

KPA-1606SYCK

1.6 x 0.6 mm Right Angle SMD Chip LED Lamp



DESCRIPTIONS

- The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip
- Electrostatic discharge and power surge could damage the LEDs
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs
- All devices, equipments and machineries must be electrically grounded

FEATURES

- 1.6 x 1.2 x 0.6 mm right angle SMD LED, 0.6 mm thickness
- Low power consumption
- Wide viewing angle
- Ideal for backlight and indicator
- Package: 2000 pcs / reel
- Moisture sensitivity level: 3
- Tinned pads for improved solderability
- RoHS compliant

APPLICATIONS

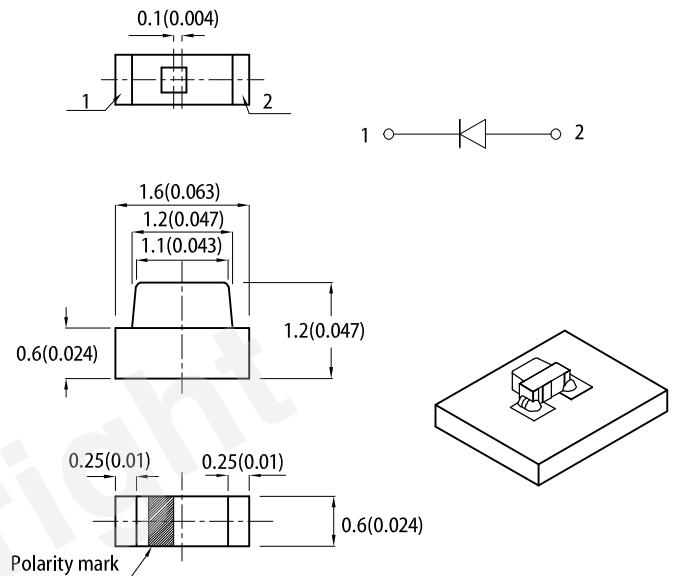
- Backlight
- Status indicator
- Home and smart appliances
- Wearable and portable devices
- Healthcare applications

ATTENTION

Observe precautions for handling electrostatic discharge sensitive devices

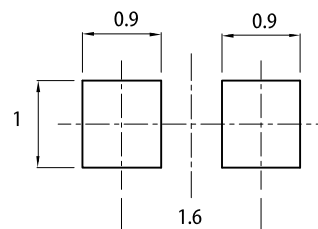


PACKAGE DIMENSIONS



RECOMMENDED SOLDERING PATTERN

(units : mm; tolerance : ± 0.1)



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ 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.

SELECTION GUIDE

Part Number	Emitting Color (Material)	Lens Type	Iv (mcd) @ 20mA ^[2]		Viewing Angle ^[1]
			Min.	Typ.	2θ1/2
KPA-1606SYCK	■ Super Bright Yellow (AlGaInP)	Water Clear	80	150	110°

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: $\pm 15\%$.
3. Luminous intensity value is traceable to CIE127-2007 standards.

ELECTRICAL / OPTICAL CHARACTERISTICS at T_A=25°C

Parameter	Symbol	Emitting Color	Value		Unit
			Typ.	Max.	
Wavelength at Peak Emission I _F = 20mA	λ_{peak}	Super Bright Yellow	590	-	nm
Dominant Wavelength I _F = 20mA	$\lambda_{\text{dom}}^{[1]}$	Super Bright Yellow	590	-	nm
Spectral Bandwidth at 50% Φ REL MAX I _F = 20mA	$\Delta\lambda$	Super Bright Yellow	20	-	nm
Capacitance	C	Super Bright Yellow	20	-	pF
Forward Voltage I _F = 20mA	V _F ^[2]	Super Bright Yellow	2.0	2.5	V
Reverse Current (V _R = 5V)	I _R	Super Bright Yellow	-	10	uA

Notes:

1. The dominant wavelength (λ_d) above is the setup value of the sorting machine. (Tolerance λ_d : $\pm 1\text{nm}$.)
2. Forward voltage: $\pm 0.1\text{V}$.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

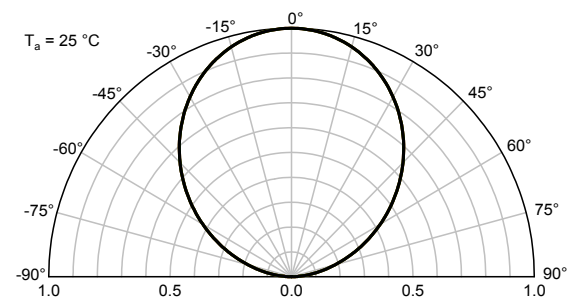
ABSOLUTE MAXIMUM RATINGS at T_A=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	75	mW
Reverse Voltage	V _R	5	V
Junction Temperature	T _J	115	°C
Operating Temperature	T _{op}	-40 to +85	°C
Storage Temperature	T _{stg}	-40 to +85	°C
DC Forward Current	I _F	30	mA
Peak Forward Current	I _{FM} ^[1]	175	mA
Electrostatic Discharge Threshold (HBM)	-	3000	V

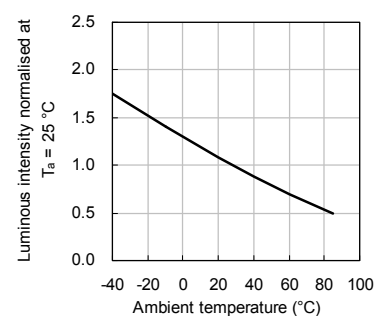
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 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.

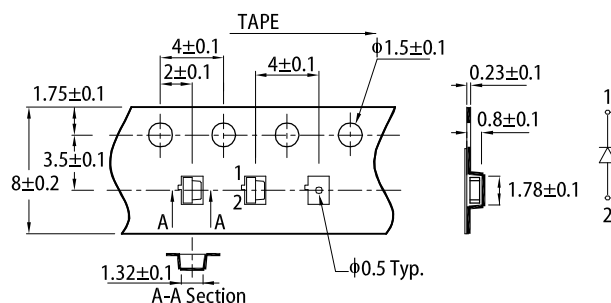
RELATIVE INTENSITY vs. WAVELENGTH



Luminous Intensity vs. Ambient Temperature



TAPE SPECIFICATIONS (units : mm)



Technical drawing of a circular mechanical part, showing a top view and a side view.

Top View Dimensions:

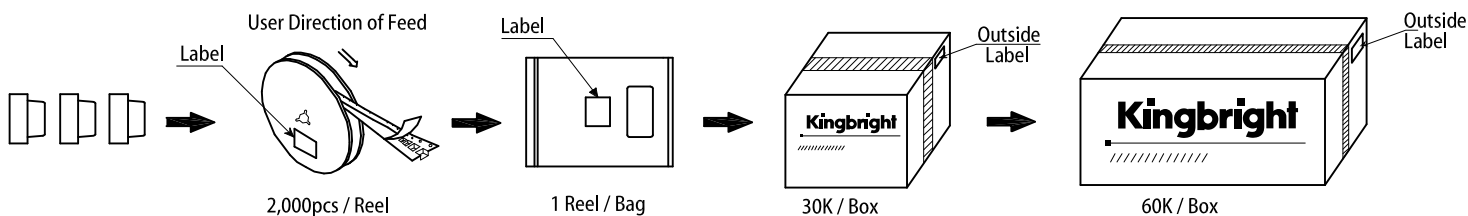
- Outer diameter: 18 ± 0.2
- Inner radius: $R6.5 \pm 0.1$
- Angle: 120°
- Radius: $R36$

Side View Dimensions:

- Top flange thickness: 12 ± 0.5
- Outer diameter: $\phi 178 \pm 1$
- Inner diameter: $\phi 56$
- Inner diameter: $\phi 60$
- Bottom flange thickness: $9 + 0.2$



PACKING & LABEL SPECIFICATIONS



Kingbright

XXXXXXXXXX-XXXX

P/NO: XXXXXXXX

QTY: XXXXpcs

S/N: XXXX

CODE: XXX

COUNTRY: CN

QC DATE: XXX XX XXXX PASSED

LOT NO:

XXXXXXXXXX-XXXX

1

RoHS Compliant

PRECAUTIONARY NOTES

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.
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