

PHOTOTRANSISTORS PRODUCTS SPECIFICATION

HPTCL-150D-4

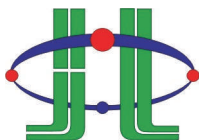


| Drawn by | Checked by | Approved by |
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DATE:2008/12/18

REV:G



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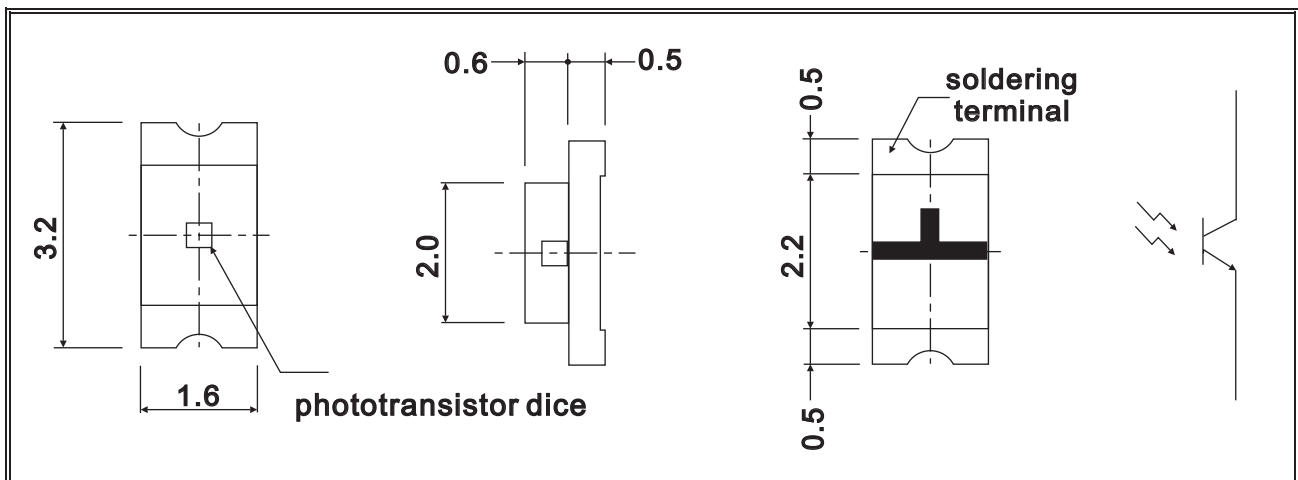
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DEVICES

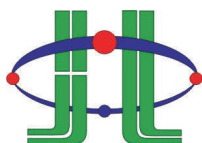
| Part Number | Lens | | Source | |
|--------------|-------------|--------------|-------------|-----------------|
| | Color | Diffusion | Dice Source | Color |
| HPTCL-150D-4 | Water clear | Non-Diffused | ----- | Phototransistor |

PACKAGE DIMENSIONS



NOTE:

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

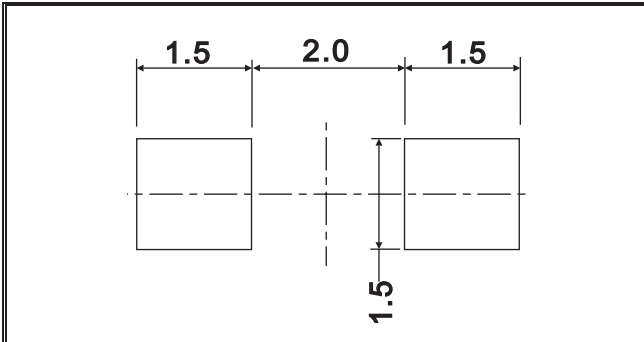


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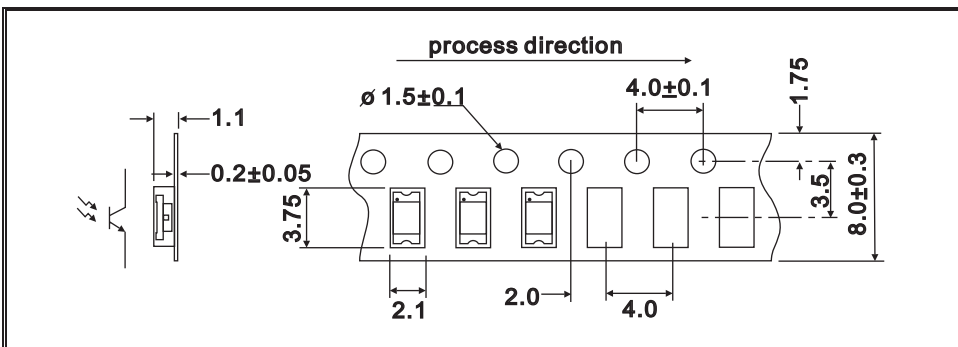
RECOMMENDED SOLDERING PATTERN



NOTE:

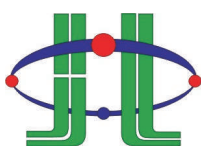
- 1.All dimensions are in millimeter.
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TAPE SPECIFICATIONS



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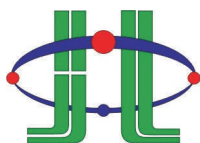
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ABSOLUTE MAXIMUM RATINGS

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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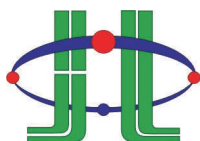
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ELECTRIC-OPTICAL CHARACTERISTICS

TA=25°C

| PARAMETER | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|--------------------------------------|------------------|---|-----|-----|------|------|
| Angle of Half Sensitive | 2θ1/2 | | | 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 μA, 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, R _L =1000Ω | | 15 | | μS |
| Fall Time | T _f | | | 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.

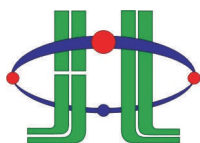
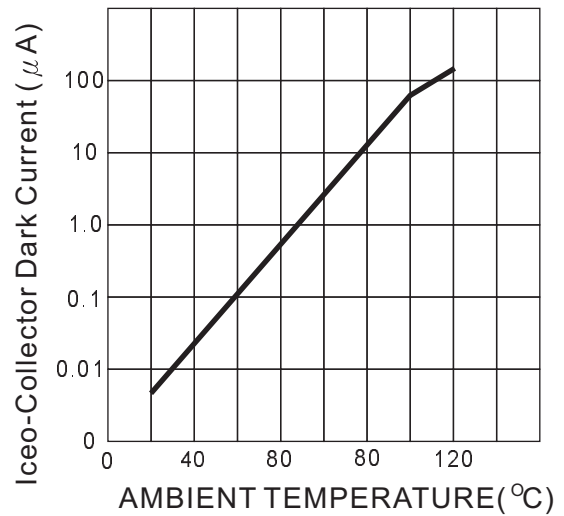
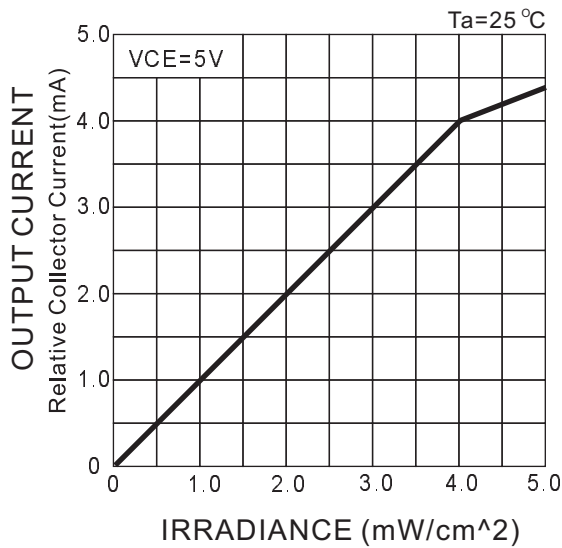
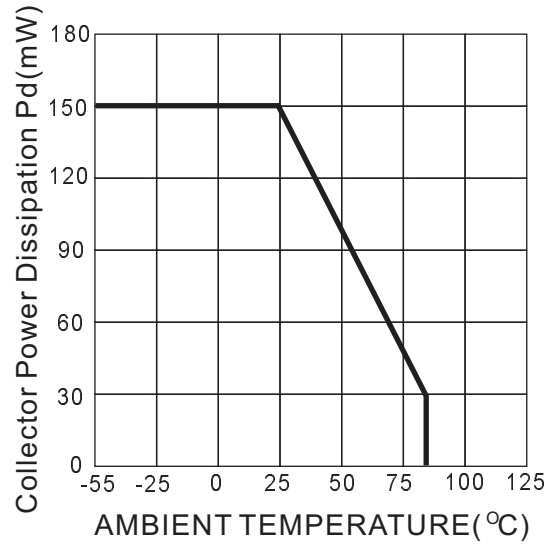
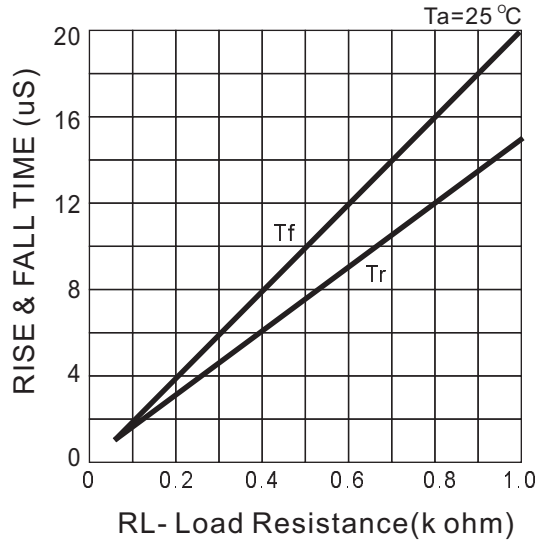


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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

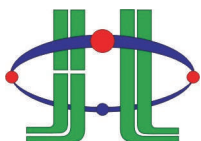
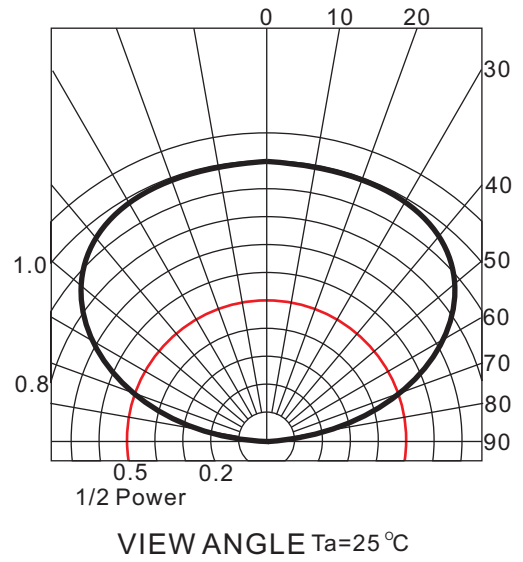
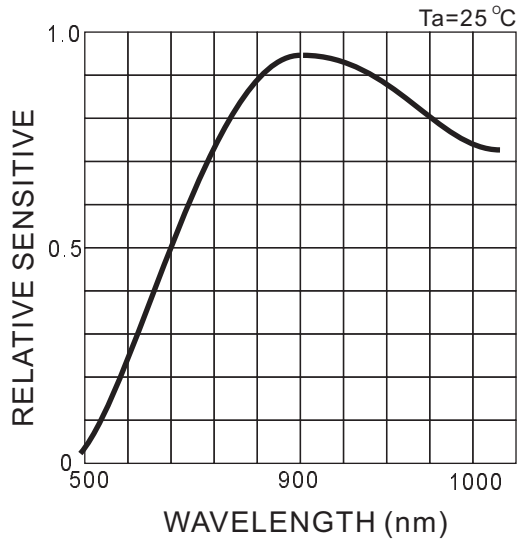


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Precautions For Use

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

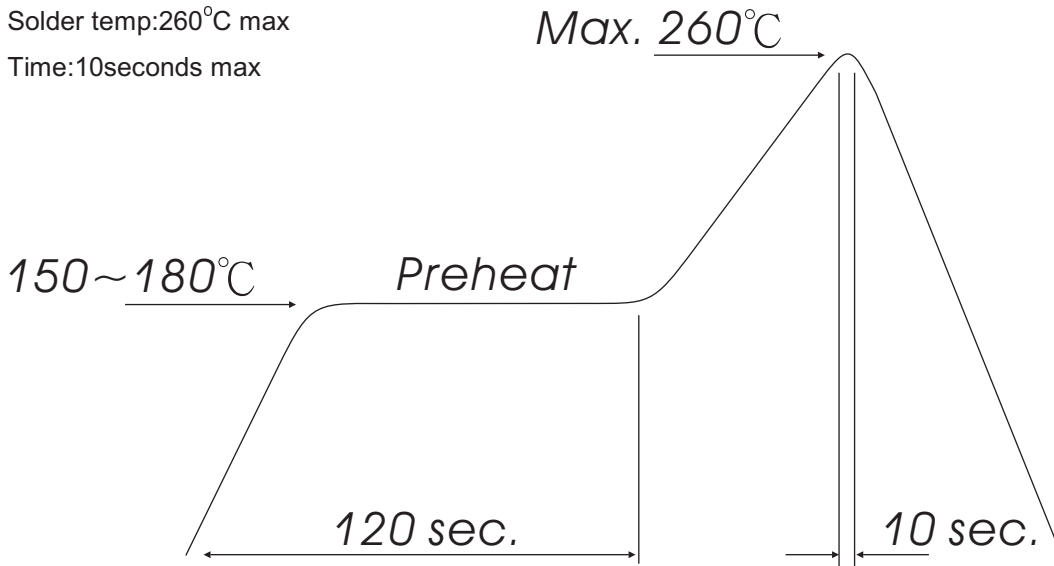
3.1 Pb-free solder temperature profile

Preheat:150 ~ 180°C

60 ~ 120seconds

Solder temp:260°C max

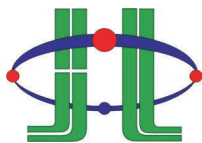
Time:10seconds max



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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