

PRELIMINARY SPEC

Part Number : WP7104PBD/A

BLUE



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

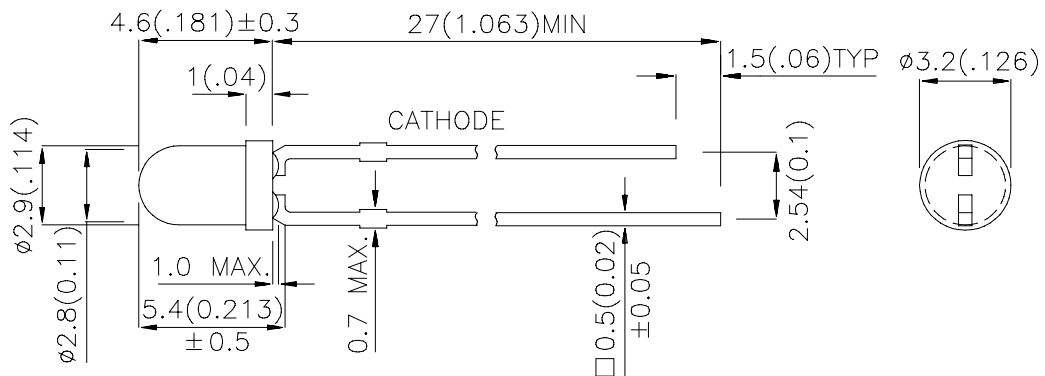
### Features

- 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 Blue source color devices are made with InGaN on SiC 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



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$ " unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2 θ 1/2
WP7104PBD/A	BLUE (InGaN)	BLUE DIFFUSED	180	700	30°

Notes:

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

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

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Blue	468		nm	IF=20mA
$\lambda_D$ [1]	Dominant Wavelength	Blue	470		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue	21		nm	IF=20mA
C	Capacitance	Blue	100		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue	3.3	3.8	V	IF=20mA
IR	Reverse Current	Blue		10	uA	VR = 5V

Notes:

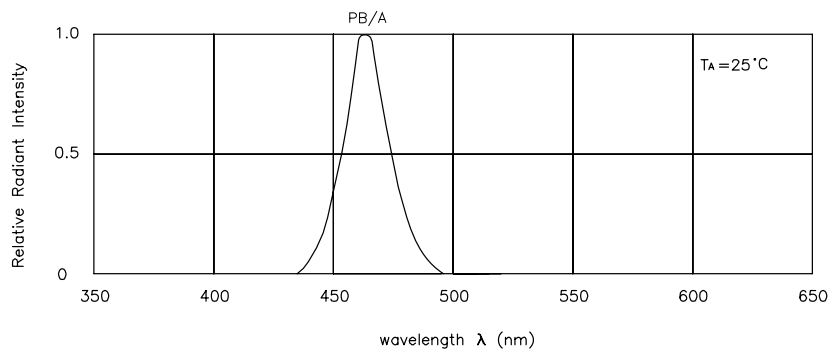
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

Parameter	Blue	Units
Power dissipation	114	mW
DC Forward Current	30	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Electrostatic Discharge Threshold (HBM)	1000	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:

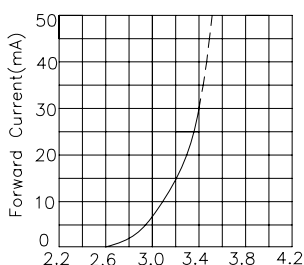
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



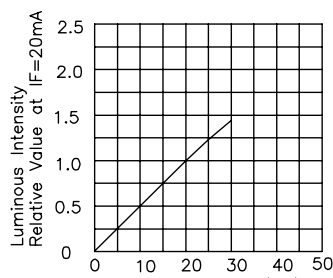
RELATIVE INTENSITY Vs. WAVELENGTH

Blue

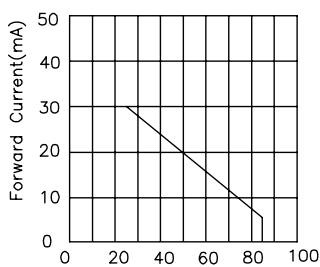
WP7104PBD/A



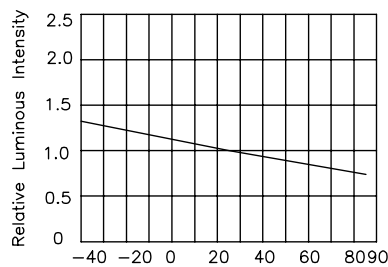
Forward Voltage(V)  
FORWARD CURRENT Vs  
FORWARD VOLTAGE



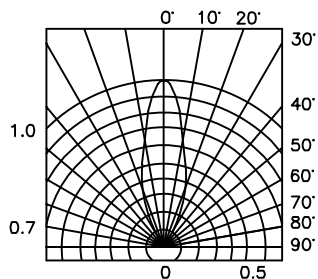
I<sub>F</sub>-Forward Current (mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT



Ambient Temperature T<sub>A</sub>(°C)  
FORWARD CURRENT  
DERATING CURVE



Ambient Temperature T<sub>A</sub>(°C)  
LUMINOUS INTENSITY Vs.  
AMBIENT TEMPERATURE

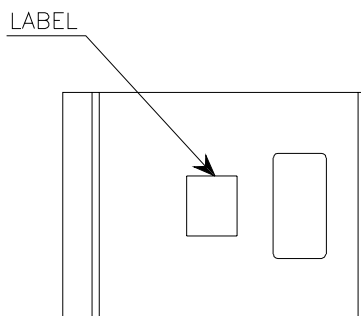
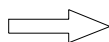
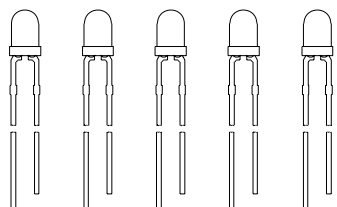


SPATIAL DISTRIBUTION

# Kingbright

## PACKING & LABEL SPECIFICATIONS

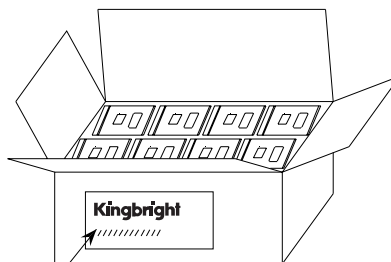
## WP7104PBD/A



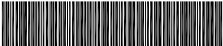
500PCS/BAG



20K / 9# BOX



10K / 5# BOX

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Q.C.	<table border="1"> <tr> <td style="text-align: center;">QC</td> </tr> <tr> <td style="text-align: center;">xxx xx. xxxx</td> </tr> <tr> <td style="text-align: center;">PASSED</td> </tr> </table>	QC	xxx xx. xxxx	PASSED
QC				
xxx xx. xxxx				
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TYPE NO : WP7104XXX				
QUANTITY : 500 pcs				
S/N : XXX	CODE: XX			
LOT NO :  xxxxxxxxx				
RoHS Compliant				