



## WP1384AD/GD 3.4mm Single-Level Circuit Board Indicator

### DESCRIPTION

- The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode

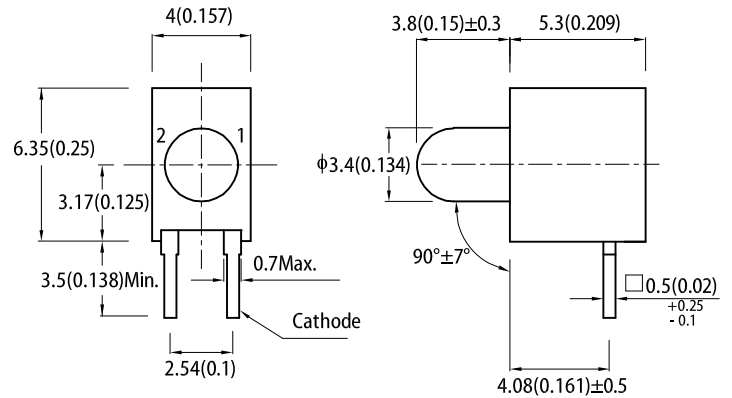
### FEATURES

- Ideal for card edge status indication
- High reliability-life measured in years
- Housing UL rating: 94V-0
- Housing material: Type 66 nylon
- RoHS compliant

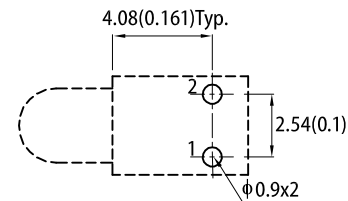
### APPLICATIONS

- Status indicator
- Illuminator
- Signage applications
- Decorative and entertainment lighting
- Commercial and residential architectural lighting

### PACKAGE DIMENSIONS



Recommended PCB Layout



**Notes:**

- All dimensions are in millimeters (inches).
- Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
- Lead spacing is measured where the leads emerge from the package.
- The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

### SELECTION GUIDE

Part Number	Emitting Color (Material)	Lens Type	Iv (mcd) @ 10mA <sup>[2]</sup>		Viewing Angle <sup>[1]</sup>
			Min.	Typ.	2θ1/2
WP1384AD/GD	<span style="color: green;">■</span> Green (GaP)	Green Diffused	10	20	60°

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 T<sub>A</sub>=25°C**

Parameter	Symbol	Emitting Color	Value		Unit
			Typ.	Max.	
Wavelength at Peak Emission I <sub>F</sub> = 10mA	λ <sub>peak</sub>	Green	565	-	nm
Dominant Wavelength I <sub>F</sub> = 10mA	λ <sub>dom</sub> <sup>[1]</sup>	Green	568	-	nm
Spectral Bandwidth at 50% Φ REL MAX I <sub>F</sub> = 10mA	Δλ	Green	30	-	nm
Capacitance	C	Green	15	-	pF
Forward Voltage I <sub>F</sub> = 10mA	V <sub>F</sub> <sup>[2]</sup>	Green	2	2.4	V
Reverse Current (V <sub>R</sub> = 5V)	I <sub>R</sub>	Green	-	10	μA

## Notes:

1. The dominant wavelength (λ<sub>d</sub>) above is the setup value of the sorting machine. (Tolerance λ<sub>d</sub> : ±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 T<sub>A</sub>=25°C**

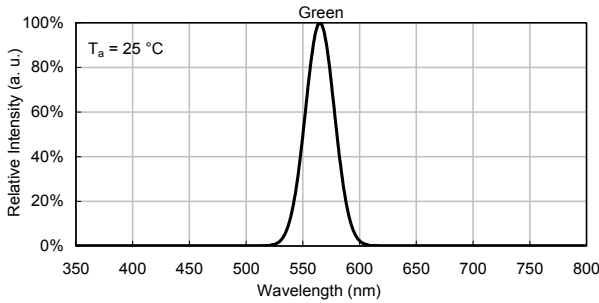
Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	62.5	mW
Reverse Voltage	V <sub>R</sub>	5	V
Junction Temperature	T <sub>j</sub>	110	°C
Operating Temperature	T <sub>op</sub>	-40 to +85	°C
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C
DC Forward Current	I <sub>F</sub>	25	mA
Peak Forward Current	I <sub>FM</sub> <sup>[1]</sup>	140	mA
Electrostatic Discharge Threshold (HBM)	-	8000	V
Lead Solder Temperature <sup>[2]</sup>		260°C For 3 Seconds	
Lead Solder Temperature <sup>[3]</sup>		260°C For 5 Seconds	

## Notes:

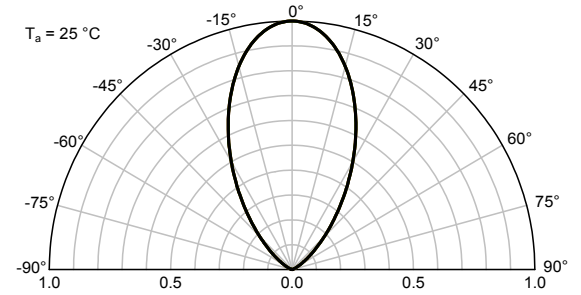
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.
4. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

## TECHNICAL DATA

### RELATIVE INTENSITY vs. WAVELENGTH

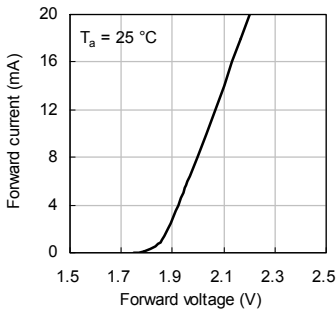


### SPATIAL DISTRIBUTION

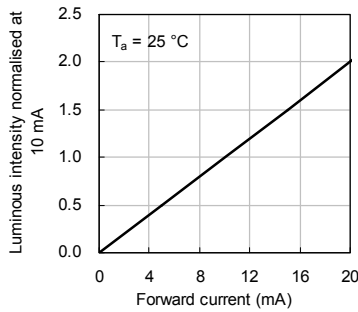


## GREEN

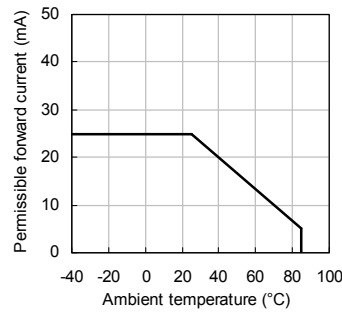
Forward Current vs. Forward Voltage



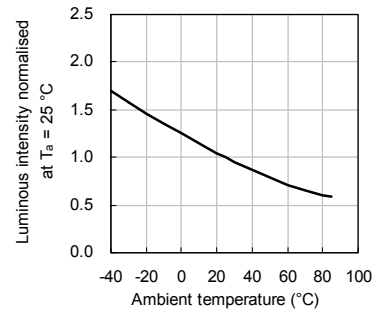
Luminous Intensity vs. Forward Current



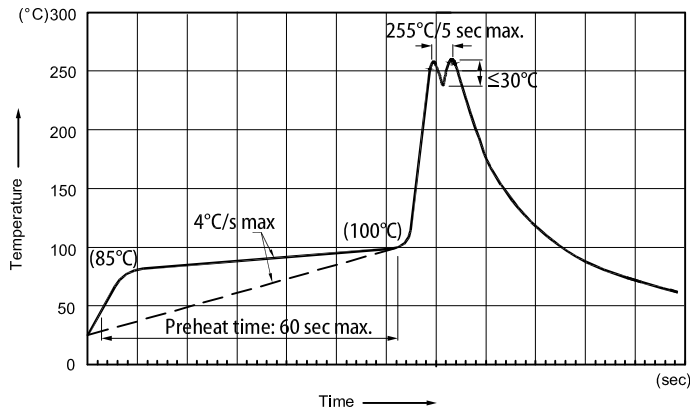
Forward Current Derating Curve



Luminous Intensity vs. Ambient Temperature



### RECOMMENDED WAVE SOLDERING PROFILE



- Notes:
1. Recommend pre-heat temperature of 105°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°C
  2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
  3. Do not apply stress to the epoxy resin while the temperature is above 85°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.

### PACKING & LABEL SPECIFICATIONS

