### T-1 (3mm) SOLID STATE LAMP

Part Number: WP710A10ZGC/E Green



ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

#### Features

- Low power consumption.
- Popular T-1 diameter package.
- General purpose leads.
- Reliable and rugged.
- Long life solid state reliability.
- Available on tape and reel.
- RoHS compliant.

#### Description

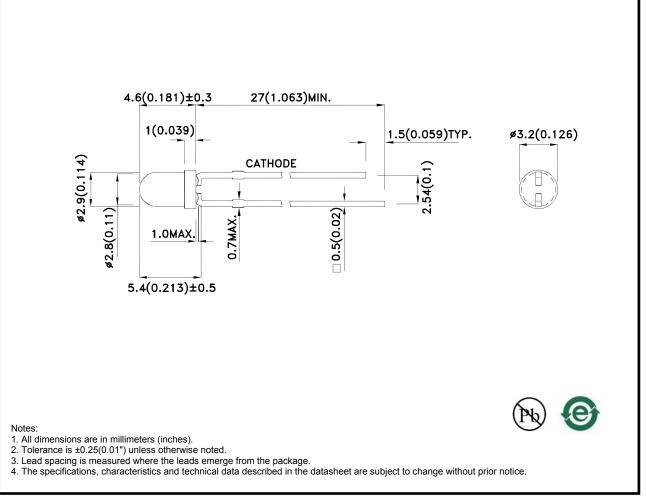
The Green source color devices are made with InGaN Light Emitting Diode.

Static electricity and surge damage the LEDS.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

#### **Package Dimensions**



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#### Selection Guide

Part No.	Dice	Lens Type	lv (mo @ 20	/	Viewing Angle [1]
			Min.	Тур.	201/2
WP710A10ZGC/E	Green (InGaN)	WATER CLEAR	7000	12000	34°

Notes:

θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
Luminous intensity/ luminous Flux: +/-15%.

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

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green	520		nm	I⊧=20mA
λD [1]	Dominant Wavelength	Green	525		nm	I⊧=20mA
Δλ1/2	Spectral Line Half-width	Green	35		nm	I⊧=20mA
С	Capacitance	Green	100		pF	VF=0V;f=1MHz
Vf [2]	Forward Voltage	Green	3.2	4	V	I⊧=20mA
lr	Reverse Current	Green		50	uA	VR = 5V

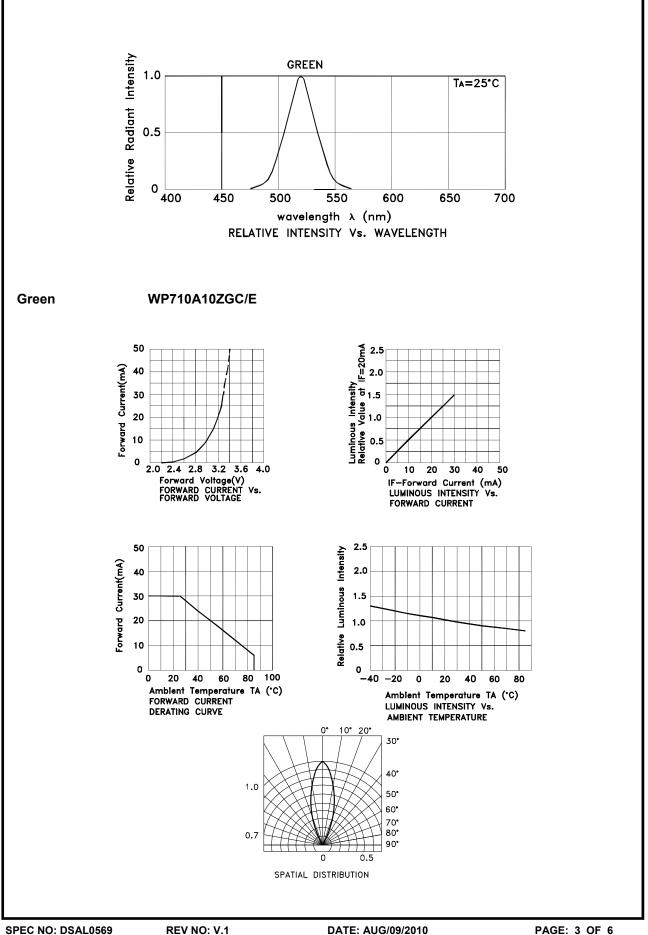
Notes:

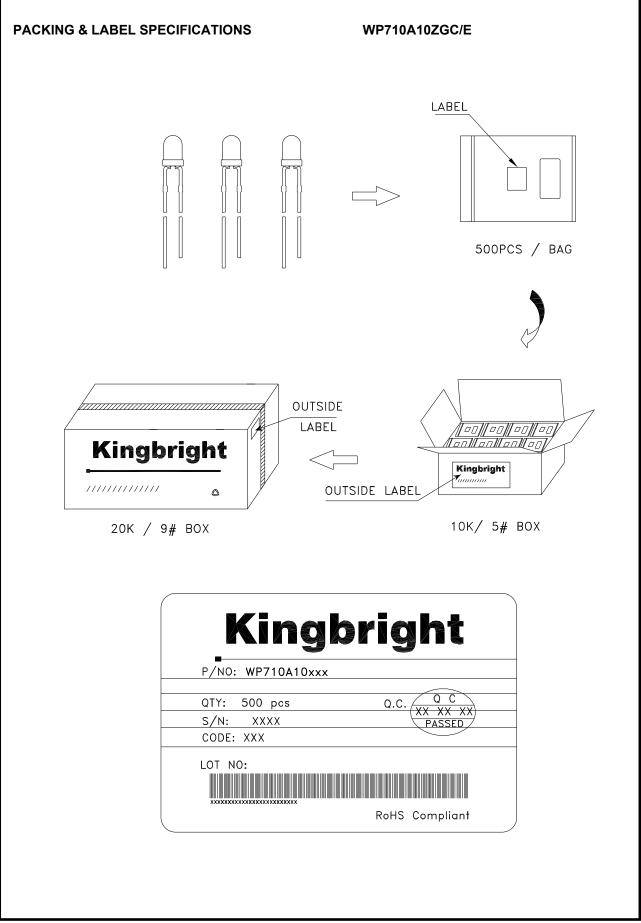
1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.

#### Absolute Maximum Ratings at TA=25°C

Parameter	Green	Units		
Power dissipation	120	mW		
DC Forward Current	30	mA		
Peak Forward Current [1]	100	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			

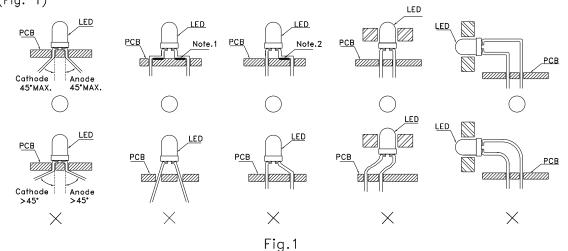
Notes: 1. 1/10 Duty Cycle, 0.1ms Pulse Width. 2. 2mm below package base. 3. 5mm below package base.





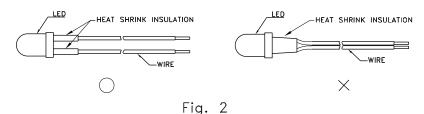
### LED MOUNTING METHOD

 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. (Fig. 1)

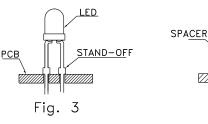


" $\bigcirc$ " Correct mounting method " $\times$ " Incorrect mounting method Note 1-2 : Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

2. When soldering wire to the LED, use individual heat-shrink tubing to insulate the exposed leads to prevent accidental contact short-circuit. (Fig. 2)



3. Use stand-offs (Fig. 3) or spacers (Fig. 4) to securely position the LED above the PCB.



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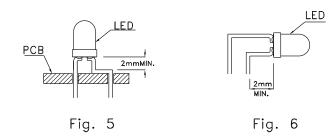
Fig. 4

LED

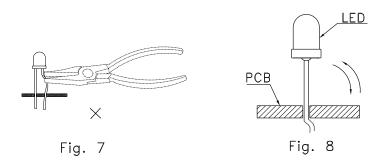
PCB

### LEAD FORMING PROCEDURES

1. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend. (Fig. 5 and 6)



- 2. Lead forming or bending must be performed before soldering, never during or after Soldering.
- 3. Do not stress the LED lens during lead-forming in order to fractures in the lens epoxy and damage the internal structures.
- 4. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB. (Fig. 7)
- 5. Do not bend the leads more than twice. (Fig. 8)



6. After soldering or other high-temperature assembly, allow the LED to cool down to 50°C before applying outside force (Fig. 9). In general, avoid placing excess force on the LED to avoid damage. For any questions please consult with Kingbright representative for proper handling procedures.

