

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

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

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

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









T-1 3/4 (5mm) BI-LEVEL LED INDICATOR

Part Number: WP1503EB/2ID

High Efficiency Red

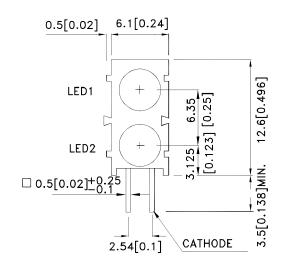
Features

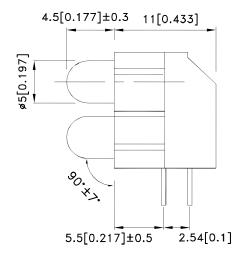
- Pre-trimmed leads for pc board mounting.
- Stackable units.
- Colors can be mixed in a single housing.
- Black case enhances contrast ratio.
- Wide viewing angle.
- High reliability life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

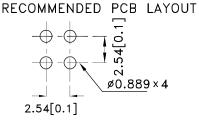
Description

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

Package Dimensions







- 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.

SPEC NO: DSAF2088 **REV NO: V.5A DATE: MAR/17/2015** PAGE: 1 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: P.Cheng ERP: 1102000679

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 10mA		Viewing Angle [1]
			Min.	Тур.	201/2
WP1503EB/2ID	High Efficiency Red (GaAsP/GaP)	Red Diffused	25	50	60°
WP 1503EB/2ID		Red Dillused	*12	*40	

Notes:

- 1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
- 2. Luminous intensity/ luminous Flux: +/-15%
- *Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red	627		nm	IF=20mA
λD [1]	Dominant Wavelength	High Efficiency Red	617		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red	45		nm	IF=20mA
С	Capacitance	High Efficiency Red	15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	High Efficiency Red	2	2.5	V	IF=20mA
lr	Reverse Current	High Efficiency Red		10	uA	VR = 5V

Notes:

- 1. Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4. Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

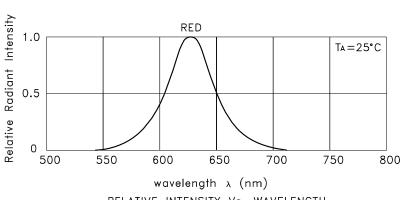
Absolute Maximum Ratings at TA=25°C

Parameter	High Efficiency Red	Units	
Power dissipation	75	mW	
DC Forward Current	30	mA	
Peak Forward Current [1]	160	mA	
Reverse Voltage	5	V	
Operating/Storage Temperature	-40°C To +85°C	1	
Lead Solder Temperature [2]	260°C For 3 Seconds		
Lead Solder Temperature [3]	260°C For 5 Seconds		

Notes:

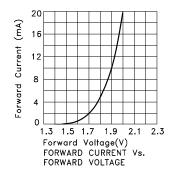
- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. 2mm below package base.
 3. 5mm below package base.

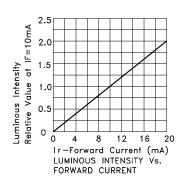
SPEC NO: DSAF2088 REV NO: V.5A DATE: MAR/17/2015 PAGE: 2 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: P.Cheng ERP: 1102000679

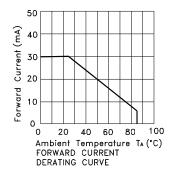


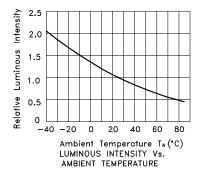
RELATIVE INTENSITY Vs. WAVELENGTH

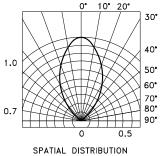
High Efficiency Red WP1503EB/2ID











SPEC NO: DSAF2088 **REV NO: V.5A** DATE: MAR/17/2015 PAGE: 3 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** ERP: 1102000679 DRAWN: P.Cheng

PACKING & LABEL SPECIFICATIONS WP1503EB/2ID 250PCS / BAG OUTSIDE LABEL Kingbright Kingbright OUTSIDE LABEL 12K / 9# BOX 6K / 5# BOX **Kingbright** P/NO: WP1503EBxxx O C QTY: 250 pcs Q.C. xx xx xxxx S/N: XXXX PASSED CODE: XXX LOT NO:

Terms and conditions for the usage of this document

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.

RoHS Compliant

- 2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- 3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- 4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
- 5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
- 6. All design applications should refer to Kingbright application notes available at http://www.KingbrightUSA.com/ApplicationNotes

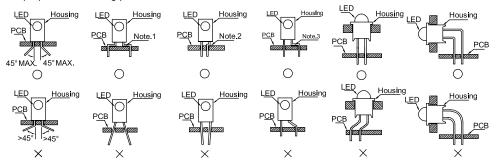
 SPEC NO: DSAF2088
 REV NO: V.5A
 DATE: MAR/17/2015
 PAGE: 4 OF 5

 APPROVED: WYNEC
 CHECKED: Allen Liu
 DRAWN: P.Cheng
 ERP: 1102000679

PRECAUTIONS

- 1. Storage conditions:
 - a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
 - b.LEDs should be stored with temperature ≤30°C and relative humidity < 60%.
 - c.Product in the original sealed package is recommended to be assembled within 72 hours of opening.

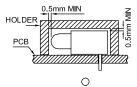
 Product in opened package for more than a week should be baked for 30 (+10/-0) hours at 85 ~ 100°C.
- 2. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures.

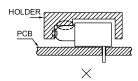


" \bigcirc " Correct mounting method " \times " Incorrect mounting method

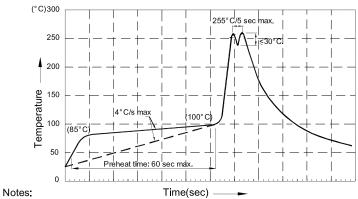
Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

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





- 4. The tip of the soldering iron should never touch the lens epoxy.
- 5. Through-hole LEDs are incompatible with reflow soldering.
- 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.
- 7. Recommended Wave Soldering Profiles:



- 1.Recommend pre-heat temperature of 105° C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260° C
- 2.Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
- 3.Do not apply stress to the epoxy resin while the temperature is above 85°C.
- 4. Fixtures should not incur stress on the component when mounting and during soldering process.
- 5.SAC 305 solder alloy is recommended.
- 6.No more than one wave soldering pass.

SPEC NO: DSAF2088 REV NO: V.5A DATE: MAR/17/2015 PAGE: 5 OF 5
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: P.Cheng ERP: 1102000679