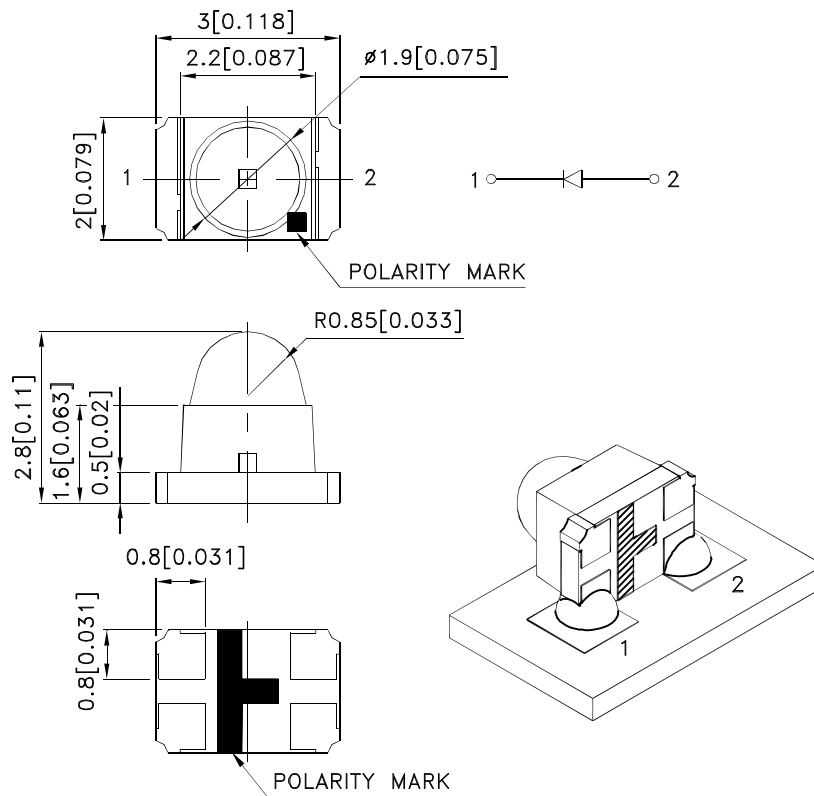
Features

- 3.0mmx2.0mm SMT LED, 2.8mm thickness.
- Low power consumption.
- Ideal for back light and indicator
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- Low current IF=2mA operating.
- RoHS compliant.

Description

The Hyper Red device is based on light emitting diode chip made from AlGaInP.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.2 (0.008") unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior 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] @ 2mA | | Viewing Angle [1] |
|---------------------|---------------------|-------------|-----------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| APDA3020LSECK/J3-PF | Hyper Red (AlGaInP) | Water Clear | 700 | 1000 | 10° |
| | | | *250 | *500 | |

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 the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Min. | Typ. | Max. | Units | Test Conditions |
|--------------------|--------------------------|-----------|------|------|------|-------|---------------------------|
| λ _{peak} | Peak Wavelength | Hyper Red | | 640 | | nm | I _F =2mA |
| λ _D [1] | Dominant Wavelength | Hyper Red | | 625 | | nm | I _F =2mA |
| Δλ _{1/2} | Spectral Line Half-width | Hyper Red | | 20 | | nm | I _F =2mA |
| C | Capacitance | Hyper Red | | 27 | | pF | V _F =0V;f=1MHz |
| V _F [2] | Forward Voltage | Hyper Red | 1.5 | 1.8 | 2.1 | V | I _F =2mA |
| I _R | Reverse Current | Hyper Red | | | 10 | uA | V _R =5V |

Notes:

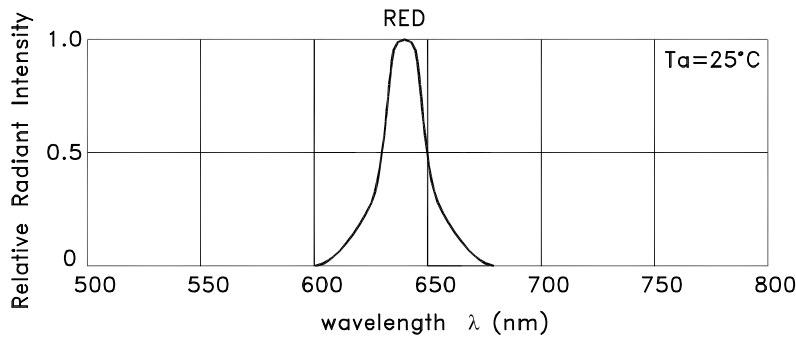
- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.
- 3.Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

| Parameter | Hyper Red | Units |
|--------------------------|----------------|-------|
| Power dissipation | 63 | 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:

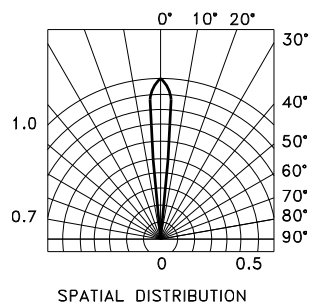
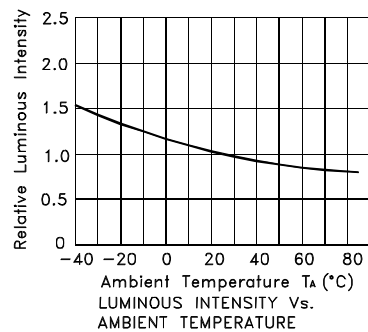
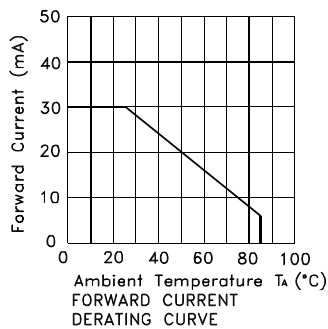
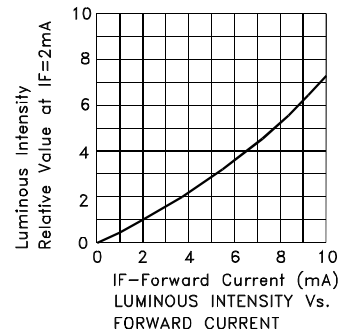
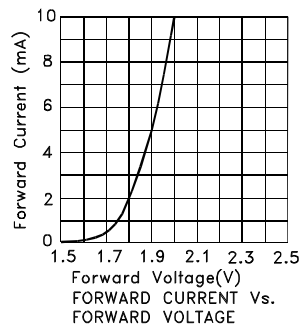
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



RELATIVE INTENSITY Vs. WAVELENGTH

Hyper Red

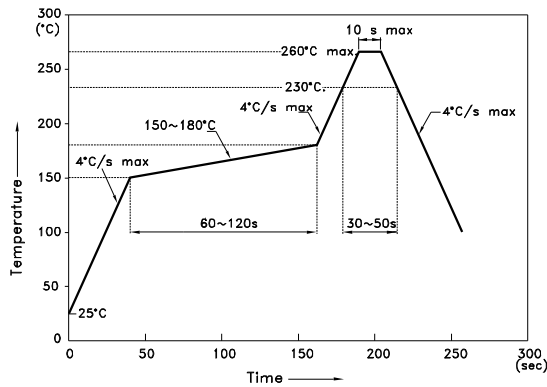
APDA3020LSECK/J3-PF



APDA3020LSECK/J3-PF

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.

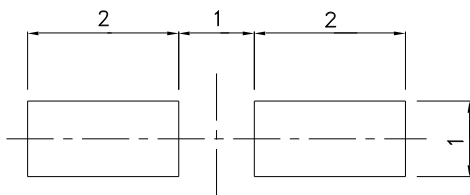
Reflow Soldering Profile For Lead-free SMT Process.



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.

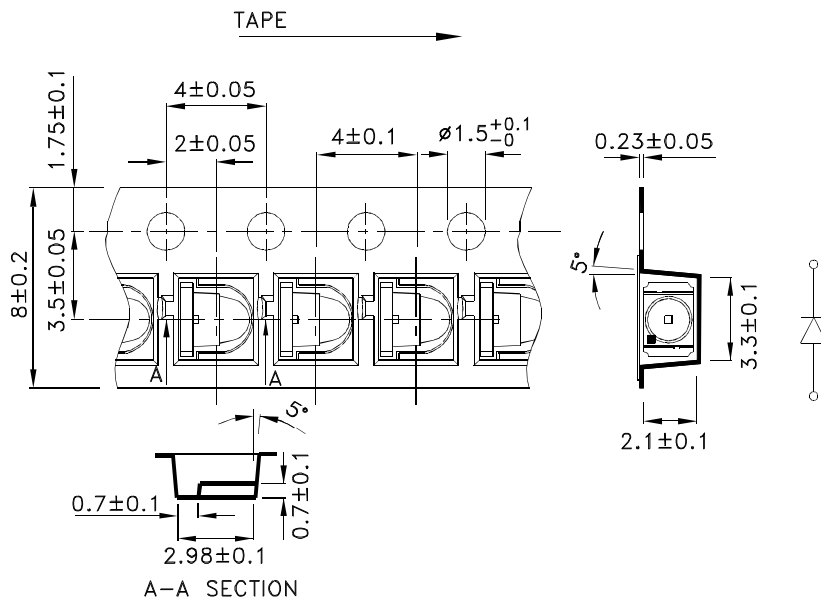
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

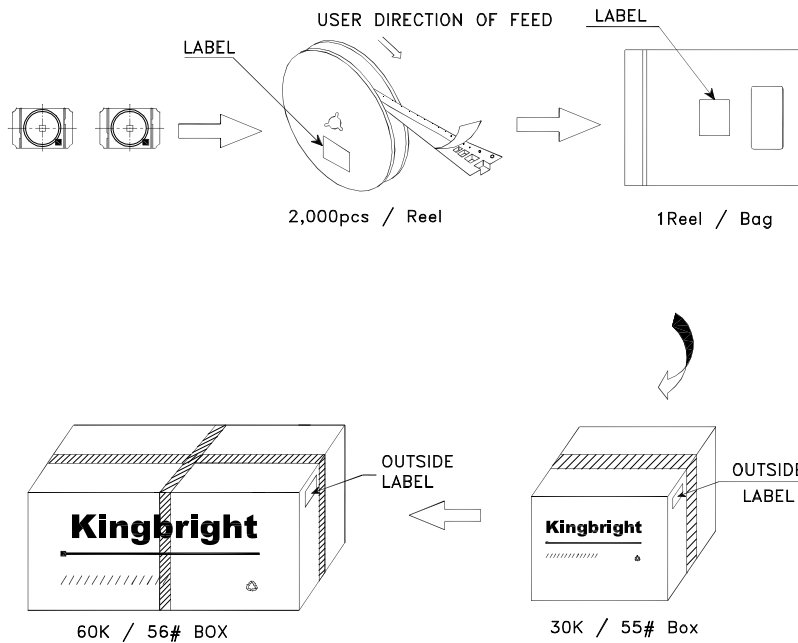



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

APDA3020LSECK/J3-PF



| | | |
|--|------|----------------------------|
| Kingbright | | |
| P/NO: APDA3020XXX | | |
| QTY: 2,000 pcs | Q.C. | Q C XX XX XXX PASSED |
| S/N: XXXX | | |
| CODE: XXX | | |
| LOT NO: | | |
|  xxxxxxxxxxxxxxxxxxxxxxxxxxxx | | |
| RoHS Compliant | | |

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