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3mm RIGHT ANGLE LED INDICATOR

Part Number: WP42WUM/EYW

High Efficiency Red

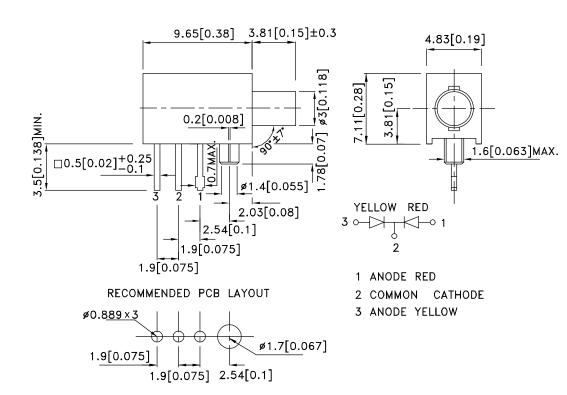
Features

- Pre-trimmed leads for pc mounting.
- 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.

Descriptions

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

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Selection Guide

Part No.	Dice	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Тур.	201/2
WP42WUM/EYW	High Efficiency Red (GaAsP/GaP)	White Diffused	10	20	100°
			*4	*8	
	Yellow (GaAsP/GaP)		2	6	
			*2	*6	

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%.
- 3. 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 Yellow	627 590		nm	IF=20mA
λD [1]	Dominant Wavelength	High Efficiency Red Yellow	617 588		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red Yellow	45 35		nm	IF=20mA
С	Capacitance	High Efficiency Red Yellow	15 20		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	High Efficiency Red Yellow	2 2.1	2.5 2.5	V	IF=20mA
lr	Reverse Current	High Efficiency Red Yellow		10 10	uA	VR = 5V

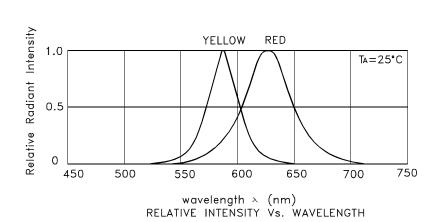
- Wavelength: + / -1nm.
 Forward Voltage: + / -0.1V.
 Wavelength value is traceable to the CIE127-2007 compliant national standards.
 Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

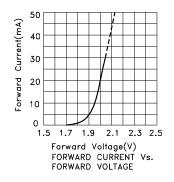
Parameter	High Efficiency Red	Yellow	Units		
Power dissipation	75	75	mW		
DC Forward Current	30	30	mA		
Peak Forward Current [1]	160	140	mA		
Reverse Voltage	5 V				
Operating / Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 3 Seconds				
Lead Solder Temperature [3]	260°C For 5 Seconds				

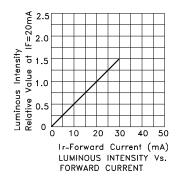
- 1. 1 / 10 Duty Cycle, 0.1ms Pulse Width.
- 2. 2mm below package base.
 5mm below package base.

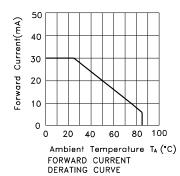
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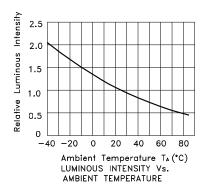


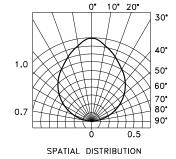
WP42WUM/EYW High Efficiency Red







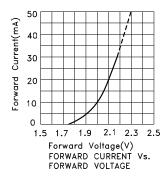


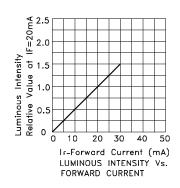


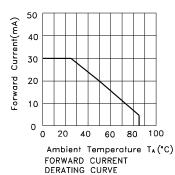
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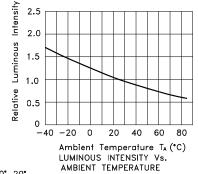
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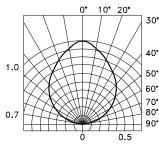
Yellow







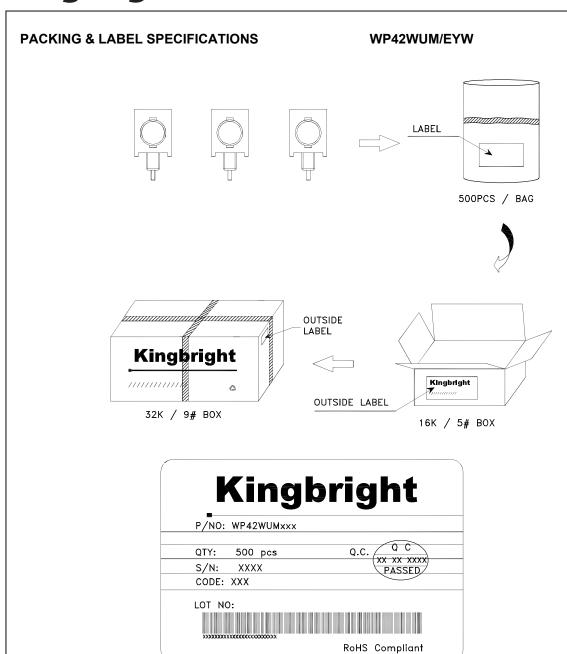




SPATIAL DISTRIBUTION

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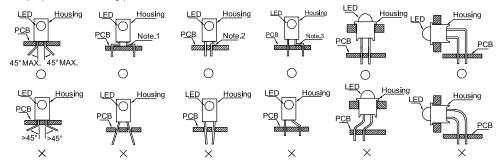
- 1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
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PRECAUTIONS

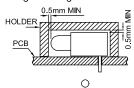
- 1. Storage conditions:
 - a. Avoid continued exposure to the condensing moisture environment and keep the product away from rapid transitions in ambient temperature.
 - b.LEDs should be stored with temperature ≤ 30° C and relative humidity < 60%.
 - c.Product in the original sealed package is recommended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

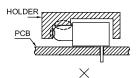


" \bigcirc " Correct mounting method " imes " Incorrect mounting method

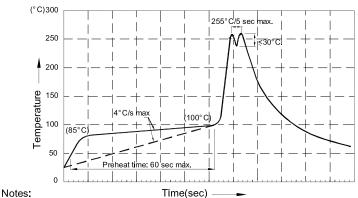
Note 1-3: Do not route PCB trace in the contact area between the leadframe and the PCB to prevent short-circuits.

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.
- 6. 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.

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