

# INFRARED PRODUCTS SPECIFICATION

## HIRTLB2-4G



Drawn by	Checked by	Approved by



DATE:2008/12/17

REV:D



**HUEY JANN ELECTRONICS INDUSTRY CO., LTD.**

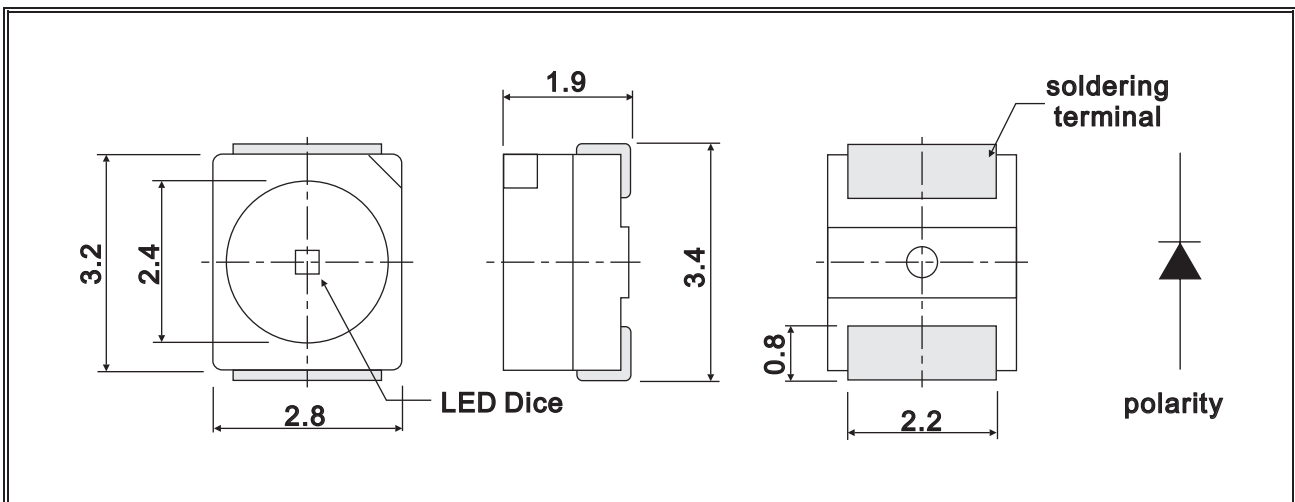
No.27 Line 466 Sec.2,Cannng-nan Rd. Wu-chi Town Taichung Shien, Taiwan, R.O.C.

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DEVICES

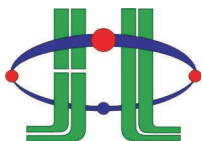
Part Number	Lens		Source	
	Color	Diffusion	Dice Source	Color
HIRTLB2-4G	Water clear	Non-Diffused	GaAIAs/GaAIAs	Infrared

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.

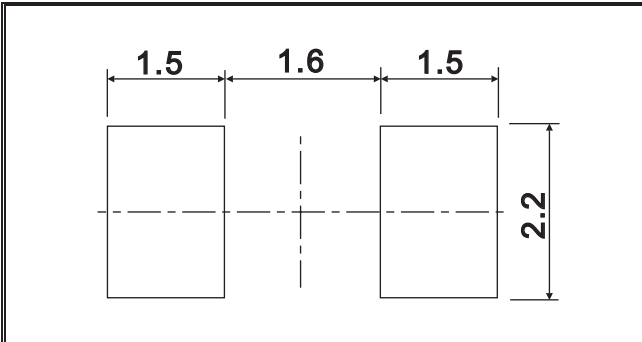


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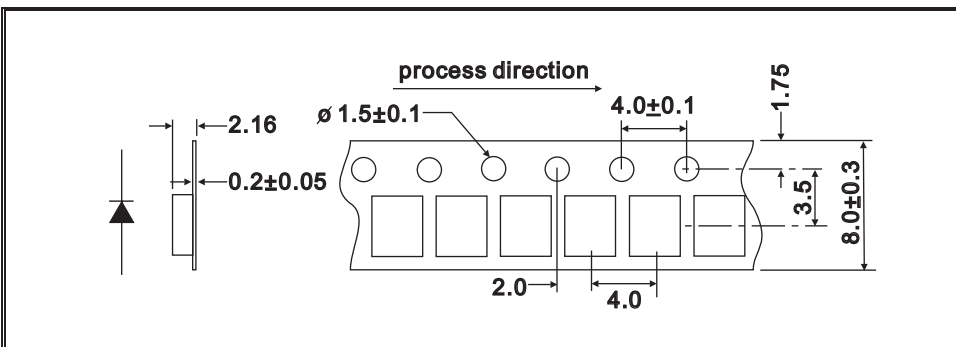
RECOMMENDED SOLDERING PATTERN



NOTE:

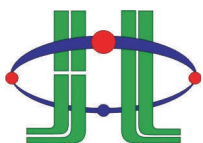
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TAPE SPECIFICATIONS



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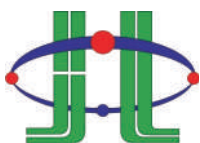
☰ ABSOLUTE MAXIMUM RATINGS

TA=25°C

PARAMETER	SYMBOL	MAX. RATING	UNIT
Power Dissipation	Pd	80	mW
Continuous Forward Current	IF	50	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 ~ +100	°C
Reflow Soldering (preheat 150-180°C 60-120sec, soldering temp 260°C 10sec)			

\*1.Duty Ratio = 1/10, Pulse Width = 0.1ms.

\*2.Iron soldering high temperature 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 temperatures PLEASE AVOID any serious pressure on the top of epoxy and lead.



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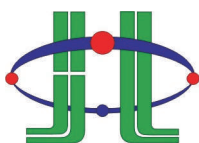
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ELECTRIC-OPTICAL CHARACTERISTICS

TA=25°C

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
View Angle of Half Power	2θ1/2	IF=20mA		120		deg
Forward Voltage	VF			1.47	1.60	V
Reverse Current	IR	VR=5V			10	μA
Radiant Output Power *2	Po	IF=20mA	5.0	9.0		mw/sr
Peak Emission Wavelength	λp			850		nm
Spectrum Width of Half Valve	Δλ			45		nm

\*2. Tolerance: ±15% HUEY-JANN measuring equipment: 1. EXELTON 2001. 2. S370 made by U.D.T.



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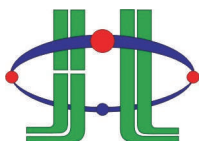
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RELIABILITY TEST

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS-C-7021 :B-1	Connect with a power if=20mA Ta=Under room temperature Test Time=1,000hrs	0/22
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS-C-7021 :B-11	Ta=+85°C±5°C RH=90% ~ 95% Test Time=1000hrs	0/22
	High Temperature Storage	MIL-STD-883:1008 JIS-C-7021 :B-10	High Ta=+100°C±5°C Test Time=1,000hrs	0/22
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-40°C±5°C Test Time=1,000hrs	0/22
	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS-C-7021 :A-4	-40°C ~ +25°C ~ +85°C ~ +25°C 60min 20min 60min 20min Test Time=200cycle	0/22
Environmental Test	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010	-40°C±5°C ~ +85°C±5°C 20min 20min Test Time=200cycle	0/22

\*Failure Criteria:

1. VF arise  $\geq$  10%
2. IV decline  $\geq$  30%
3. A failure is an LED that is open or shorted

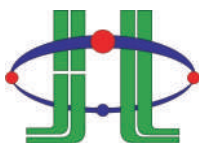
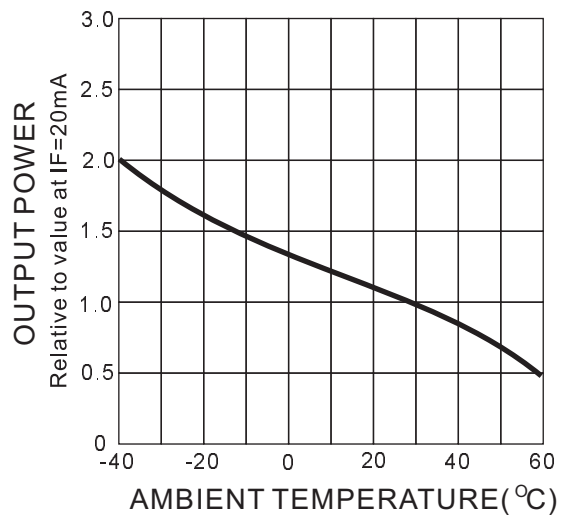
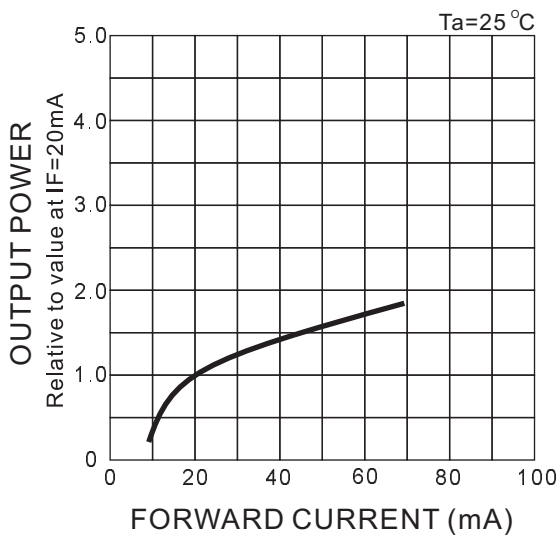
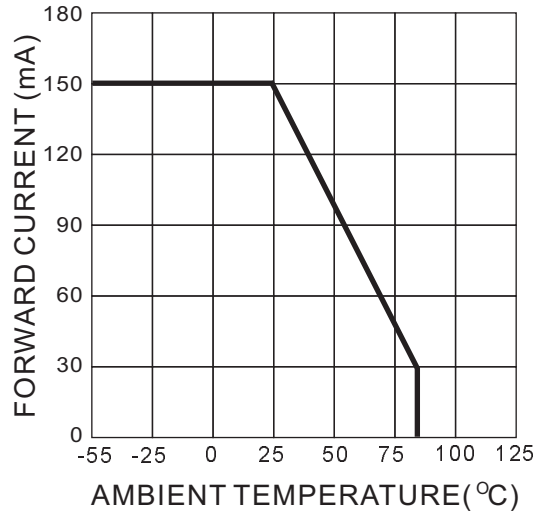
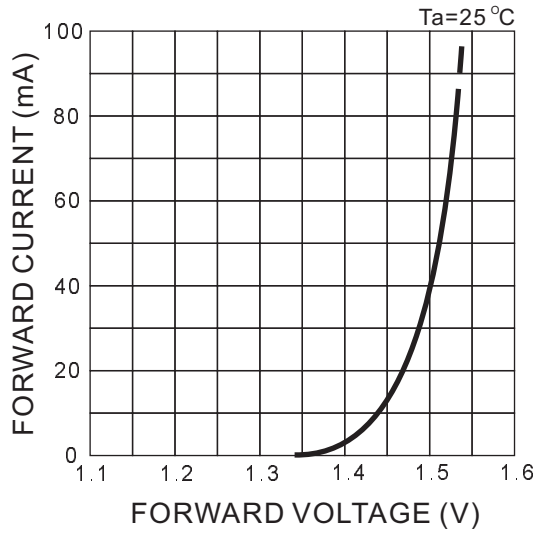


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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

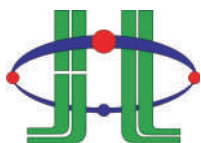
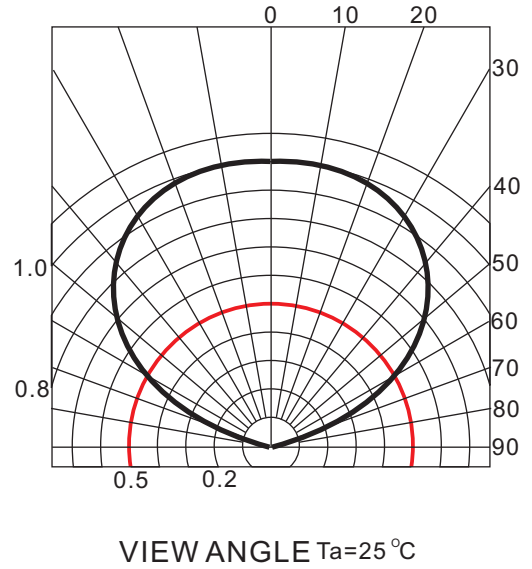
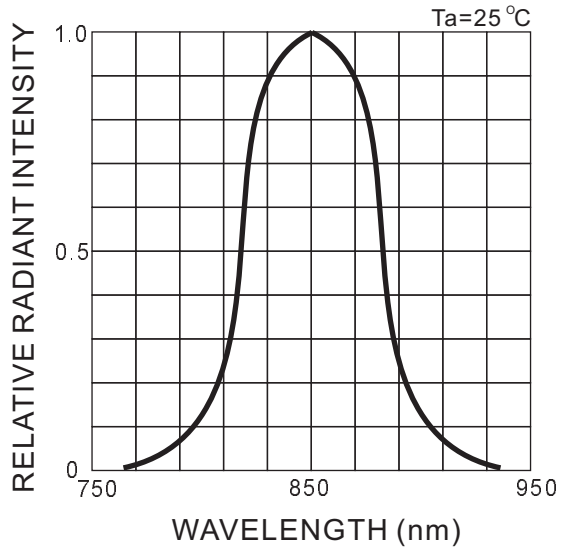


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