

Part Number: WP56BID

High Efficiency Red

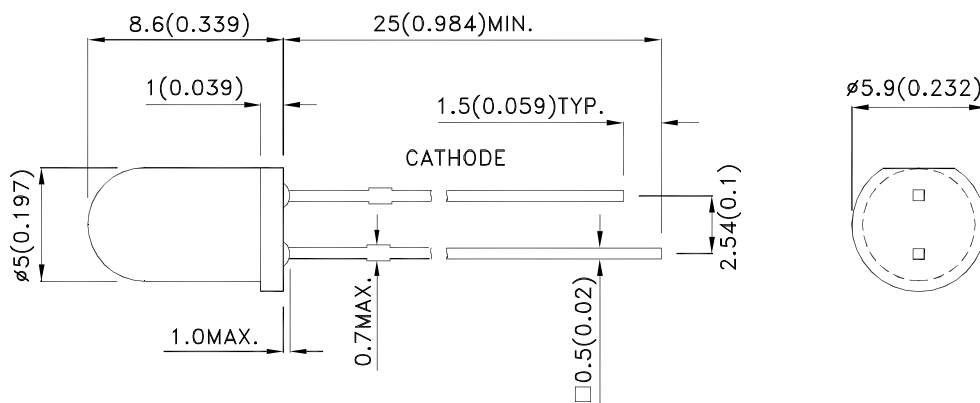
Features

- T-1 3/4 package.
- With built-in blinking IC.
- Operation voltage from 3.5V to 14V.
- Blinking frequency from 3.0Hz to 1.5Hz.
- RoHS compliant.

Description

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

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. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) V= 9V		Viewing Angle [1]
			Min.	Typ.	2θ1/2
WP56BID	High Efficiency Red (GaAsP/GaP)	Red Diffused	18	40	60°

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

Electrical / Optical Characteristics at TA=25°C

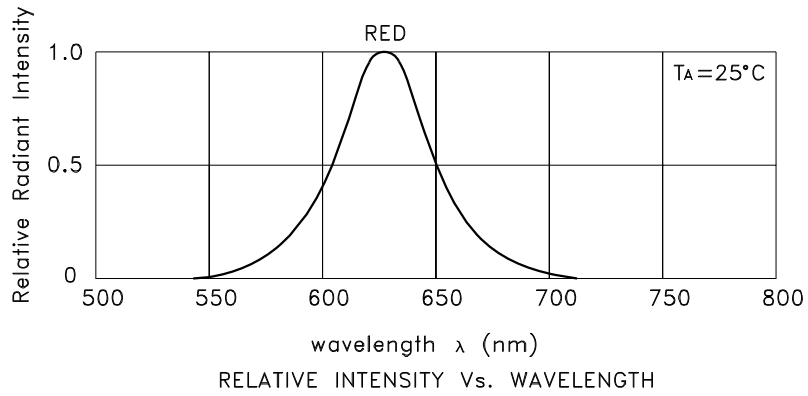
Symbol	Parameter	Device	Min.	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	High Efficiency Red		627		nm	
λ _D	Dominant Wavelength	High Efficiency Red		625		nm	
Δλ _{1/2}	Spectral Line Half-width	High Efficiency Red		45		nm	
I _F	Forward Current	High Efficiency Red	8	22		mA	Min:V _F =3.5V Typ:V _F =5V
I _{SON}	Supply Current	High Efficiency Red		8		mA	V _F =3.5V
I _{SON}	Supply Current	High Efficiency Red		44		mA	V _F =14V
f	Blink Frequency	High Efficiency Red	1.5		3	Hz	V _F =3.5V~14V

Absolute Maximum Ratings at TA=25°C

Parameter	High Efficiency Red	Units
Power dissipation	310	mW
Forward Voltage	14	V
Reverse Voltage	0.5	V
Operating Temperature	-40°C To +70°C	
Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [1]	260°C For 3 Seconds	
Lead Solder Temperature [2]	260°C For 5 Seconds	

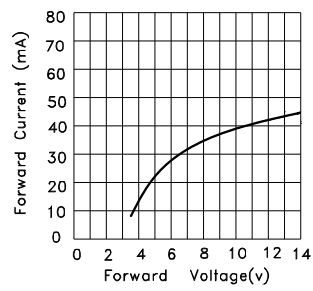
Notes:

1. 2mm below package base.
2. 5mm below package base.



High Efficiency Red

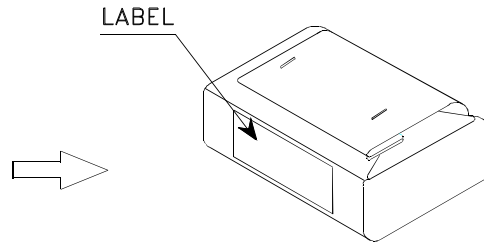
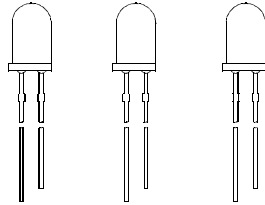
WP56BID



Kingbright

PACKING & LABEL SPECIFICATIONS

WP56BID



500PCS / BAG




32K / 9# BOX

OUTSIDE LABEL



OUTSIDE LABEL

16K / 5# BOX

Kingbright		
P/NO: WP56Bxxx		
QTY: 500 pcs	Q.C.	Q C XX XX XXXX PASSED
S/N: XXXX		
CODE: XXX		
LOT NO:		
 xxxxxxxxxxxxxxxxxxxxxxxxxxxx		
RoHS Compliant		

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)

6. Do not bend the leads more than twice. (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.