

PHOTOTRANSISTORS PRODUCTS SPECIFICATION

HPTCL-150D-4



Drawn by	Checked by	Approved by



DATE:2008/12/18

REV:G



HUEY JANN ELECTRONICS INDUSTRY CO., LTD.

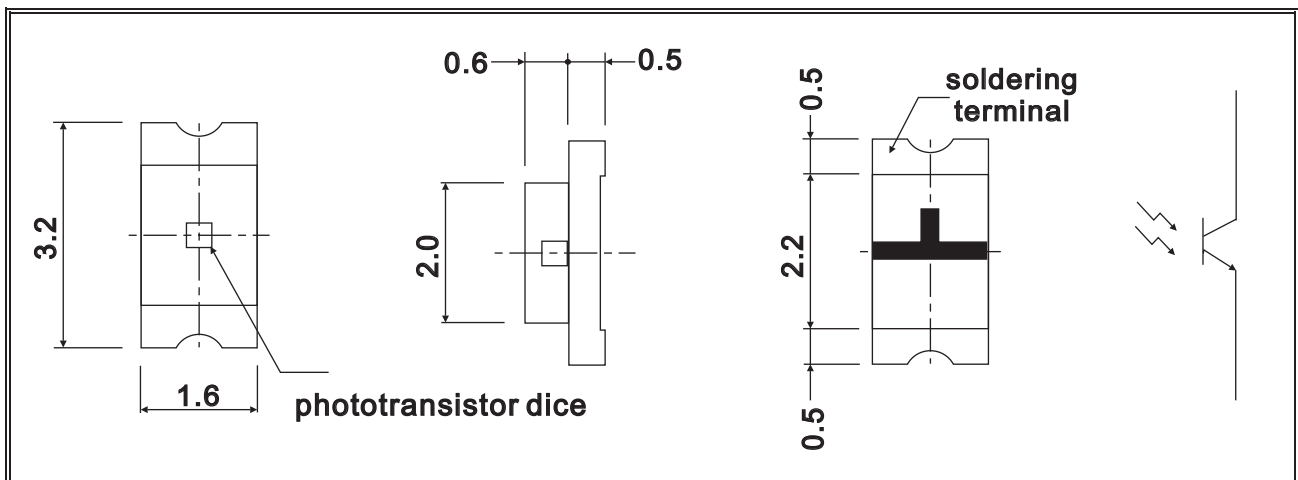
No.27 Line 466 Sec.2,Cannng-nan Rd. Wu-chi Town Taichung Shien, Taiwan, R.O.C.

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DEVICES

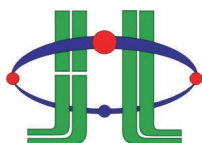
Part Number	Lens		Source	
	Color	Diffusion	Dice Source	Color
HPTCL-150D-4	Water clear	Non-Diffused	-----	Phototransistor

PACKAGE DIMENSIONS



NOTE:

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

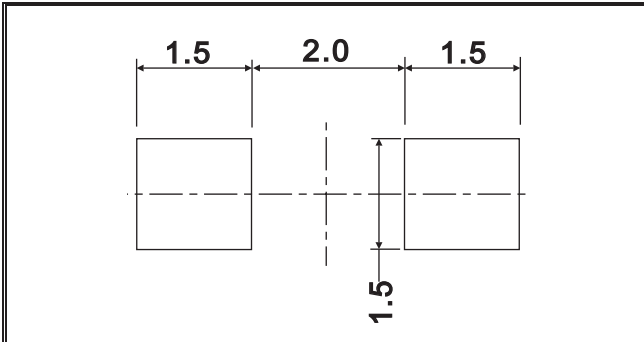


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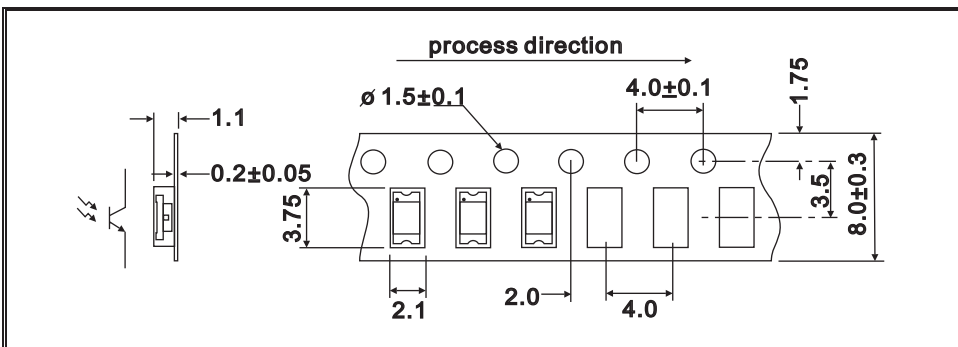
RECOMMENDED SOLDERING PATTERN



NOTE:

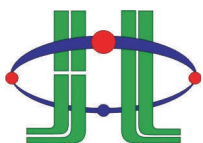
- 1.All dimensions are in millimeter.
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TAPE SPECIFICATIONS



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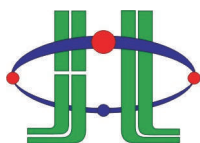
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ABSOLUTE MAXIMUM RATINGS

TA=25°C

PARAMETER	SYMBOL	MAX. RATING	UNIT
Power Dissipation	Pd	150	mW
Sensitive Area	AA	0.19	mm
Collector-Emitter Voltage	Vceo	20	V
Emitter-Collector Voltage	Veco	5	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Dip Soldering Temperature (3mm from case Bottom 260 °C for 5 seconds)			

*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
Angle of Half Sensitive	$2\theta_{1/2}$			140		deg
Collector-Emitter Voltage	V_{ceo}	$I_c=1mA,$ $E_e=0mw/cm^2$	20			V
Emitter-Collector Voltage	V_{eco}	$I_c=100\mu A,$ $E_e=0mw/cm^2$		5		v
Collector-Emitter Saturation Voltage	V_{ces}	$I_c=0.5mA,$ $E_e=0.5mw/cm^2$			0.4	V
Collector Current (Saturation)	I_c	$V_{ce}=5V,$ $E_e=0.5mw/cm^2$		0.4		mA
Collector Dark Current	I_{ceo}	$V_{ce}=20V,$ $E_e=0mw/cm^2$			100	nA
Ries Time	T_r	$V_{ce}=5V,$ $I_c=1mA,$		15		μS
Fall Time	T_f	$R_L=1000\Omega$		20		μS
Peak Wavelength	λ_p			940		nm
Sensitivity Wavelength	λ		500		1100	nm

*1.The dominate wavelength , λ_d , is derived from the CIE Chromaticity Diagram and represents the color of the device.

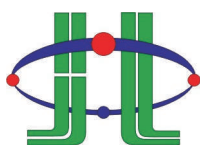
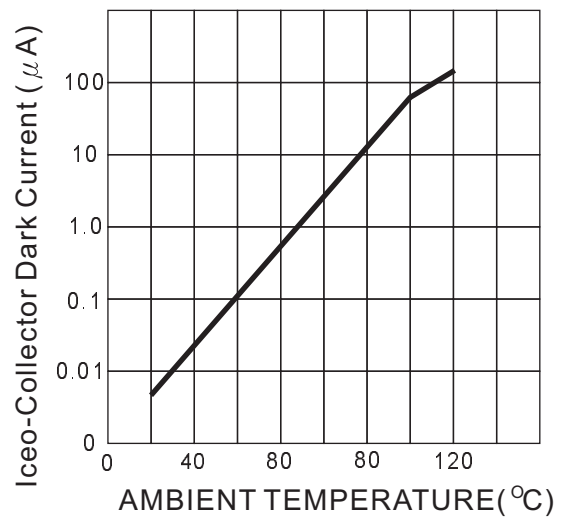
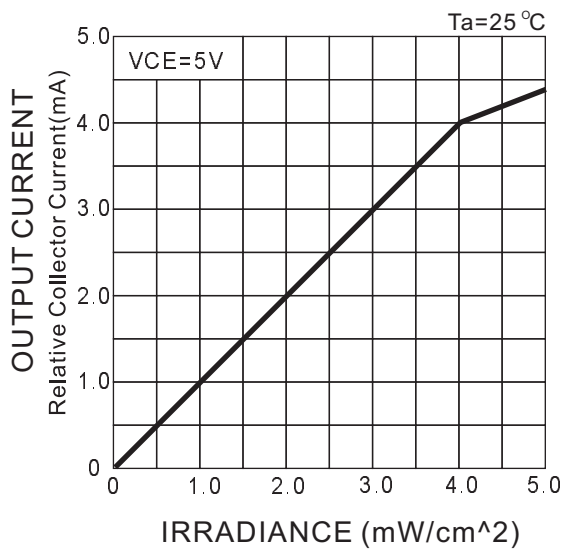
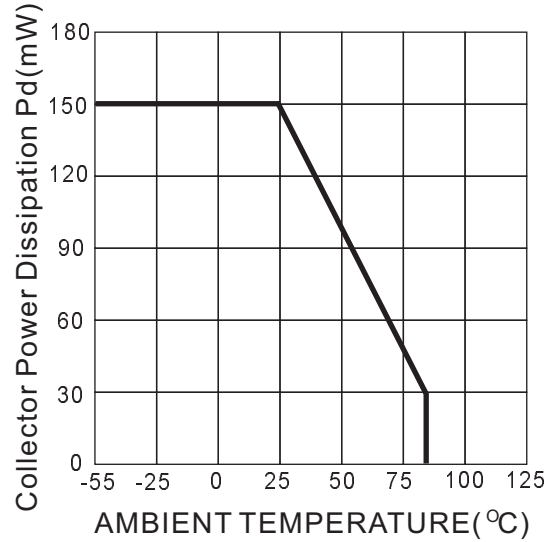
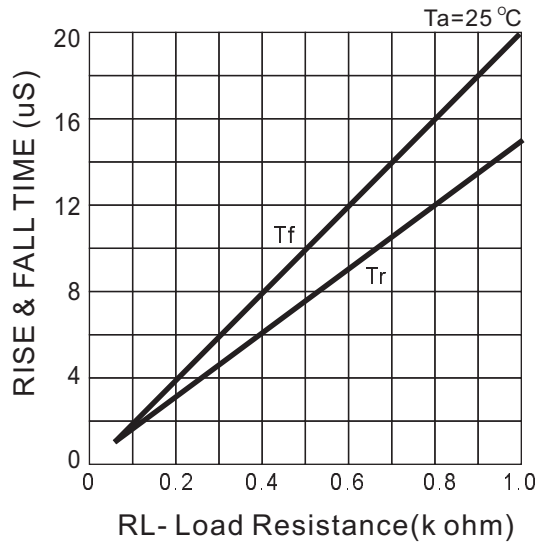


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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

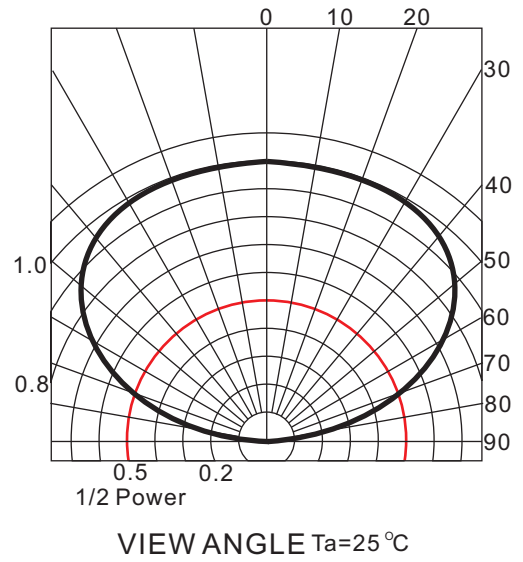
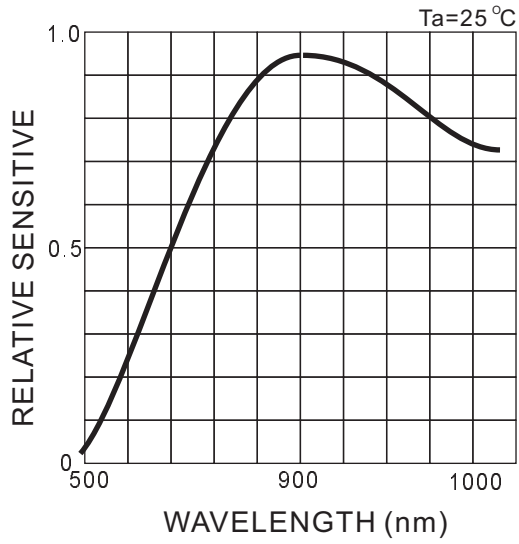


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Precautions For Use

1. Over-current-proof

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30°C or less and 60%RH or less.

2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

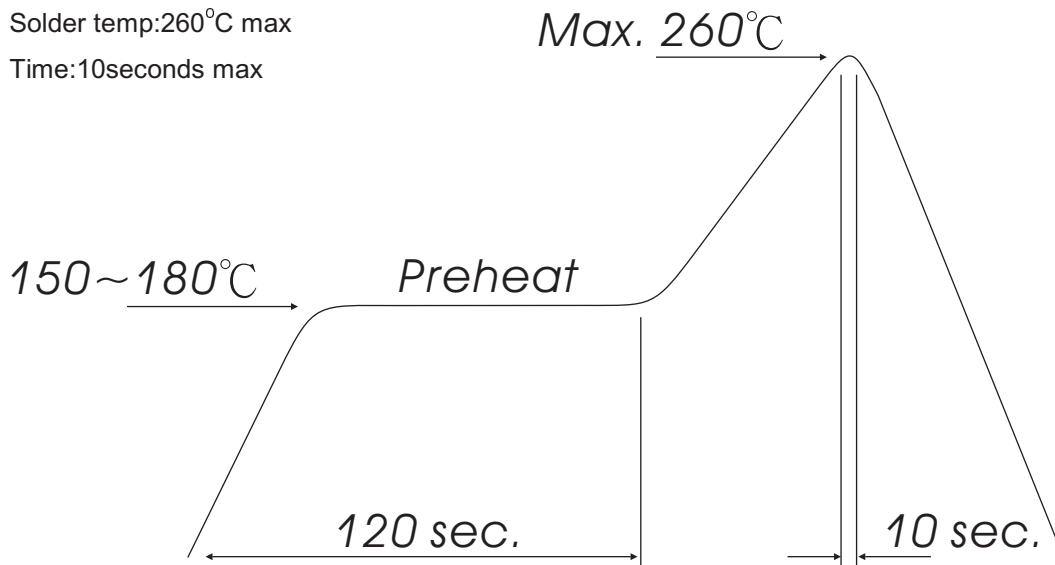
3.1 Pb-free solder temperature profile

Preheat:150 ~ 180°C

60 ~ 120seconds

Solder temp:260°C max

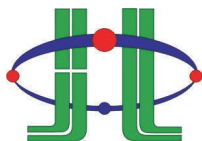
Time:10seconds max



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

3.4 After soldering, do not warp the circuit board.



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