

ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

Features

- 3.0mmx2.5mm SMD LED, 1.4mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for back light and indicator.
- Inner lens type.
- Moisture sensitivity level : level 3.
- Package : 2000pcs / reel.
- RoHS compliant.

3.0x2.5mm SURFACE MOUNT LED LAMP

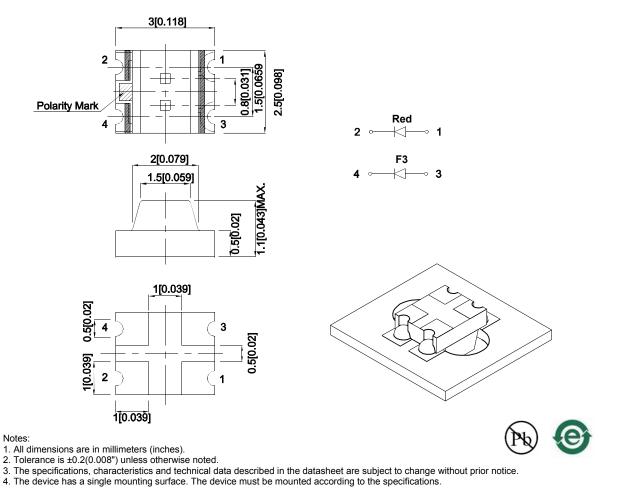
Part Number: APB3025SURKF3C-01

Hyper Red

Descriptions

- The Hyper Red source color devices are made with Al GaInP on GaAs substrate Light Emitting Diode.
- F3 Made with Gallium Arsenide Infrared Emitting diodes.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic glove when handling the LEDs.
- All devices, equipment and machinery must be electri cally grounded.

Package Dimensions



SPEC NO: DSAN3274 APPROVED: Wynec REV NO: V.2A CHECKED: Allen Liu DATE: SEP/26/2016 DRAWN: L.T.Zhang PAGE: 1 OF 7 ERP: 1203014073

Part No.	Emitting Color (Material)	nitting Color (Material) Lens Type	lv (mcd) [2] @ 20mA		Po (mW/sr) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	Min.	Тур.	201/2
APB3025SURKF3C-01	Hyper Red(AlGaInP)	- Water Clear	120	250	-	-	- 160°
			*40	*70	-	-	
	Infrared (GaAs)		-	-	2	3	
			-	-	*2	*3	

Notes:

1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

2. Radiant Intensity / Luminous Intensity: +/-15%.

* Radiant Intensity / Luminous Intensity value is traceable CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C (Red)

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

Notes:

1. Wavelength: +/-1nm.

Forward Voltage: +/-0.1V.
Wavelength value is traceable to CIE127-2007 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 (Red)

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				

Notes:

1.1/10 Duty Cycle, 0.1ms Pulse Width.
Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

Electrical / Optical Characteristics at TA=25°C (F3)

Parameter	P/N	Symbol	Тур.	Max.	Units	Test Conditions
Forward Voltage [1]	F3	VF	1.2	1.6	V	I⊧=20mA
Reverse Current	F3	lr		10	uA	VR = 5V
Capacitance	F3	С	90		pF	VF=0V;f=1MHz
Peak Spectral Wavelength	F3	λP	940		nm	I⊧=20mA
Spectral Bandwidth	F3	Δλ1/2	50		nm	I⊧=20mA

Notes:

1. Forward Voltage: +/-0.1V.

2. Wavelength value is traceable to CIE127-2007 standards.

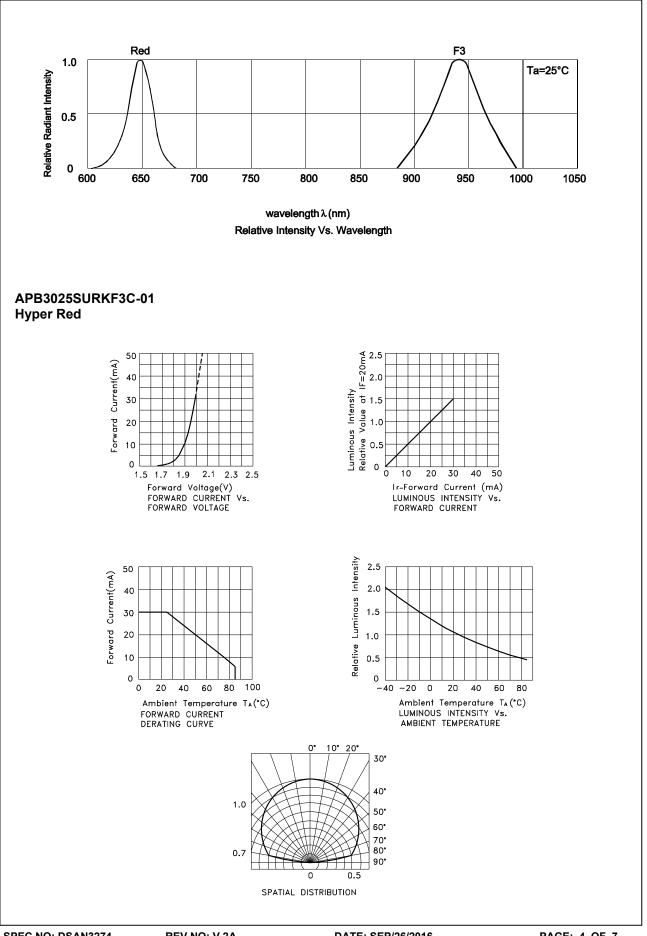
3. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C (F3)

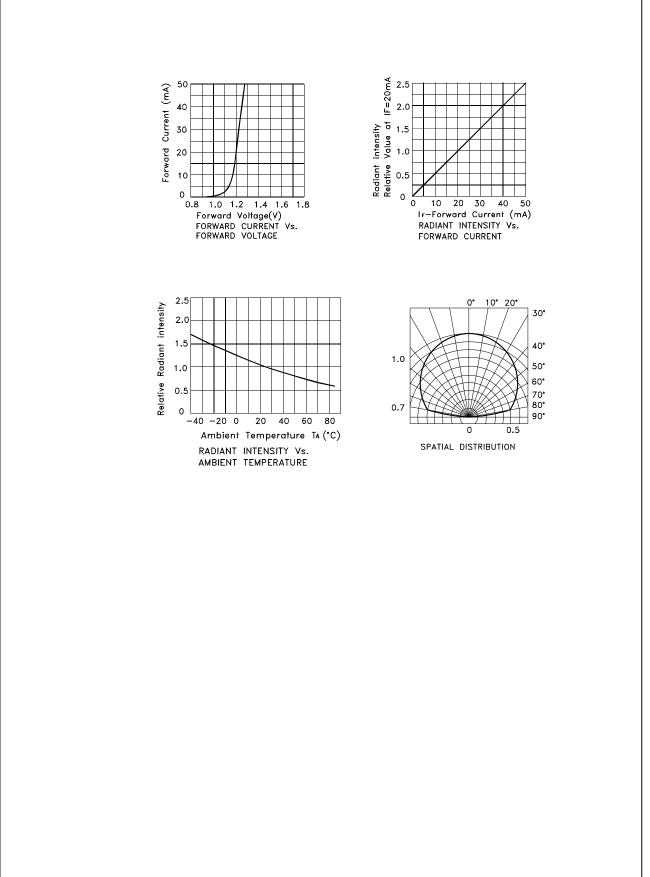
Parameter	Symbol	Values	Units	
Power dissipation	PT	80	mW	
DC Forward Current	lF	50	mA	
Peak Forward Current [1]	ifs	1.2	А	
Reverse Voltage	VR	5	V	
Operating Temperature	ТА	-40 To +85	°C	
Storage Temperature	Тятд	-40 To +85	°C	

Note:

 1.1/100 Duty Cycle, 10µs Pulse Width.
Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity - Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



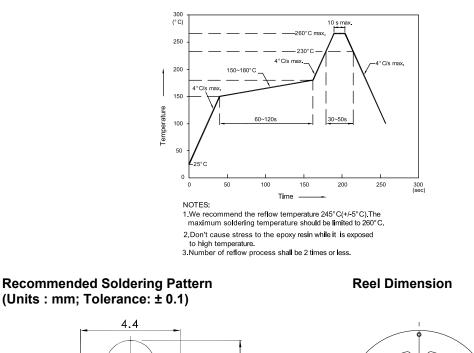
F3

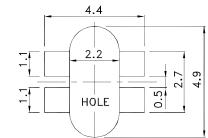


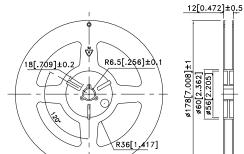
APB3025SURKF3C-01

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.





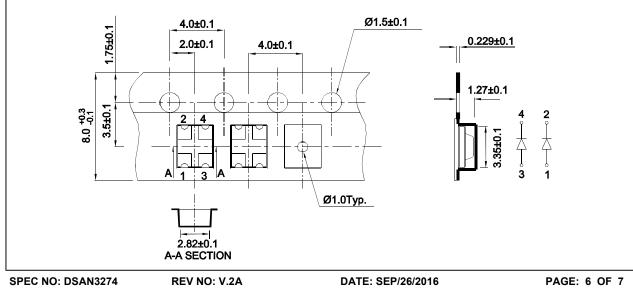




9[0.<u>354]±0.2</u>| |____

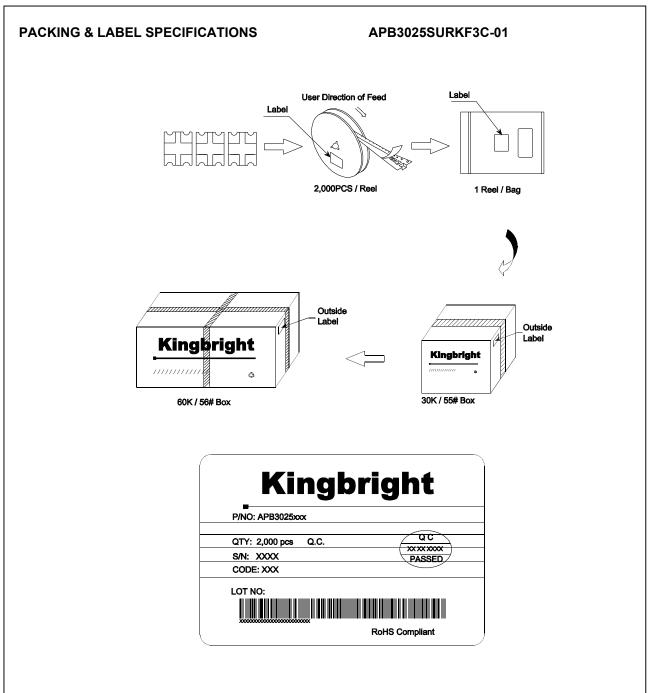
Tape Dimensions (Units : mm)

Таре



CHECKED: Allen Liu

DRAWN: L.T.Zhang



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

DATE: SEP/26/2016 DRAWN: L.T.Zhang