

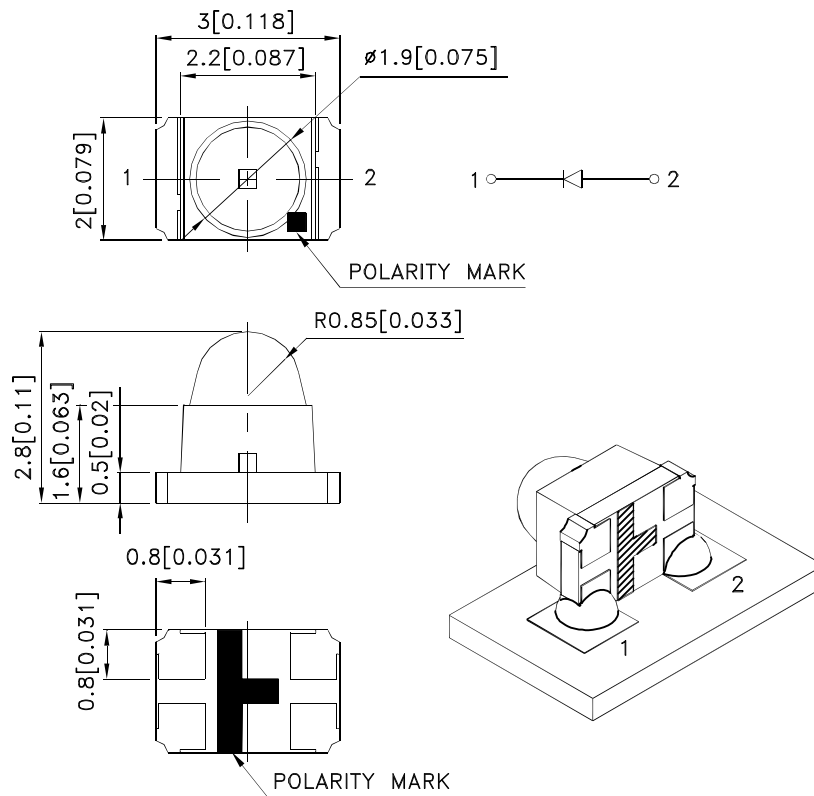
### Features

- 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  $\pm 0.2$  (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]<br>@ 2mA |      | Viewing<br>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 <sub>peak</sub>  | Peak Wavelength          | Hyper Red |      | 640  |      | nm    | I <sub>F</sub> =2mA       |
| λ <sub>D</sub> [1] | Dominant Wavelength      | Hyper Red |      | 625  |      | nm    | I <sub>F</sub> =2mA       |
| Δλ <sub>1/2</sub>  | Spectral Line Half-width | Hyper Red |      | 20   |      | nm    | I <sub>F</sub> =2mA       |
| C                  | Capacitance              | Hyper Red |      | 27   |      | pF    | V <sub>F</sub> =0V;f=1MHz |
| V <sub>F</sub> [2] | Forward Voltage          | Hyper Red | 1.5  | 1.8  | 2.1  | V     | I <sub>F</sub> =2mA       |
| I <sub>R</sub>     | Reverse Current          | Hyper Red |      |      | 10   | uA    | V <sub>R</sub> =5V        |

Notes:

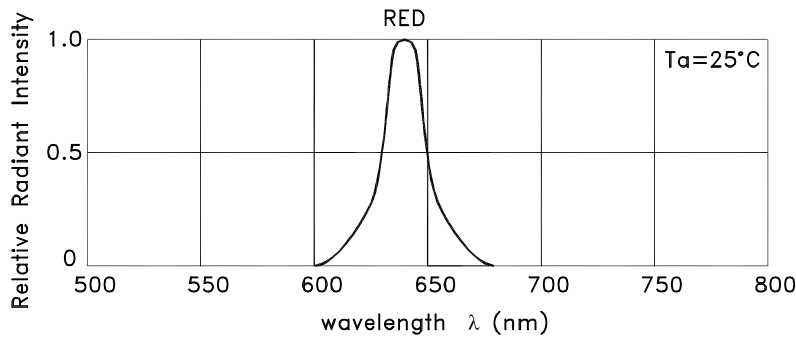
- 1.Wavelength: +/-1nm.
- 2.Forward Voltage: +/-0.1V.
- 3.Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## 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:

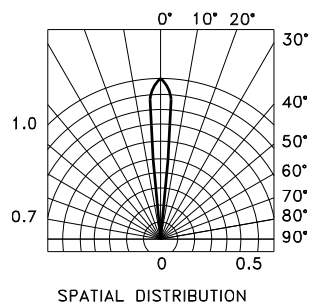
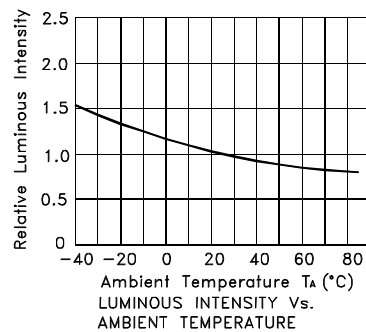
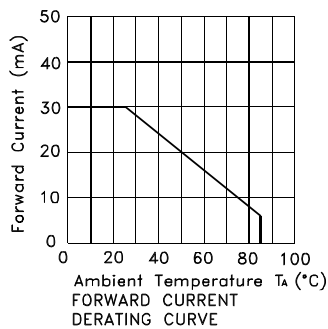
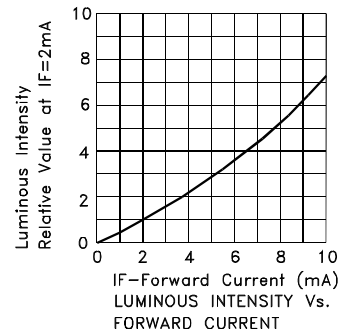
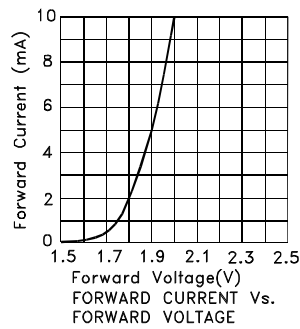
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



RELATIVE INTENSITY Vs. WAVELENGTH

## Hyper Red

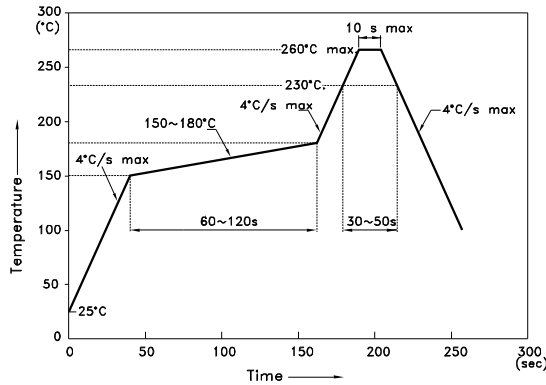
### APDA3020LSECK/J3-PF



## 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.

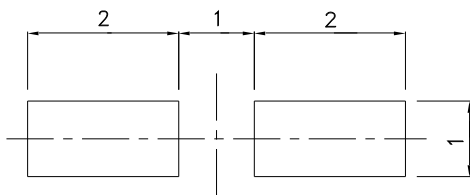
Reflow Soldering Profile For Lead-free SMT Process.



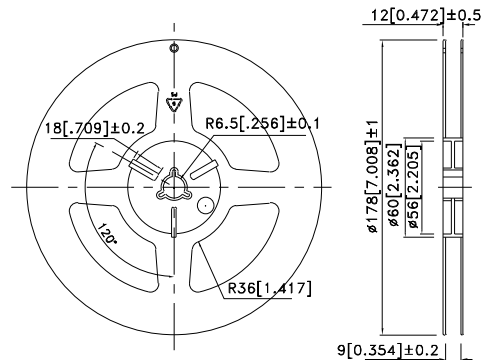
NOTES:

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.

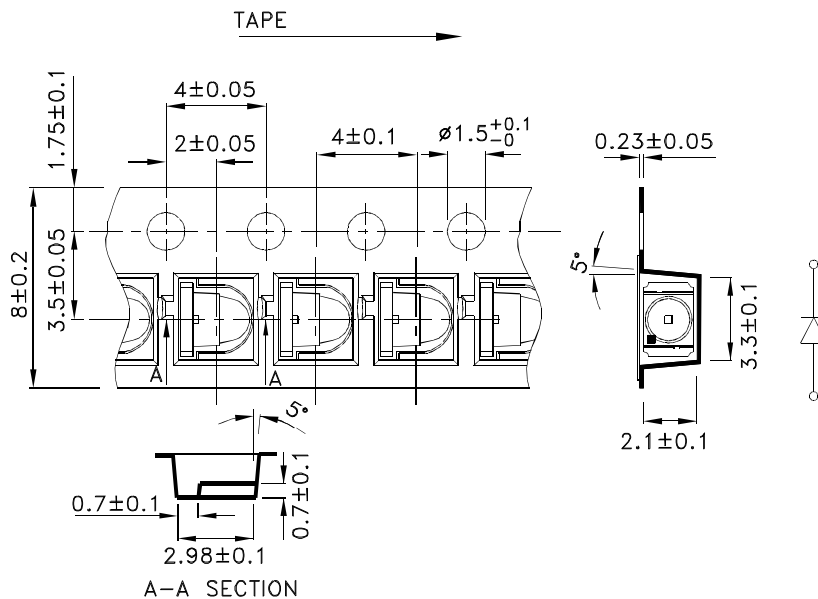
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension

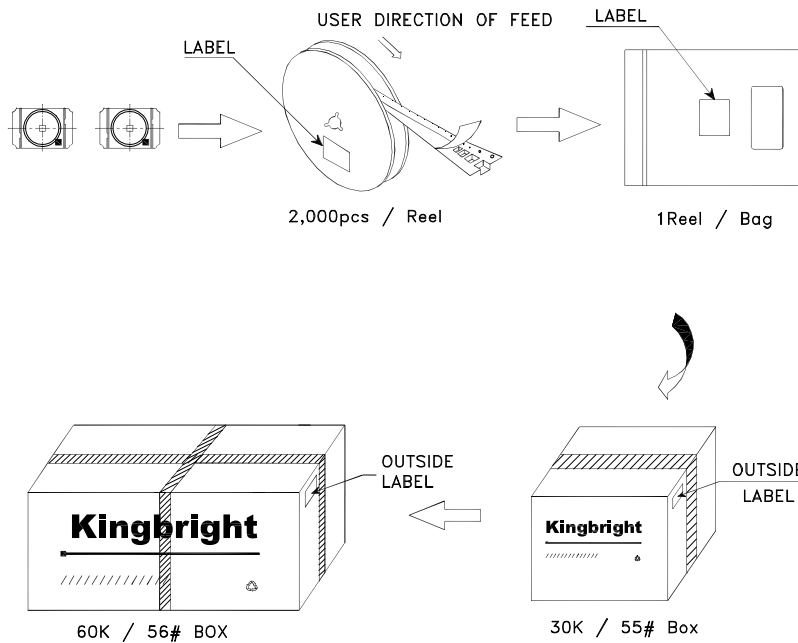



### Tape Dimensions (Units : mm)



## PACKING & LABEL SPECIFICATIONS

## APDA3020LSECK/J3-PF



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

### Terms and conditions for the usage of this document

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
6. All design applications should refer to Kingbright application notes available at <http://www.KingbrightUSA.com/ApplicationNotes>



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.