



## Selection Guide

Part No.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 10mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
WP406A10XHA/X2GD	Green (GaP)	Green Diffused	6	12	70°

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%.
3. Luminous intensity value is traceable to CIE127-2007 standards.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Green	565		nm	I <sub>F</sub> =10mA
λ <sub>D</sub> [1]	Dominant Wavelength	Green	568		nm	I <sub>F</sub> =10mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Green	30		nm	I <sub>F</sub> =10mA
C	Capacitance	Green	15		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Green	2	2.5	V	I <sub>F</sub> =10mA
I <sub>R</sub>	Reverse Current	Green		10	uA	V <sub>R</sub> = 5V

Notes:

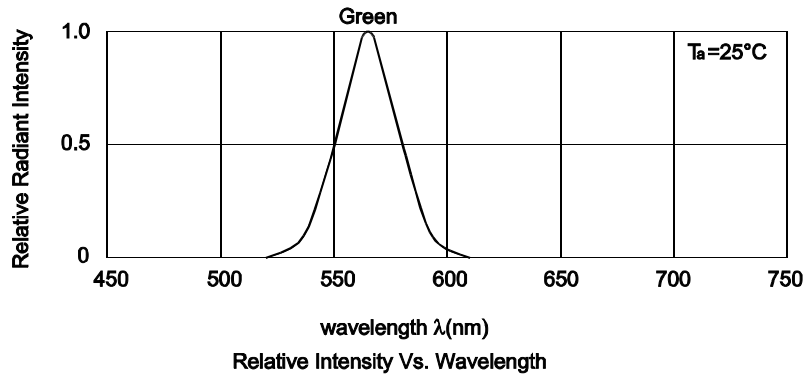
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

Parameter	Values	Units
Power dissipation	62.5	mW
DC Forward Current	25	mA
Peak Forward Current [1]	140	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

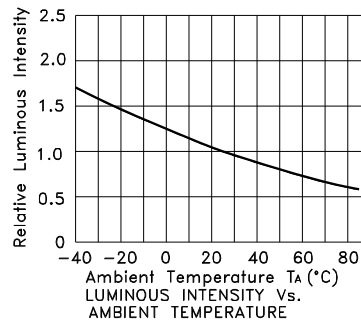
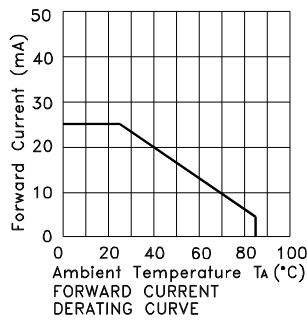
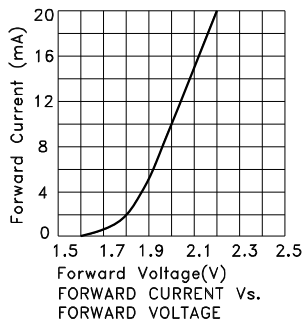
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.
4. 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.



**Green**

**WP406A10XHA/X2GD**



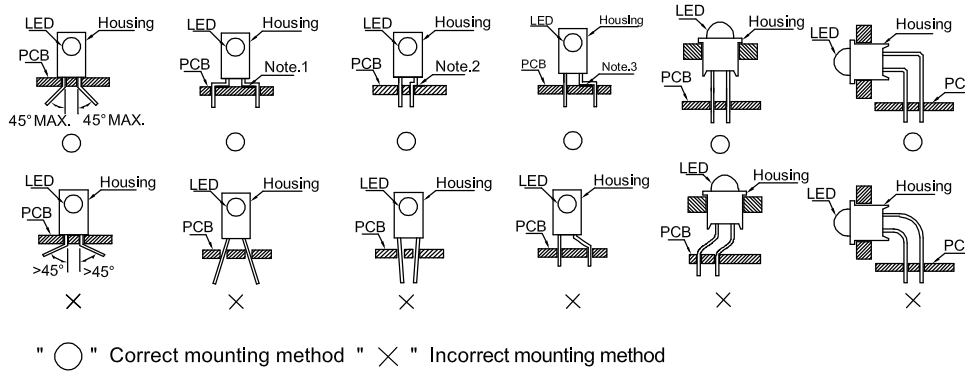


## PRECAUTIONS

### 1. Storage conditions:

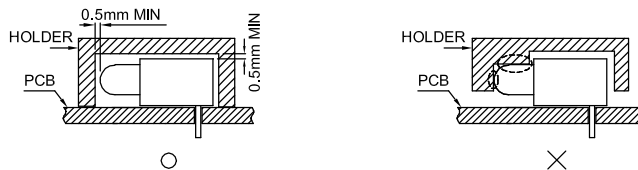
- a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
- b. LEDs should be stored with temperature  $\leq 30^{\circ}\text{C}$  and relative humidity  $< 60\%$ .
- c. Product in the original sealed package is recommended to be assembled within 72 hours of opening. Product in opened package for more than a week should be baked for 30 (+10/-0) hours at  $85 \sim 100^{\circ}\text{C}$ .

### 2. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures.



Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

### 3. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.

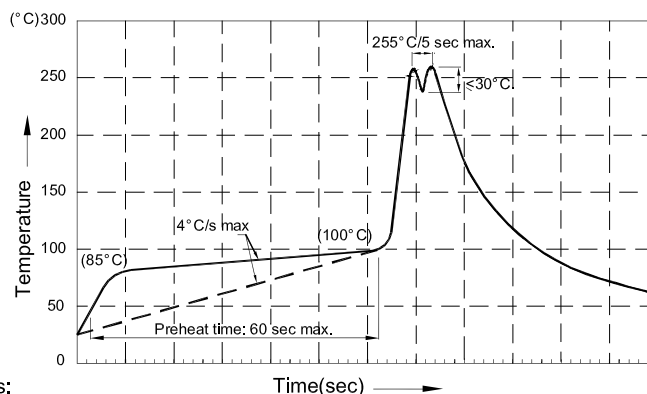


### 4. The tip of the soldering iron should never touch the lens epoxy.

### 5. Through-hole LEDs are incompatible with reflow soldering.

### 6. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.

### 7. Recommended Wave Soldering Profiles:



Notes:

1. Recommend pre-heat temperature of  $105^{\circ}\text{C}$  or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of  $260^{\circ}\text{C}$
2. Peak wave soldering temperature between  $245^{\circ}\text{C} \sim 255^{\circ}\text{C}$  for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above  $85^{\circ}\text{C}$ .
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.

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