Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com

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Kingbright

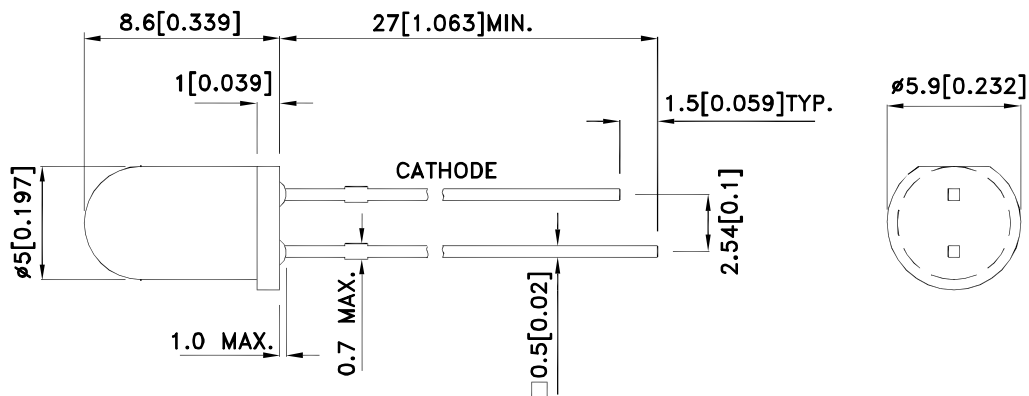Part Number: WP7113NT   Pure Orange

Features

- Low power consumption.
- Popular T-1 3/4 diameter package.
- General purpose leads.
- Reliable and rugged.
- Long life - solid state reliability.
- Available on tape and reel.
- RoHS compliant.

Description

The Pure Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Pure Orange Light Emitting Diode.

Package Dimensions

8.6[0.339]   27[1.063]MIN.

1[0.039]

1.5[0.059]TYP.

CATHODE

ø5[0.197]

2.54[0.1]

1.0 MAX.

0.7 MAX.

□0.5[0.02]

ø5.9[0.232]

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

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Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) [2] @ 10mA | | Viewing Angle [1] |
			Min.	Typ.	2θ1/2
WP7113NT	Pure Orange (GaAsP/GaP)	Orange Transparent	50	100	20°

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%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Pure Orange	607		nm	I_F=20mA
λD [1]	Dominant Wavelength	Pure Orange	610		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Pure Orange	35		nm	I_F=20mA
C	Capacitance	Pure Orange	15		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Pure Orange	2.05	2.5	V	I_F=20mA
I_R	Reverse Current	Pure Orange		10	uA	V_R = 5V

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

Absolute Maximum Ratings at TA=25°C

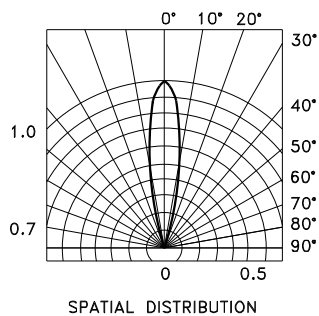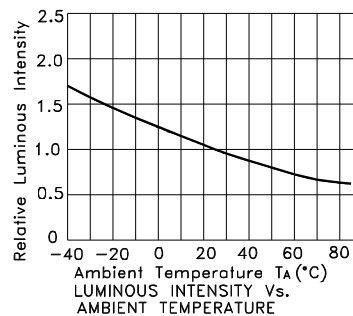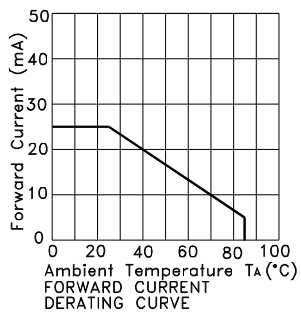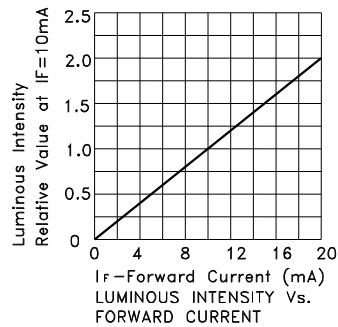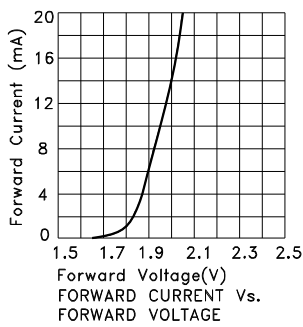| Parameter	Pure Orange	Units
Power dissipation	62.5	mW
DC Forward Current	25	mA
Peak Forward Current [1]	145	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

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

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ORANGE

T$_A$=25°C

RELATIVE INTENSITY Vs. WAVELENGTH

wavelength λ (nm)

Relative Radiant Intensity

Pure Orange   WP7113NT

Forward Current (mA)

Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE

Luminous Intensity
Relative Value at IF=10mA

I$_F$—Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

Forward Current (mA)

Ambient Temperature T$_A$ (°C)
FORWARD CURRENT
DERATING CURVE

Relative Luminous Intensity

Ambient Temperature T$_A$ (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

0° 10° 20°
30°
40°
50°
60°
70°
80°
90°

SPATIAL DISTRIBUTION
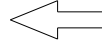
Kingbright

LABEL

1,000PCS / BAG

OUTSIDE LABEL

Kingbright

36K / 9# BOX
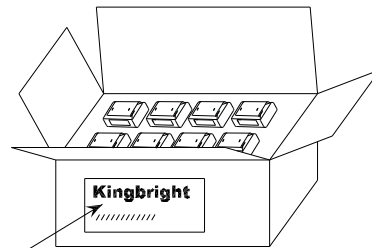
OUTSIDE LABEL

18K / 5# BOX

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P/NO: WP7113xxx

QTY: 1,000 pcs   Q.C.

Q C
XX XX XXXX
PASSED

S/N: XXXX

CODE: XXX

LOT NO:

xxxxxxxxxxxxxxxxxxxxxxx

RoHS Compliant

Kingbright

PRECAUTIONS

1. 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)
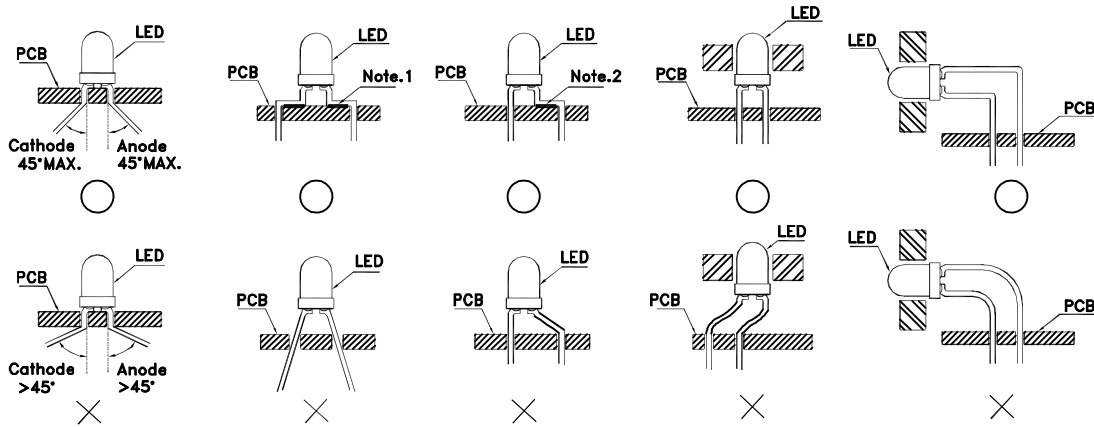
Fig.1

"○" Correct mounting method   "✕" Incorrect mounting method

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.
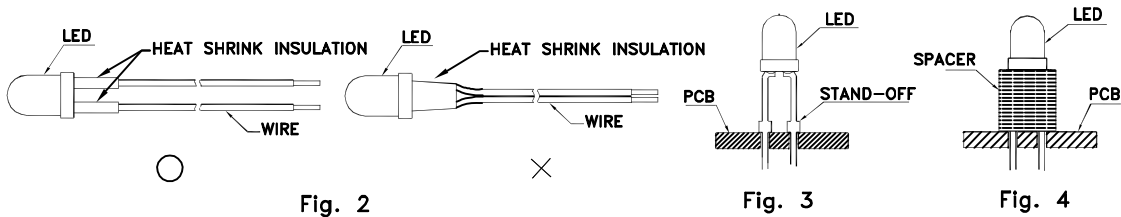
Fig. 2   Fig. 3   Fig. 4

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

5. 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)

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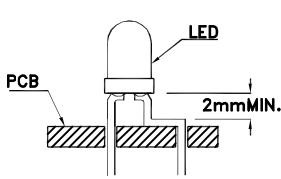6. Do not bend the leads more than twice. (Fig. 8)
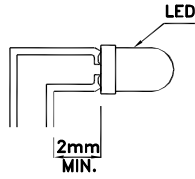

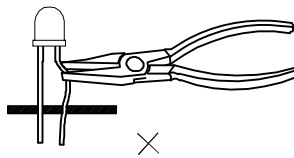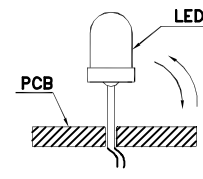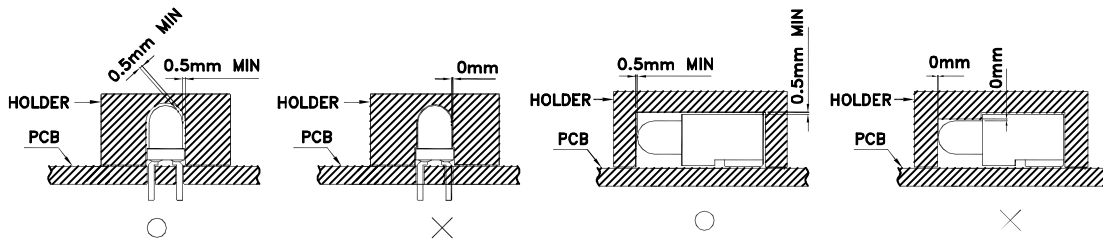Fig. 5   Fig. 6   Fig. 7   Fig. 8

7. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.


8. The tip of the soldering iron should never touch the lens epoxy.
9. Through-hole LEDs are incompatible with reflow soldering.
10. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.
11. Recommended Wave Soldering Profile for Kingbright Thru-Hole Products
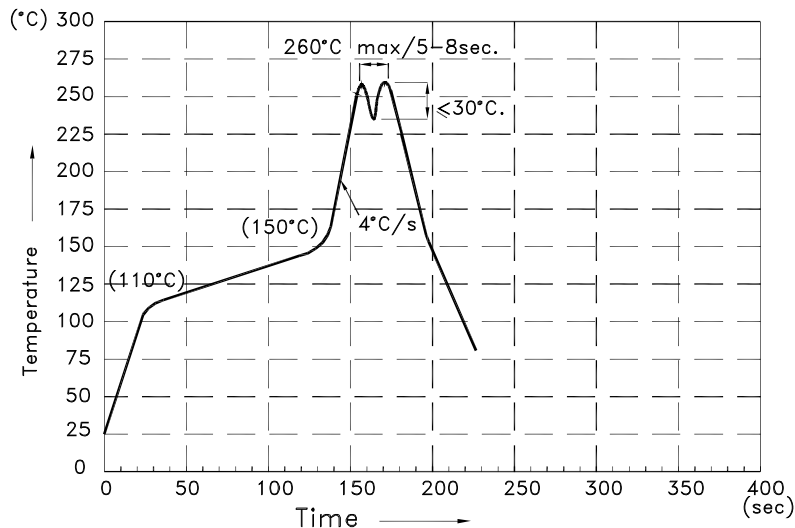
NOTES:
1. Recommend the wave temperature 245°C~260°C.The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. During wave soldering, the PCB top-surface temperature should be kept below 105°C.
5. No more than once.