

APTB1612LSYKCGKC

1.6 x 1.25 mm Bi-Color SMD Chip LED Lamp



DESCRIPTIONS

- The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip
- . The Green source color devices are made with AIGaInP on GaAs substrate Light Emitting Diode
- · 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 mm x 1.25 mm SMD LED. 0.65 mm thickness
- Bi-color, low power consumption
- Wide viewing angle
- · Ideal for backlight and indicator
- Package: 2000 pcs / reel
- Moisture sensitivity level: 3
- RoHS compliant

APPLICATIONS

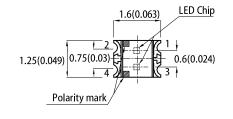
- Backlight
- Status indicator
- Home and smart appliances
- · Wearable and portable devices
- Healthcare applications

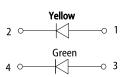
ATTENTION

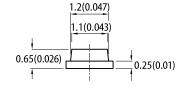
Observe precautions for handling electrostatic discharge sensitive devices

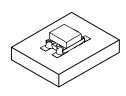


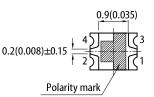
PACKAGE DIMENSIONS





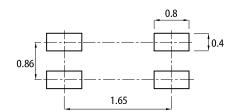






RECOMMENDED SOLDERING PATTERN

(units : mm; tolerance : ± 0.1)



Notes

1. All dimensions are in millimeters (inches).

Tolerance is ±0.2(0.008") unless otherwise noted.
 The specifications, characteristics and technical data described in the datasheet are subject to

change without prior notice. The device has a single mounting surface. The device must be mounted according to the specifications. 4.

SELECTION GUIDE

Part Number	Emitting Color (Material)	Lens Type	lv (mcd) @ 2mA ^[2]		Viewing Angle ^[1]
			Min.	Тур.	201/2
APTB1612LSYKCGKC	Super Bright Yellow (AlGaInP)	Water Clear	4	10	150°
	Green (AlGaInP)		1.2	3	150

Notes

- 1. 61/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
 2. Luminous intensity / luminous flux: +/-15%.
- 3. Luminous intensity value is traceable to CIE127-2007 standards.

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ELECTRICAL / OPTICAL CHARACTERISTICS at T_A=25°C

Parameter	Symbol	Emitting Color	Value			Unit
			Min.	Тур.	Max.	
Wavelength at Peak Emission I_F = 2mA	λ_{peak}	Super Bright Yellow Green	-	590 574	-	nm
Dominant Wavelength I _F = 2mA	λ_{dom} ^[1]	Super Bright Yellow Green	-	590 570	-	nm
Spectral Bandwidth at 50% Φ REL MAX I _F = 2mA	Δλ	Super Bright Yellow Green	-	20 20	-	nm
Capacitance	С	Super Bright Yellow Green	-	20 15	-	pF
Forward Voltage $I_F = 2mA$	V _F ^[2]	Super Bright Yellow Green	1.5 1.5	1.85 1.9	2.1 2.1	V
Reverse Current (V _R = 5V)	I _R	Super Bright Yellow Green	-	-	10 10	uA

Notes:

The dominant wavelength (λd) above is the setup value of the sorting machine. (Tolerance λd : ±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.

Parameter	Symbol	Va	Unit		
		Super Bright Yellow	Green		
Power Dissipation	P _D	75 75		mW	
Reverse Voltage	V _R	5	5	V	
Junction Temperature	TJ	115	115	°C	
Operating Temperature	T _{op}	-40 Te	°C		
Storage Temperature	T _{stg}	-40 Te	°C		
DC Forward Current	I _F	30	30	mA	
Peak Forward Current	I _{FM} ^[1]	175	150	mA	
Electrostatic Discharge Threshold (HBM)	-	3000	3000	V	

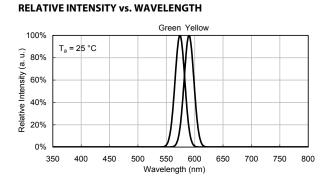
ABSOLUTE MAXIMUM RATINGS at $T_A = 25^{\circ}C$

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.

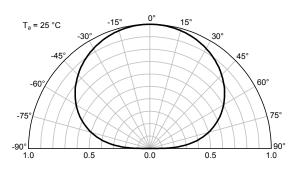
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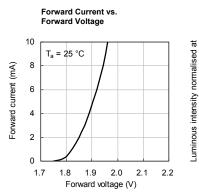
TECHNICAL DATA

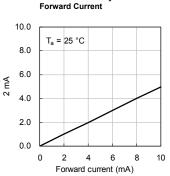


SPATIAL DISTRIBUTION



SUPER BRIGHT YELLOW

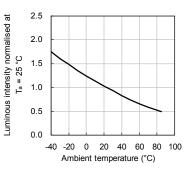




Luminous Intensity vs.

Forward Current Derating Curve





GREEN Forward Current Derating Curve Forward Current vs. Luminous Intensity vs. Luminous Intensity vs. Forward Voltage Ambient Temperature Forward Current 10 10.0 50 2.5 Luminous intensity normalised at 2 mA Luminous intensity normalised at $T_a = 25 \ ^\circ C$ Permissible forward current (mA) T_a = 25 °C T_a = 25 °C 8.0 2.0 Forward current (mA) 8 40 1.5 6 30 6.0 4.0 20 4 1.0 2 2.0 10 0.5 0 0.0 0 0.0 0 10 1.7 1.8 1.9 2.0 2.1 2.2 2 4 6 8 -40 -20 0 20 40 60 80 100 -40 -20 0 20 40 60 80 100 Forward current (mA) Forward voltage (V) Ambient temperature (°C) Ambient temperature (°C)

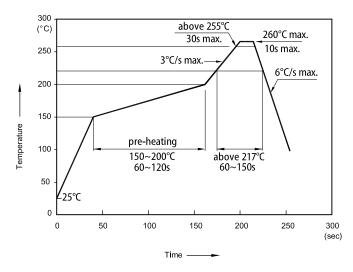
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TECHNICAL DATA

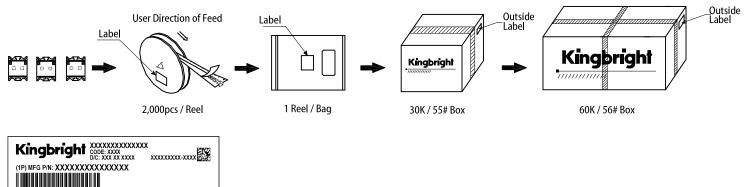
REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS



Notes

 Don't cause stress to the LEDs while it is exposed to high temperature.
 The maximum number of reflow soldering passes is 2 times.
 Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product

PACKING & LABEL SPECIFICATIONS



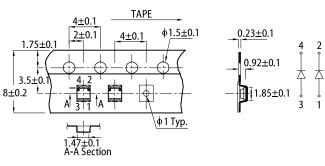
PRECAUTIONARY NOTES

DE: XXXX (4L) COO: XX

- The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- 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. 2
- 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. 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
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- 6 onNotes

1 RoHS Comp

TAPE SPECIFICATIONS (units : mm)



REEL DIMENSION (units : mm)

