

VISIBLE LIGHT PRODUCTS SPECIFICATION

HTLB4a-49YWF YWF YWF

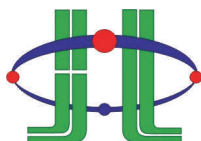


Drawn by	Checked by	Approved by



DATE:2010/7/14

REV:F



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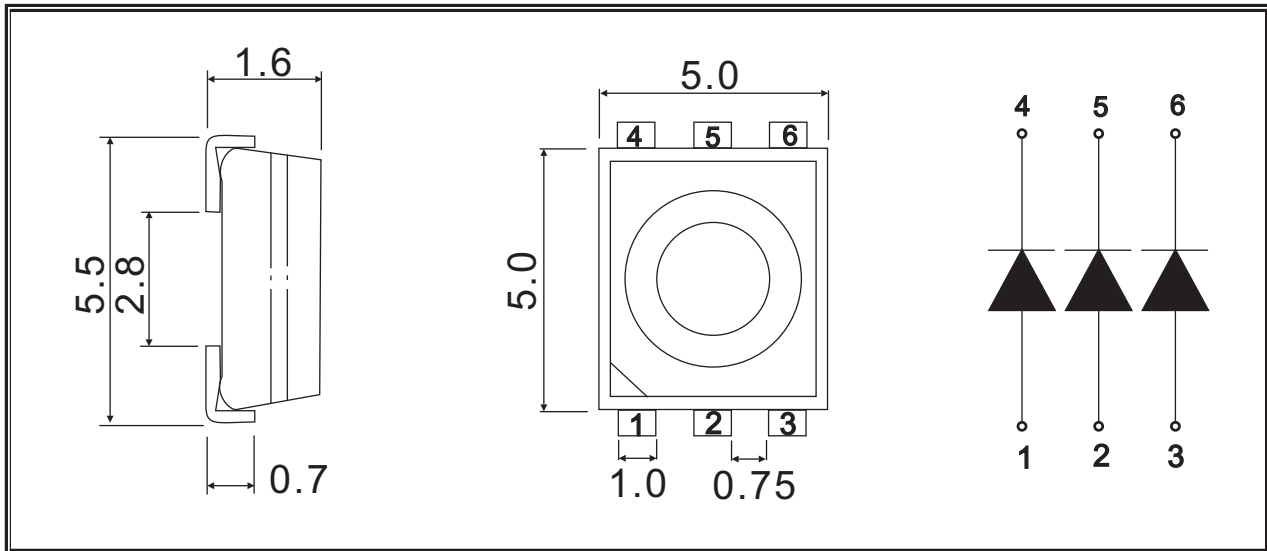
No.27 Line 466 Sec.2,Camg-nan Rd. Wu-chi Town Taichung Shien, Taiwan, R.O.C.

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DEVICES

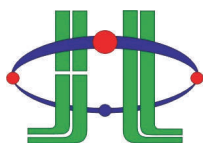
Part Number	Lens		Source	
	Color	Diffusion	Dice Source	Color
HTLB4a-49YWFYWFYWF	Yellow	Non-Diffusion	GaN/InGa	Warm White

PACKAGE DIMENSIONS



NOTE:

- 1.All dimensions are in millimeter.
- 2.specifications are subject to change without notice.
- 3.Tolerance is 0.3mm unless otherwise noted.



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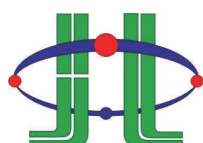
ABSOLUTE MAXIMUM RATINGS

TA=25°C

PARAMETER	SYMBOL	MAX. RATING	UNIT
Power Dissipation	Pd	120	mW
Continuous Forward Current	IF	75	mA
Peak Forward Current *1	IFM	150	mA
Reverse Voltage	VR	4	V
Electrostatic Discharge (HBM)	ESD	150	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C
Reflow Soldering (preheat 150-180°C 60-120sec, soldering temp 260°C 10sec)			

*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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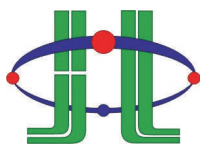
ELECTRIC-OPTICAL CHARACTERISTICS

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			3.3	3.8	V
Reverse Current	IR	VR=4V			60	μA
Luminous Intensity *2	IV	IF=60mA	3000	4200		mcd
Chromaticity Coordinates	x			0.40		
	y			0.41		
Spectrum Width Of Half Valve	Δλ			---		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.



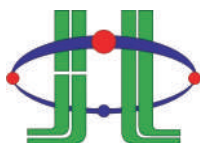
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RELIABILITY TEST

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)		

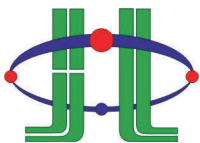
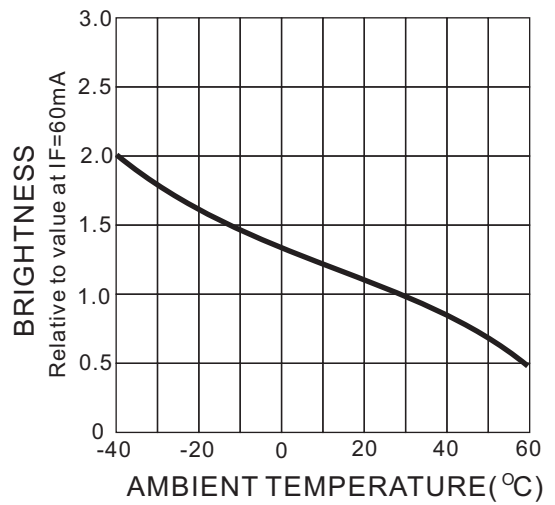
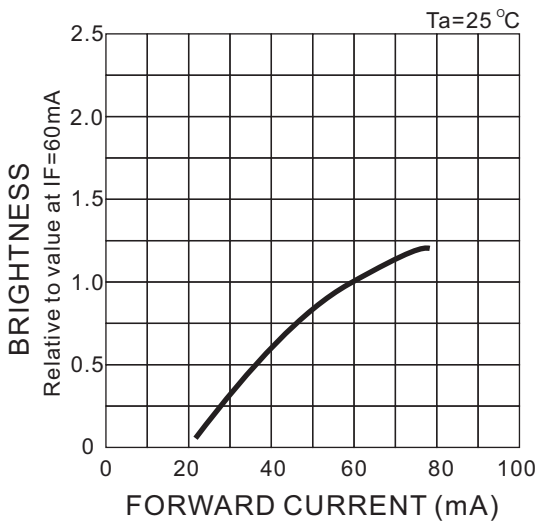
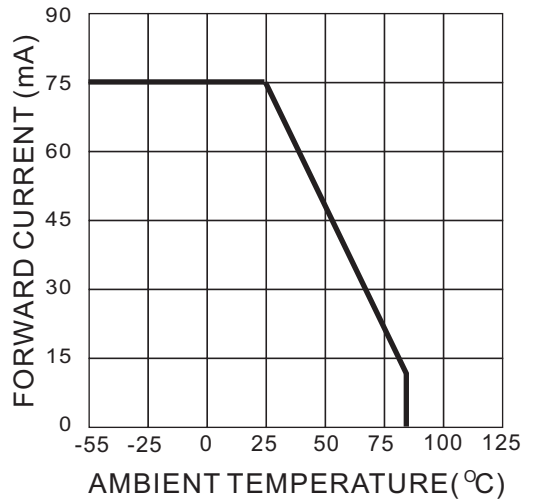
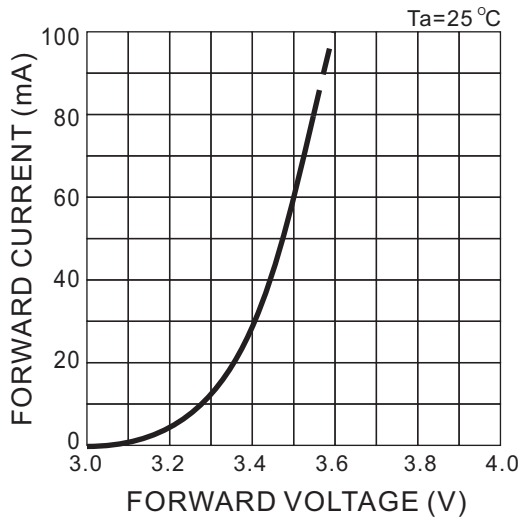


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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

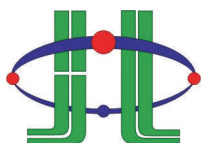
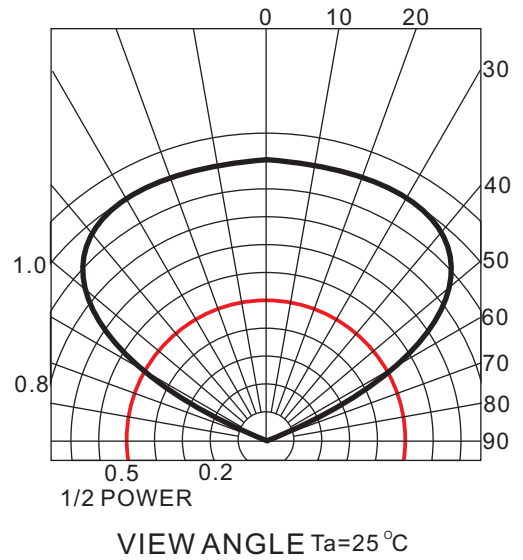
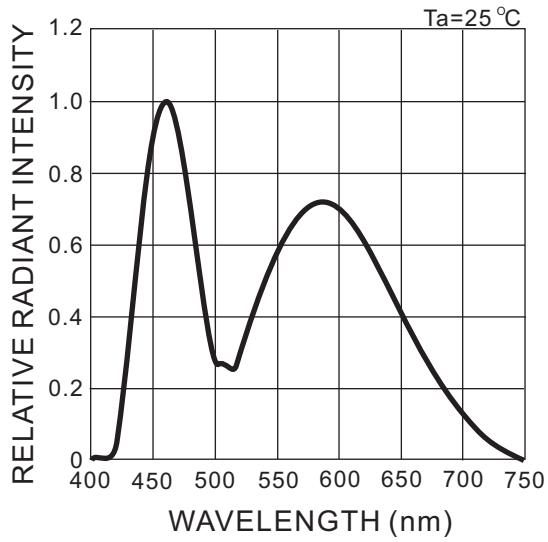


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LED VF Bin Selection

$I_F=60\text{mA}$

BIN CODE	Forward Voltage	
	Minimum	Maximum
k	3.2	3.4
m	3.4	3.6
n	3.6	3.8

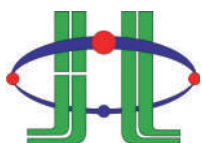
Voltage tolerance for each bin limit is $\pm 0.03\text{V}$

Brightness Bin Selection

$I_F=60\text{mA}$

BIN CODE	Brightness in mcd	
	Minimum	Maximum
T	2500	3200
U	3200	4200
V	4200	5500
W	5500	7200

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



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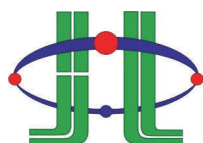
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Color Bin Selection

If=20mA

Bin	CCT(K)	Chromaticity Coordinates				
	TYP					
C10	3640	x	0.402	0.417	0.409	0.392
		y	0.423	0.431	0.400	0.391
C11	3500	x	0.402	0.438	0.424	0.392
		y	0.423	0.440	0.406	0.391
C12	3640	x	0.392	0.409	0.402	0.387
		y	0.391	0.400	0.382	0.374
C13	3370	x	0.409	0.424	0.416	0.402
		y	0.400	0.406	0.389	0.382
C14	3500	x	0.387	0.416	0.410	0.383
		y	0.374	0.389	0.374	0.360
C15	3150	x	0.438	0.454	0.438	0.424
		y	0.440	0.446	0.412	0.406
C16	3150	x	0.424	0.438	0.429	0.416
		y	0.406	0.412	0.394	0.389
C17	2950	x	0.454	0.471	0.453	0.438
		y	0.446	0.451	0.416	0.412
C18	2950	x	0.438	0.453	0.444	0.429
		y	0.412	0.416	0.399	0.394
Tolerance		x ± 0.02			y ± 0.02	

The chromaticity coordinates reading at center of light.

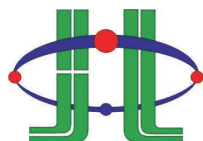
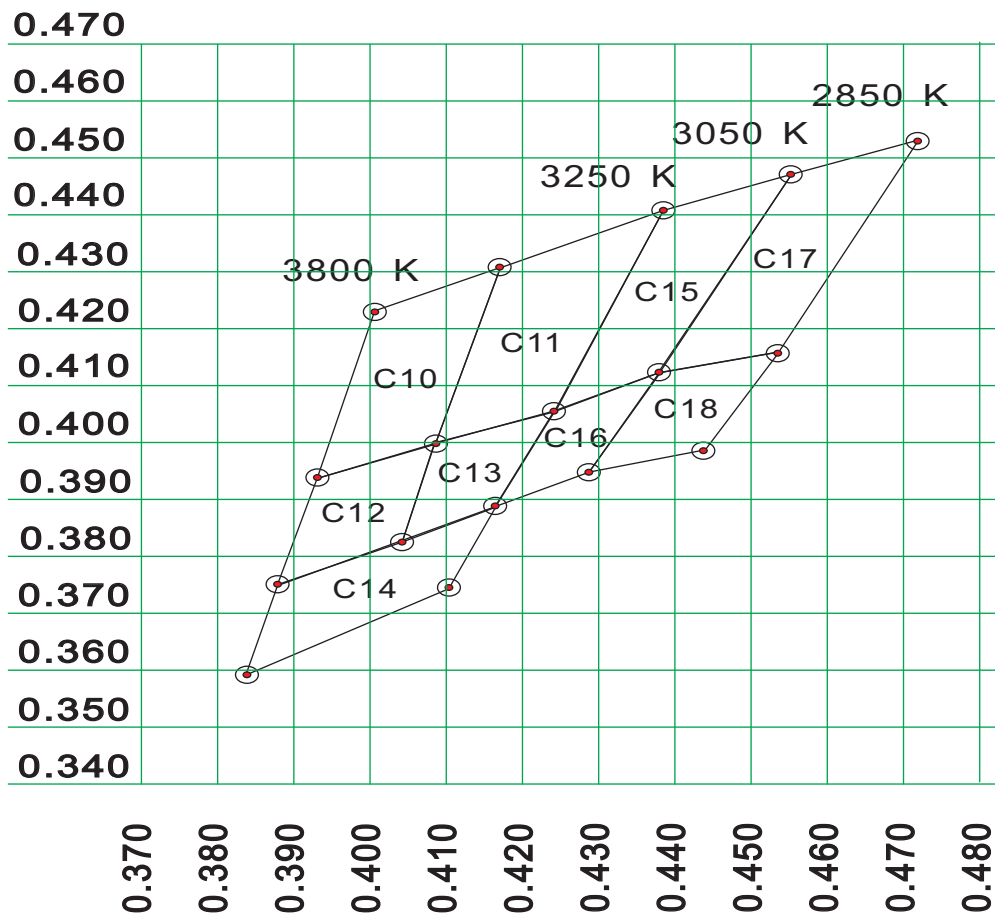


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CIE Curve Color Chart



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