

# VISIBLE LIGHT PRODUCTS

## SPECIFICATION

### HTLB4a-46WOR WOR WOR

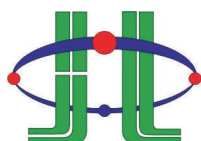


Drawn by	Checked by	Approved by



DATE:2008/10/25

REV:B



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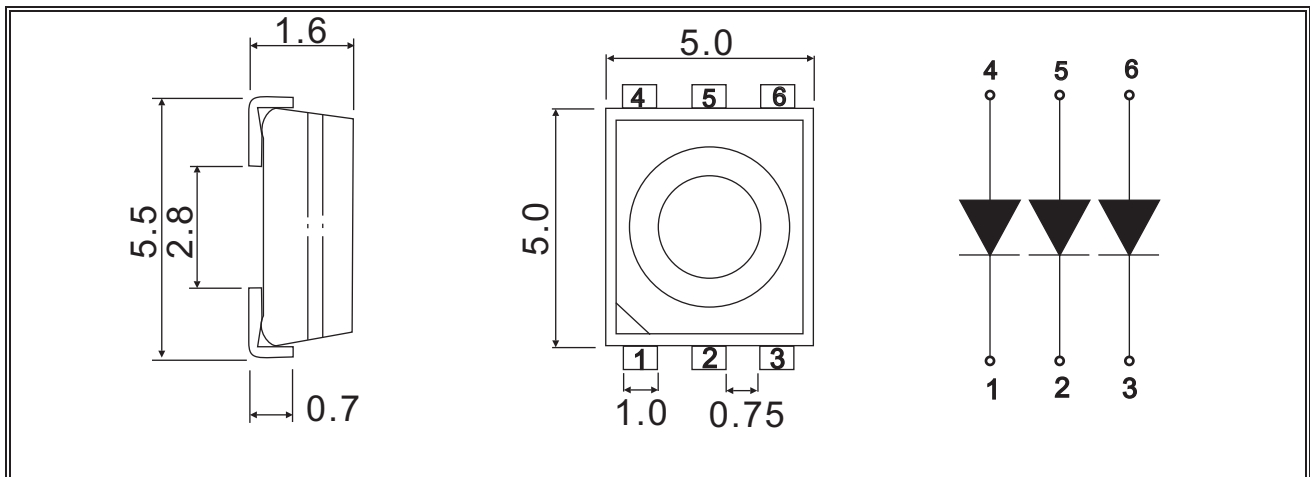
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## DEVICES

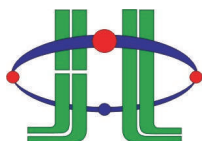
Part Number	Lens		Source	
	Color	Diffusion	Dice Source	Color
HTLB4a-46WOR WOR WOR	Water clear	Non-Diffused	AlInGaP/GaP	Super Fresh Red

## PACKAGE DIMENSIONS



### NOTE:

- 1.All dimensions are in millimeter.
- 2.specifications are subject to change without notice.
- 3.Tolerance is  $\pm 0.3\text{mm}$  unless otherwise noted.

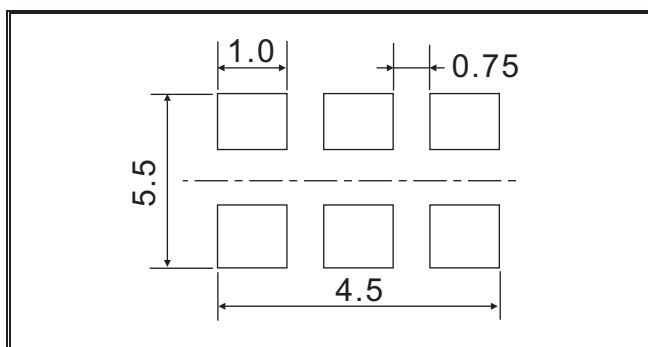


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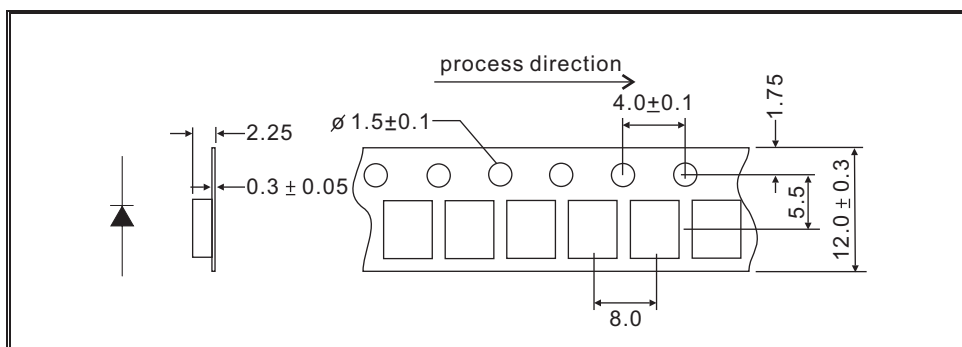
## RECOMMENDED SOLDERING PATTERN



NOTE:

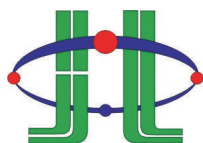
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## TAPE SPECIFICATIONS



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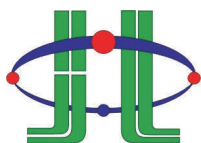
ABSOLUTE MAXIMUM RATINGS

TA=25°C

PARAMETER	SYMBOL	MAX. RATING	UNIT
Power Dissipation	Pd	180	mW
Continuous Forward Current	IF	75	mA
Peak Forward Current *1	IFM	150	mA
Reverse Voltage	VR	5	V
LED Junction Temperature	Tj	100	°C
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C
Reflow Soldering (preheat 150-180°C 60-120sec, soldering temp 260°C 5sec)			

\*1.Duty Ratio=0.1%,Pulse Width=10us.

\*2.Iron soldering in 350°C within 5 seconds will not cause damage to the dice. But be aware of the high temperature will not only make the epoxy soften but also cause the lead moving and the gold wire broken and even open. So before returning to the normal temperature PLEASE AVOID any serious pressure on the top of epoxy and lead.



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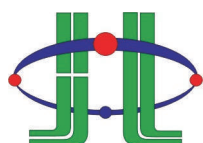
ELECTRIC-OPTICAL CHARACTERISTICS

TA=25°C

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
View Angle of Half Power	2θ1/2	IF=60mA		120		deg
Forward Voltage	VF			2.1	2.4	V
Reverse Current	IR	VR=5V			10	μA
Luminous Intensity *2	IV	IF=60mA	700	1300		mcd
Peak Emission Wavelength	λp			635		nm
Dominate Wave Length *3	λd(HUE)			625		nm
Spectrum Width Of Half Valve	Δλ			25		nm

\*2.Tolerance:±15% HUEY-JANN measuring equipment : EXELTRON 2001. 2.S370 made by U.D.T.

\*3.The dominate wavelength , λ d, is derived from the CIE Chromaticity Diagram and represents the color of the device.



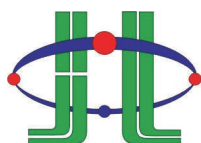
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RELIABILITY TEST

Classification	Test Item	Test Conditions	Refer to Temperature-profile
Reflow Soldering	Lead Solder	Pre-heat=120~150°C Pre-heat time=120sec Max Peak temperature=240°C Max Soldering time=10sec Max	
	Lead free Solder	Pre-heat=180~200°C Pre-heat time=120sec Max Peak temperature=260°C Max Soldering time=10sec Max	
Hand Soldering	Temperature=350°C Max Soldering time=3sec Max(one time only)		

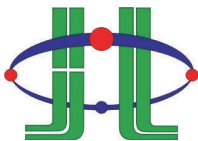
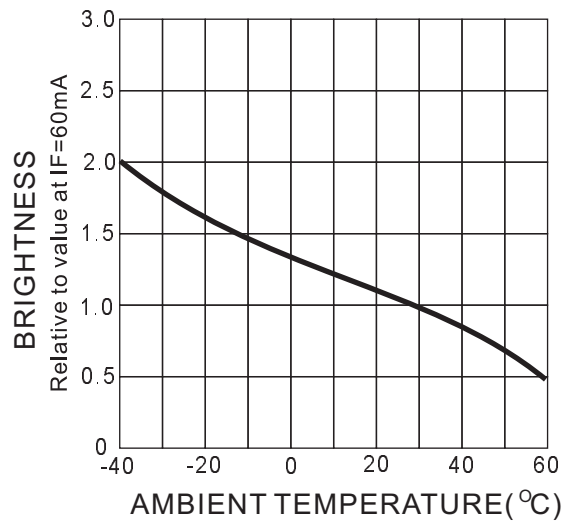
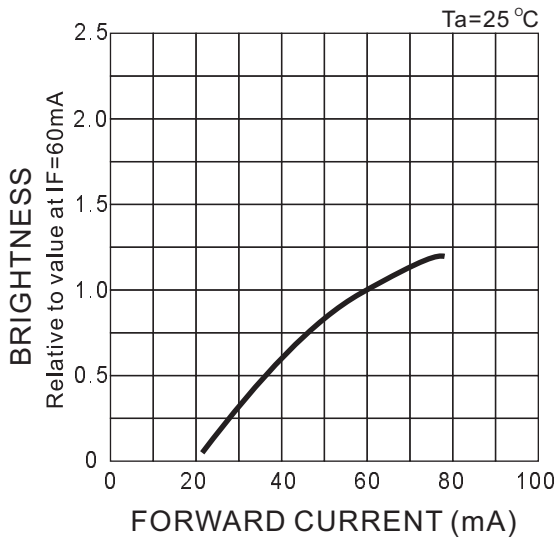
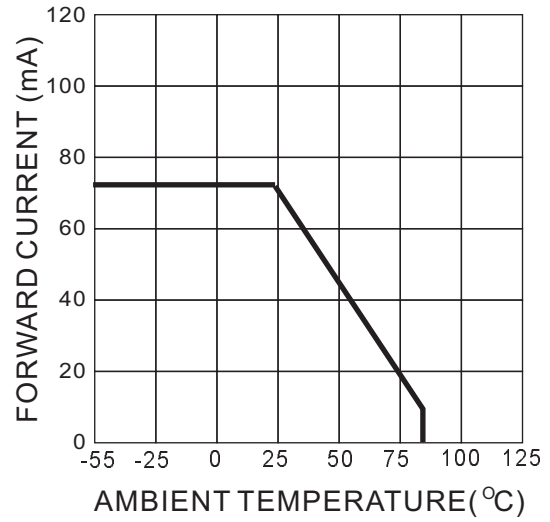
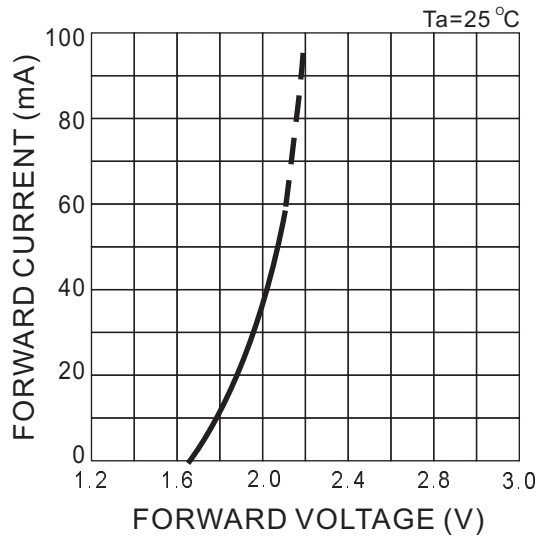


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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

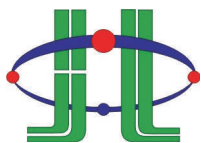
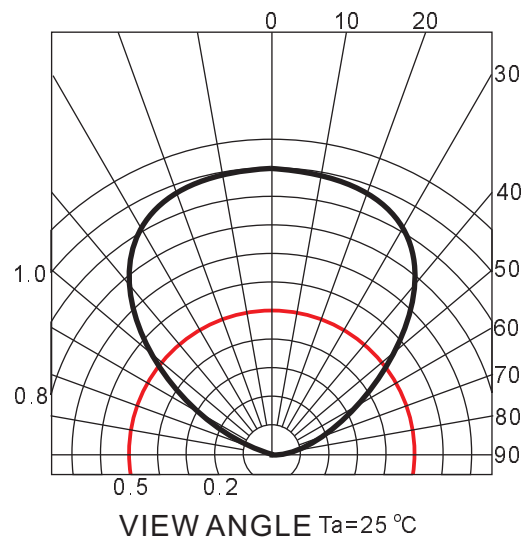
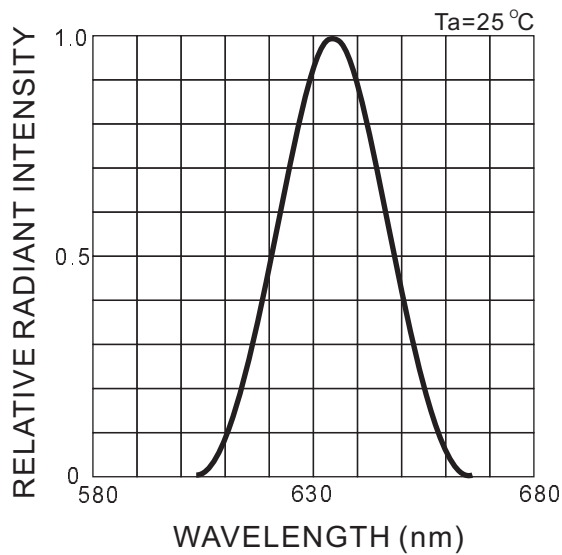


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LED VF Bin Selection

$I_F=60\text{mA}$

BIN CODE	Forward Voltage	
	Minimum	Maximum
d	1.8	2.0
e	2.0	2.2
f	2.2	2.4

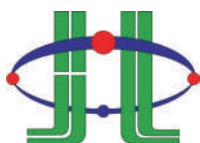
Voltage tolerance for each bin limit is  $\pm 0.03\text{V}$

Brightness Bin Selection

$I_F=60\text{mA}$

BIN CODE	Brightness in mcd	
	Minimum	Maximum
P	880	1150
Q	1150	1500
R	1500	1900
S	1900	2500

Brightness tolerance for each bin limit is  $\pm 15\%$



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