P-tec Corp.
2405 Commerce Circle
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www.p-tec.net

Tel:(800)688-0613
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sales@p-tec.net

PL16 Series 5mm T1¾ Ultra Bright Pure Green LED

Features

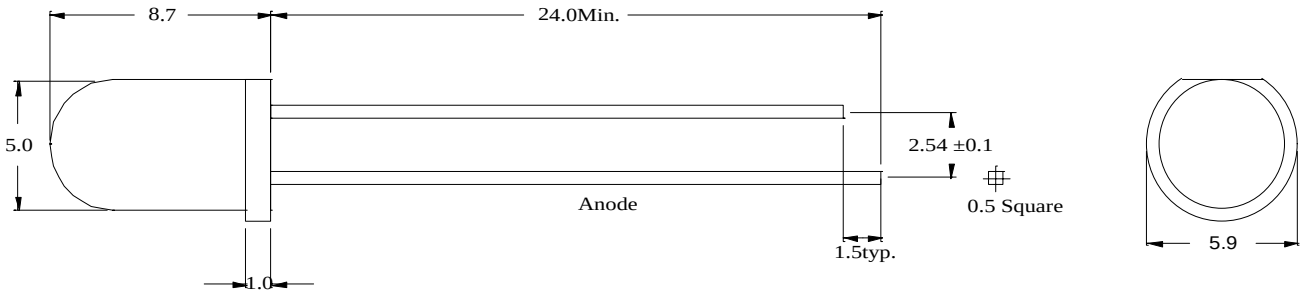
*Popular 5mm Lens Style with Flange
*High Light Output
*Narrow Viewing Angle
*Low Current Requirements
*Integrated Zener Diode for ESD protection
*RoHS Compliant

Absolute Maximum Ratings at T_A = 25°C

Power Dissipation	120mW
Reverse Voltage (<100µA)	5.0V
Max Forward Current	30mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100mA
Operating Temperature Range	- 25°C to +85°C
Storage Temperature Range	- 40°C to +100°C
Soldering Temperature (1.6mm below body)	260°C for 5 seconds
Electronic Static Discharge	6000V

Electrical & Optical Characteristics at T_A = 25°C

Part Number	LED Chip		Dominant Wave Length	View Angle 2θ ½	Forward Voltage @20mA (V)		Luminous Intensity @20mA (mcd)	
Water Clear Lens	Material	Emitting Color	nm	Deg	Typ	Max	Min	Typ
PL16C-WCG43Z	InGaN/SiC	True Green	520	15°	3.2	4.0	2750	7500



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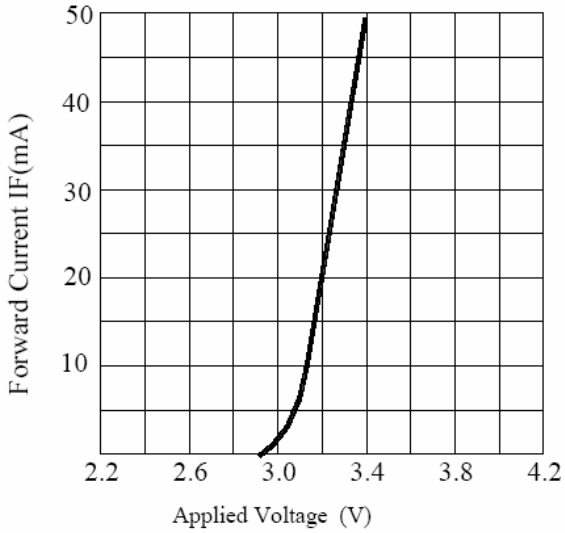
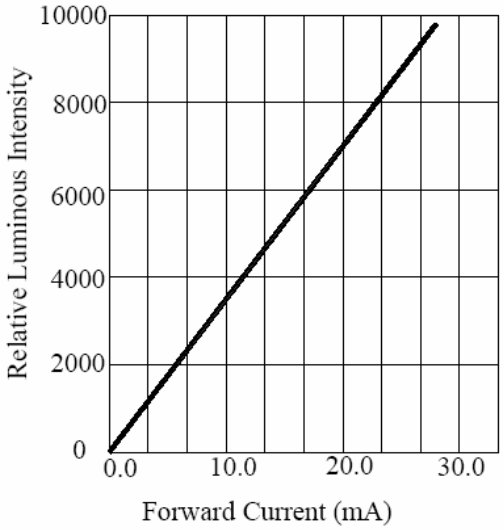
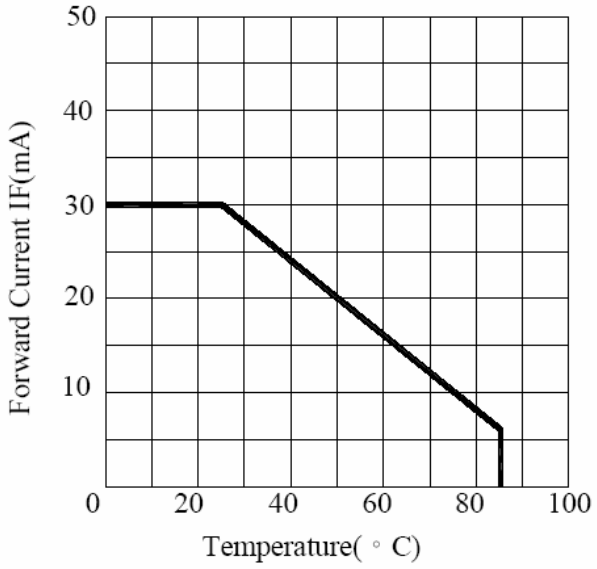
Typical Electrical / Optical Characteristics Curves :



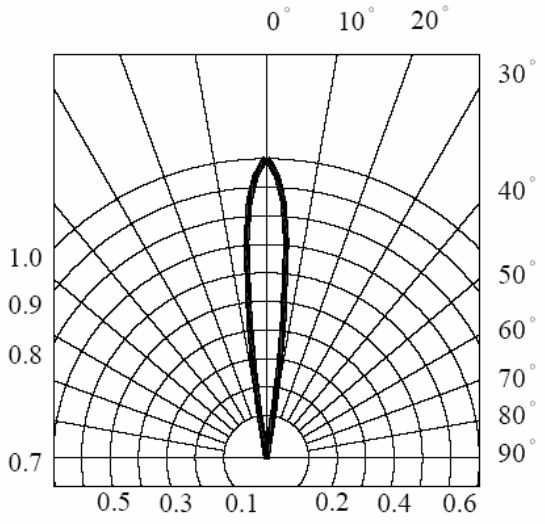
FORWARD CURRENT VS.APPLIED VOLTAGE



FORWARD CURRENT VS. LUMINOUS INTENSITY



FORWARD CURRENT VS. AMBIENT TEMPERATURE



RADIATION DIAGRAM

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Precautions:

TAKE NOTE OF THE FOLLOWING IN USE OF LED

1. Temperature in use

Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel , etc) which are used for semiconductor products such as transistors cannot be added to the resin.

Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use.

Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approximately 120-130℃.

At a temperature exceeding this limit, the coefficient of liner expansion of the resin doubles or more compared to that at normal temperature and the resin is softened.

If external force or stress is applied at that time, it may cause a wire rupture.

2. Soldering

Please be careful on the following at soldering.

After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

(1) Soldering measurements:

Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

(2) Solder dip: Preheat: 90℃ max. (Backside of PCB), Within 120 seconds

Solder bath: 250℃ max. (Solder temperature), Within 5 seconds

(3) Soldering iron : 250℃ max. (Temperature of soldering iron tip), Within 3 seconds

3. Insertion

Pitch of the LED leads and pitch of mounting holes need to be same

4. Others

Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

Baking temperature: 120℃ max. Baking time: Within 60 seconds

If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.