



# PRODUCT SPECIFICATION

*Part Number*  
**PLC764-WCG04**

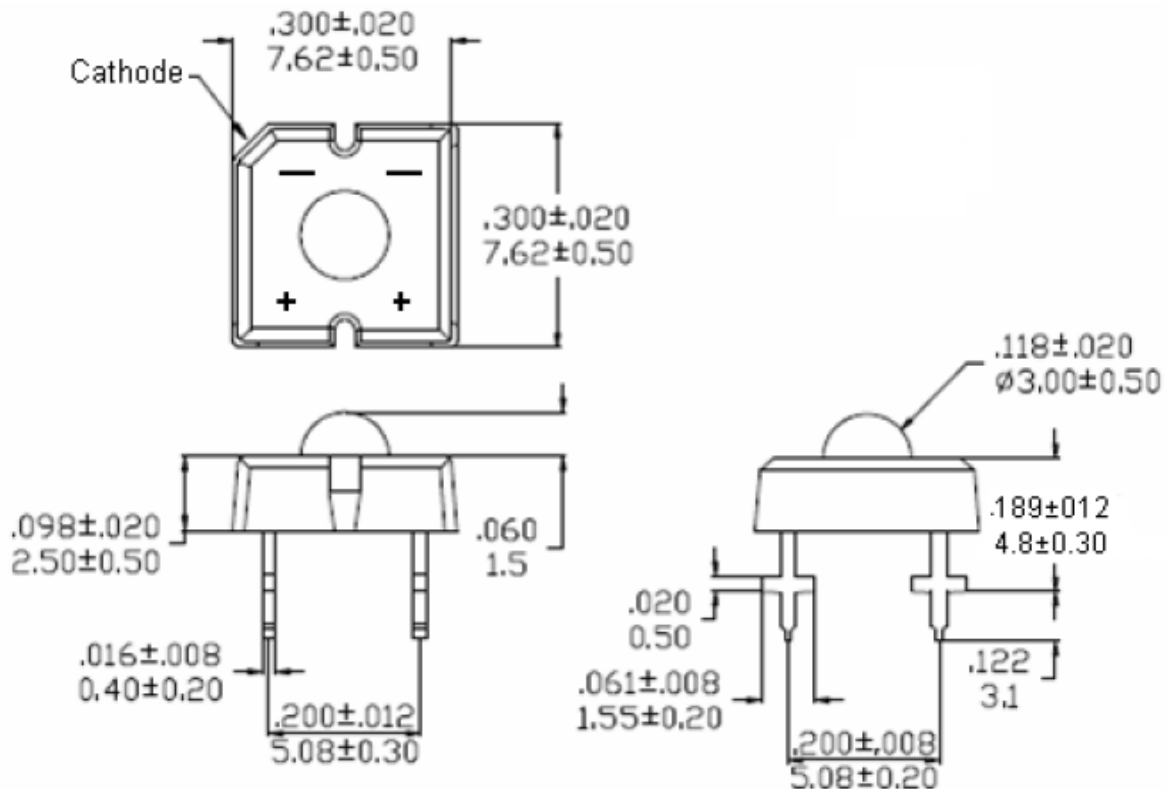
## *Details*

- Piranha LED
- 7.62 x 7.62 x 9.4mm
- Emitting Color Green
- InGaN Dice Used

## *Features*

- 3mm Lens
- High Luminous Output
- High Current Operation
- RoHS Compliant

## *Mechanical Dimensions*



### Notes:

1. Dimensions in millimeters [inch], and tolerance is  $\pm 0.25$  [.010] unless otherwise noted.
2. Specifications subject to change without notice





### Device Selection Guide

| Model Number | Chip     |                |
|--------------|----------|----------------|
|              | Material | Emitting Color |
| PLC764-WCG04 | InGaN    | Green          |

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

| Parameter                            | Symbol                                             | Rating   | Unit |
|--------------------------------------|----------------------------------------------------|----------|------|
|                                      |                                                    | G        |      |
| Power Dissipation                    | PAD                                                | 160      | mW   |
| Continuous Forward Current           | IAF                                                | 40       | mA   |
| Peak Current (duty cycle 1/10, 1KHz) | IPF                                                | 100      | mA   |
| Reverse Voltage                      | VR                                                 | 5        | V    |
| Operating Temperature                | Topr                                               | -30~+80  | °C   |
| Storage Temperature                  | Tstg                                               | -40~+100 | °C   |
| Soldering Conditions                 | Max. 260°C for 5 sec Max.(3mm from the epoxy body) |          |      |

### Electrical and Optical Characteristics at Ta=25°C

| Parameter           | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---------------------|--------|------|------|------|------|-----------|
| Forward Voltage     | VF     | --   | 3.5  | 4.0  | V    | IF=30mA   |
| Luminous Flux       | Iv     | 3500 | 5000 | --   | mlm  |           |
| Dominant Wavelength | λD     | --   | 525  | --   | nm   |           |
| Viewing Angle       | 2θ1/2  | --   | 50   | --   | deg  |           |
| Reverse Current     | IR     | --   | --   | 50   | μA   | VR=5V     |

**Luminous Flux Rank Limits ( IF = 30mA )**

| Code | Unit: mlm |      |
|------|-----------|------|
|      | Min.      | Max. |
| G    | 3500      | 4000 |
| H    | 4000      | 5000 |
| J    | 5000      | 6000 |
| K    | 6000      | 7000 |

**Color Rank Limits ( IF = 30mA )**

| Code | Unit: mlm |      |
|------|-----------|------|
|      | Min.      | Max. |
| TG1  | 515       | 520  |
| TG2  | 520       | 525  |
| TG3  | 525       | 530  |
| TG4  | 530       | 535  |

**Forward Voltage Rank Limits ( IF = 30mA )**

| Code | Unit: V |      |
|------|---------|------|
|      | Min.    | Max. |
| J    | 3.0     | 3.2  |
| K    | 3.2     | 3.4  |
| L    | 3.4     | 3.6  |
| M    | 3.6     | 3.8  |
| N    | 3.8     | 4.0  |

**Notes:**

1. Tolerance of measurement of luminous Flux:  $\pm 15\%$
2. Tolerance of measurement of Dominant wavelength:  $\pm 2\text{nm}$
3. Tolerance of measurement of forward voltage:  $\pm 0.05\text{v}$
4. All data measured by P-tec's test equipment
5. One delivery will include several color rank, VF and Iv ranks of the products.
6. The quantity-ratio of the ranks is decided by P-tec
7. Please confirm with P-tec salesman, if your request differs from standard specifications.

### Typical Electrical/Optical Characteristic Curves

- $T_a = 25^\circ\text{C}$  Unless Otherwise Noted

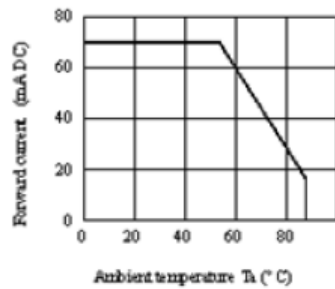


Fig 1. Forward Current  
Vs. Ambient Temperature

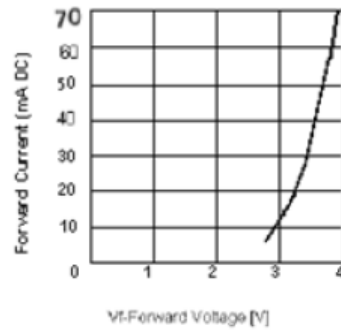


Fig. 2 Forward Current  
Vs. Forward Voltage

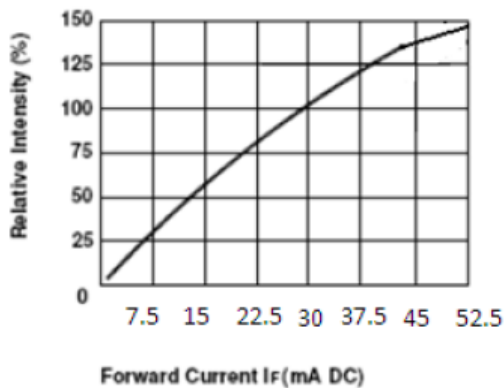


Fig 3. Relative Intensity  
Vs. Forward Current

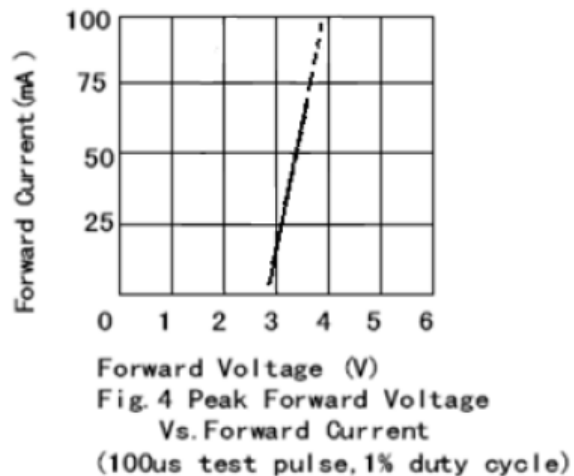


Fig. 4 Peak Forward Voltage  
Vs. Forward Current  
(100 $\mu$ s test pulse, 1% duty cycle)

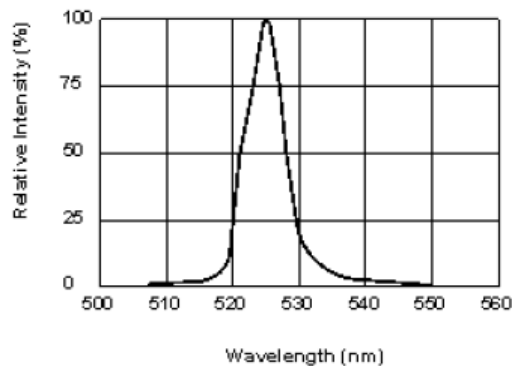


Fig 5. Relative Intensity Vs. Wavelength

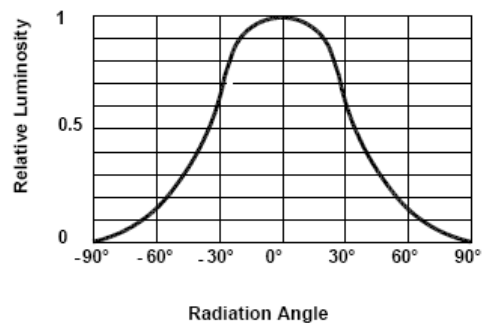


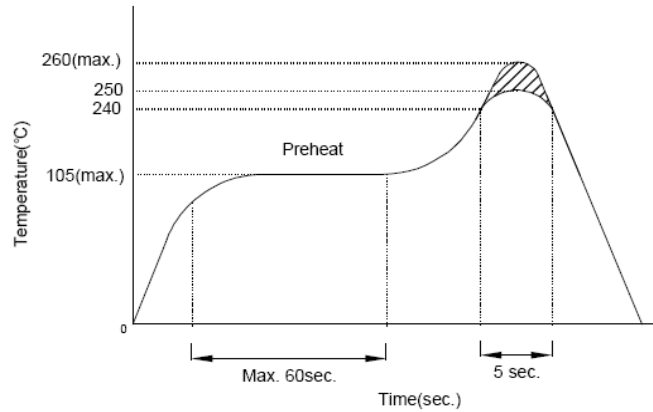
Fig 6. Radiation Diagram

## ***Precautions for Use***

### 1. Recommended soldering conditions

#### 1.1. Wave soldering

Basic SPEC. is  $\leq 5\text{sec.}$  When  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1\text{sec.}$ ).



#### 1.2. Recommended Soldering:

Power dissipation of iron should be smaller than 15W and temperature should be controllable.  
Soldering temperature should be under  $230^{\circ}\text{C}$ , time 3sec.

### 2. Static Electricity

#### 2.1 Static electricity or surge voltage damages LEDs.

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

#### 2.2 All devices, equipment and machinery must be properly grounded. It is recommended that measures be taken against surge voltage to the equipment that mounts the LEDs.



|                                 |             |            |             |
|---------------------------------|-------------|------------|-------------|
| Customer Approval<br>Signatures | Approved By | Checked By | Prepared By |
|                                 |             |            |             |

[illegible]