

2.0x1.25mm SMD CHIP LED LAMP

Part Number: KP-2012SURCK Hyper Red

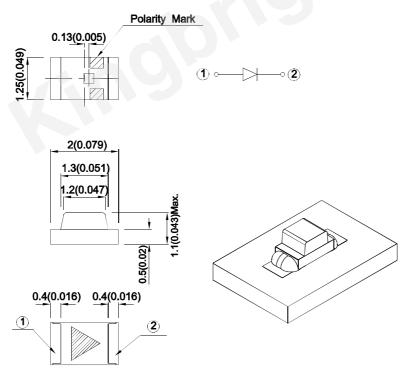
Features

- 2.0mmx1.25mm SMD LED,1.1mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Hyper Red source color devices are made with Al-GaInP on GaAs substrate Light Emitting Diode.

Package Dimensions



SPEC NO: DSAA3359

APPROVED: Wynec

- 1. All dimensions are in millimeters (inches).
 2. Tolerance is ±0.1(0.004") 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.

REV NO: V.16A

CHECKED: Allen Liu

DATE: OCT/30/2015 DRAWN: L.Q.Xie

PAGE: 1 OF 5

ERP: 1203000189

Kingbright

Selection Guide

Part No.	Emitting Color (Material)	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
KP-2012SURCK	Hyper Red (AlGaInP)	Matan Class	120	230	- 120°
		Water Clear	*40	*80	

Notes:

- $1. \theta 1/2$ 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	Emitting Color	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red	645		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red	630		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red	28		nm	IF=20mA
С	Capacitance	Hyper Red	35		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red	1.95	2.5	V	IF=20mA
lr	Reverse Current	Hyper Red		10	uA	V _R =5V

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

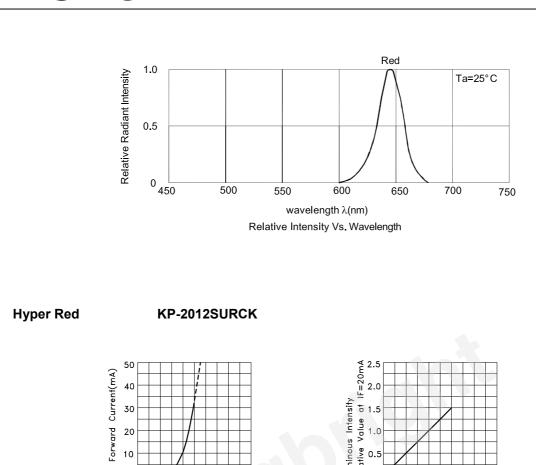
Absolute Maximum Ratings at TA=25°C

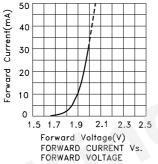
Parameter	Values	Units		
Power dissipation	75	mW		
DC Forward Current	30	mA		
Peak Forward Current [1]	185	mA		
Reverse Voltage	5	V		
Operating Temperature	-40°C To +85°C			
Storage Temperature	-40°C To +85°C			

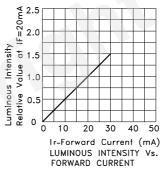
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

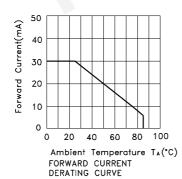
DATE: OCT/30/2015 **SPEC NO: DSAA3359 REV NO: V.16A** PAGE: 2 OF 5 **APPROVED: Wynec CHECKED: Allen Liu** DRAWN: L.Q.Xie ERP: 1203000189

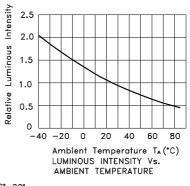
Kingbright

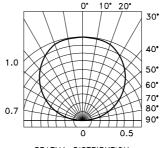












SPATIAL DISTRIBUTION

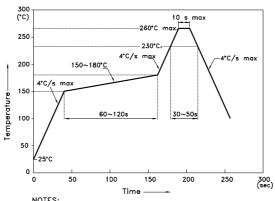
SPEC NO: DSAA3359 **REV NO: V.16A** DATE: OCT/30/2015 PAGE: 3 OF 5 **APPROVED: Wynec CHECKED: Allen Liu** DRAWN: L.Q.Xie ERP: 1203000189

Kingbright

KP-2012SURCK

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.



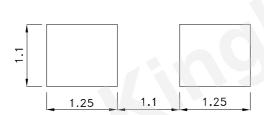
- NOTES:

 1.We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.

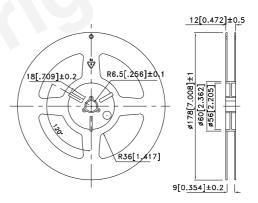
 2.Don't cause stress to the epoxy resin while it is exposed to high temperature.
 - to high temperature.

 3.Number of reflow process shall be 2 times or less.

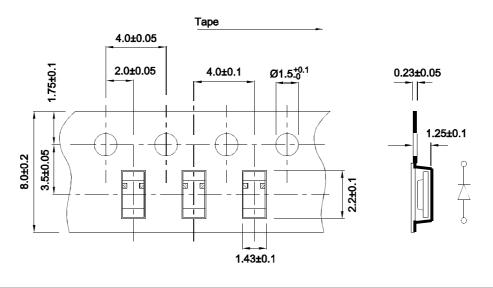
Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



Reel Dimension

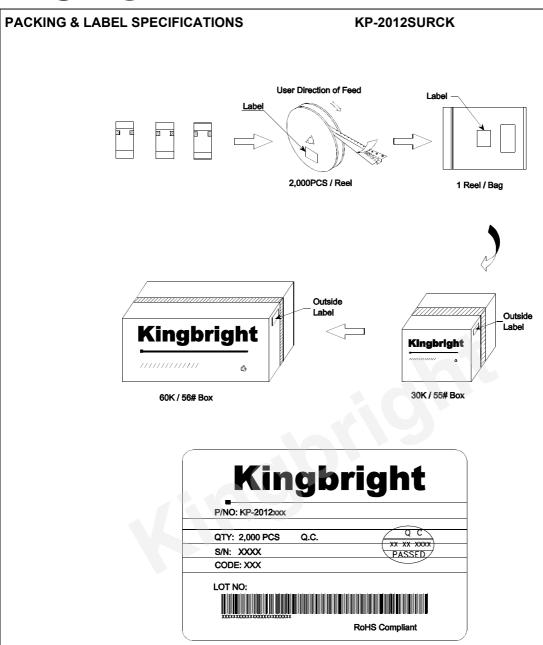


Tape Dimensions (Units: mm)



SPEC NO: DSAA3359 APPROVED: Wynec REV NO: V.16A CHECKED: Allen Liu DATE: OCT/30/2015 DRAWN: L.Q.Xie PAGE: 4 OF 5 ERP: 1203000189





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.kingbright.com/application notes

 SPEC NO: DSAA3359
 REV NO: V.16A
 DATE: OCT/30/2015
 PAGE: 5 OF 5

 APPROVED: Wynec
 CHECKED: Allen Liu
 DRAWN: L.Q.Xie
 ERP: 1203000189