

Part Number: KPTD-3216EC-01

High Efficiency Red

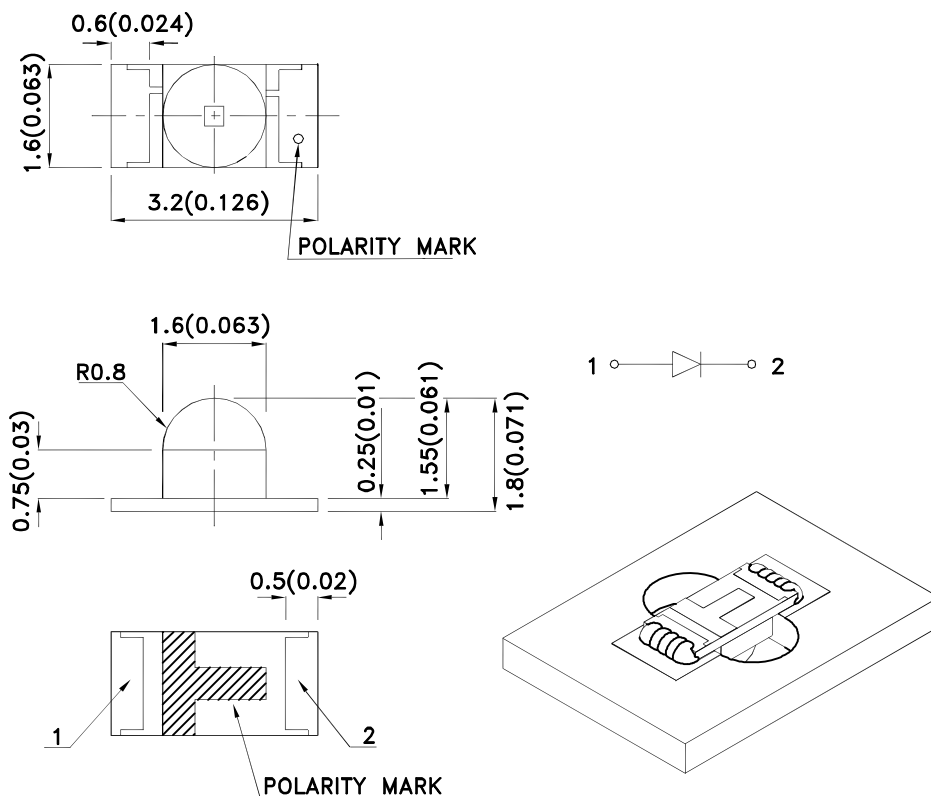
### Features

- 3.2mmX1.6mm SMT LED, 1.8mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- 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



#### 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] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPTD-3216EC-01	High Efficiency Red (GaAsP/GaP)	Water Clear	30	55	40°
			*20	*50	

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	Typ.		Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	High Efficiency Red	627	*627		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	High Efficiency Red	625	*617		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	High Efficiency Red	45			nm	I <sub>F</sub> =20mA
C	Capacitance	High Efficiency Red	15			pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	High Efficiency Red	2		2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	High Efficiency Red			10	uA	V <sub>R</sub> =5V

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

\* Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

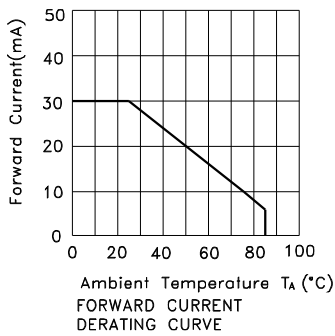
Parameter	High Efficiency Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

Note:

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



## High Efficiency Red KPTD-3216EC-01



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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.

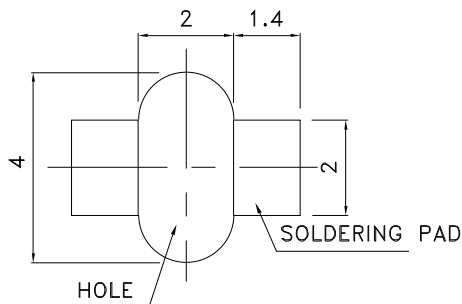
Reflow Soldering Profile For Lead-free SMT Process.



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.

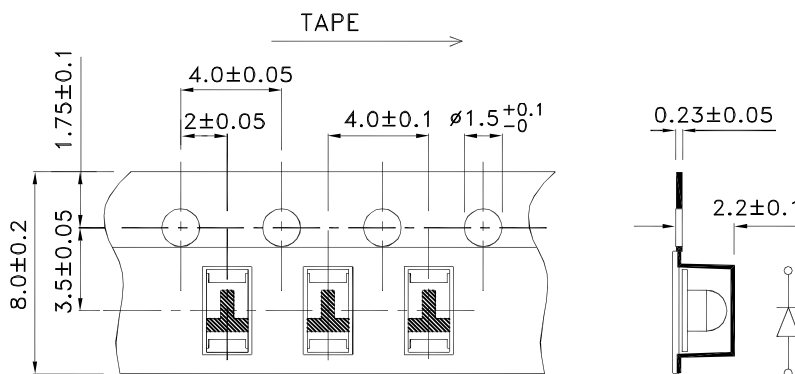
### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



### Reel Dimension



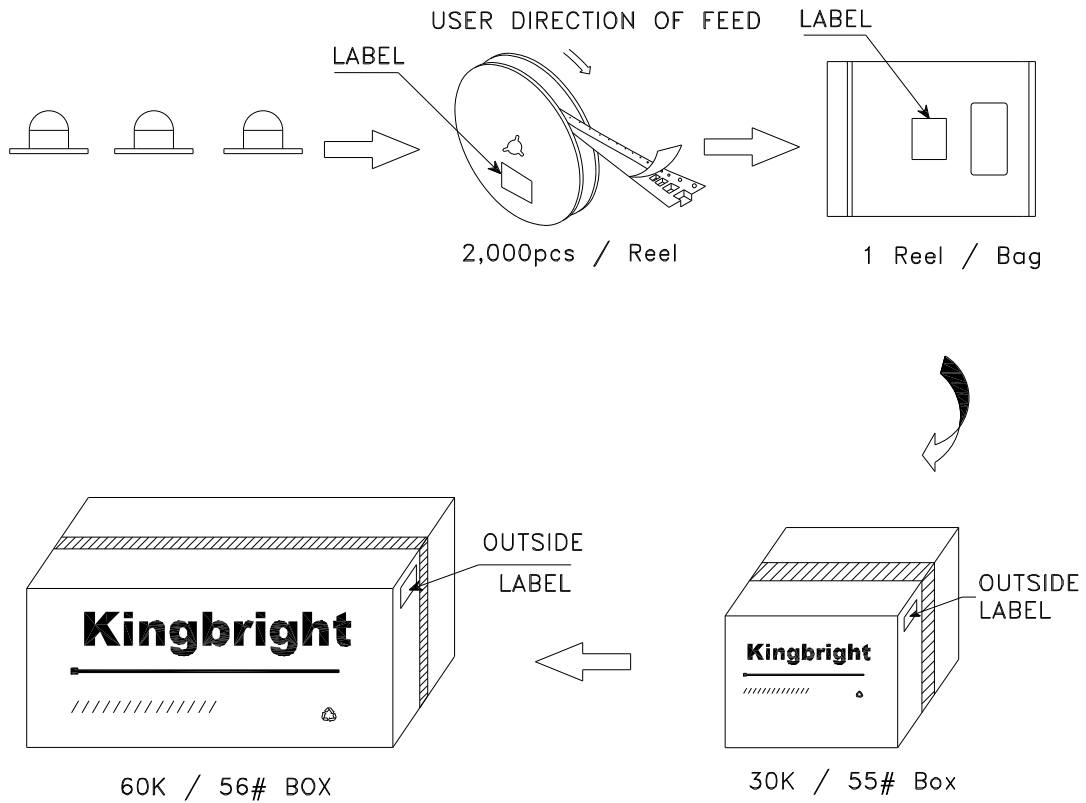
### Tape Dimensions (Units : mm)




# Kingbright

## PACKING & LABEL SPECIFICATIONS

KPTD-3216EC-01



<b>Kingbright</b>	
P/NO: KPTD-3216xxx	
QTY: 2,000 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C xx xx xxxx PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

Detailed application notes are listed on our website.  
[http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)

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