

# SIT501

## Photo Interrupter

### Dimensions

(unit: mm)

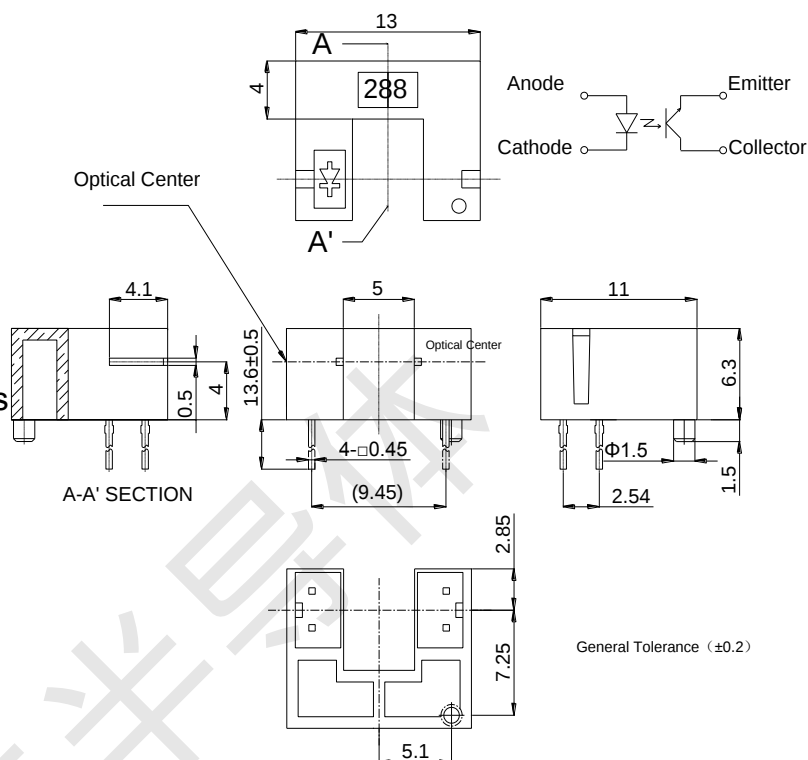
The SIT501 is a photointerrupter, high-performance standard type, combines high-output GaAs IRED with high sensitive phototransistor.

### Features

- PCB direct mount type
- GAP:5.0mm
- With the installation positioning boss
- Horizontal slit
- RoHS Compliance

### Applications

- FAX
- Mouses
- Rotary encoders



### Maximum Ratings

(Ta=25°C)

| Item                                |                             | Symbol    | Rating    | Unit |
|-------------------------------------|-----------------------------|-----------|-----------|------|
| Input                               | Power dissipation           | $P_D$     | 100       | mW   |
|                                     | Forward current             | $I_F$     | 60        | mA   |
|                                     | Reverse voltage             | $V_R$     | 5         | V    |
| Output                              | Collector power dissipation | $P_C$     | 100       | mW   |
|                                     | Collector current           | $I_C$     | 40        | mA   |
|                                     | Collector-Emitter voltage   | $V_{CEO}$ | 30        | V    |
|                                     | Emitter-Collector voltage   | $V_{ECO}$ | 5         | V    |
| Operating temperature <sup>*1</sup> |                             | Topr.     | -20 ~ +85 | °C   |
| Storage temperature <sup>*1</sup>   |                             | Tstg.     | -30 ~ +85 | °C   |
| Soldering temperature <sup>*2</sup> |                             | Tsol.     | 260       | °C   |

\*1. No icebond or dew

\*2. The soldering should be 1.2mm away from bottom of the holder t=within 3s

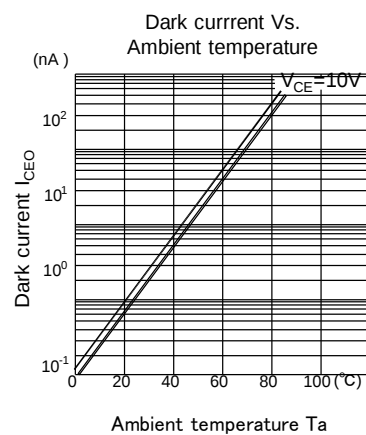
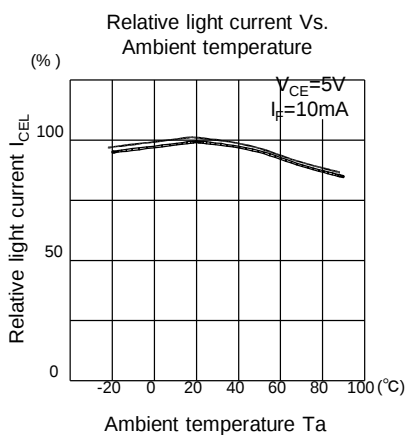
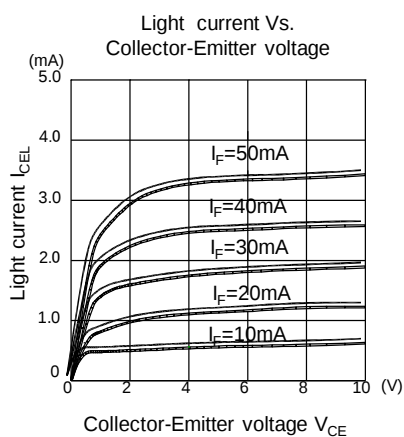
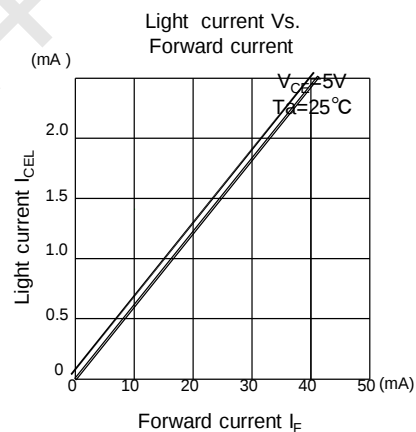
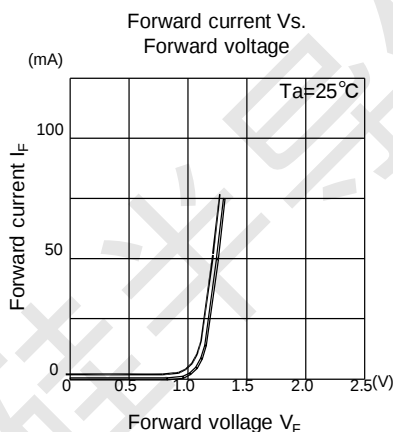
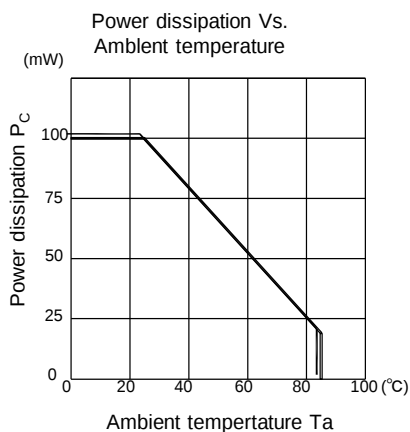
The contents of this data sheet are subject to change without advance notice for the purpose of improvement. When using this product, would you please refer to the latest specifications.

## SIT501

## Electro-Optical Characteristics

(Ta=25°C)

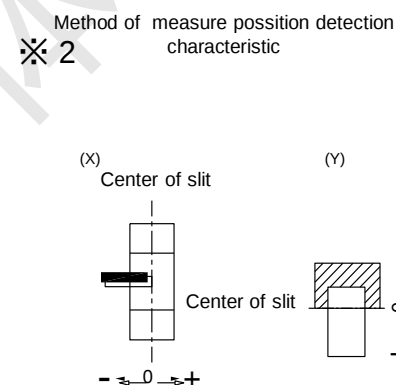
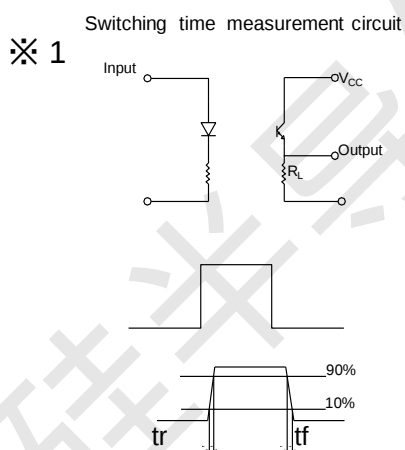
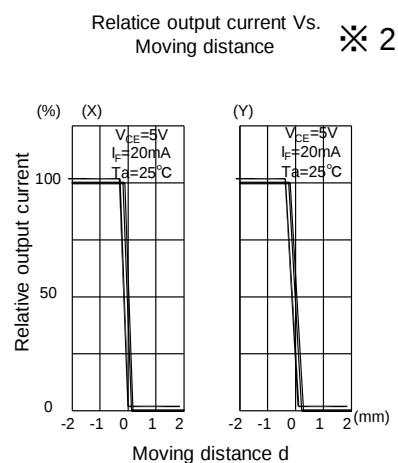
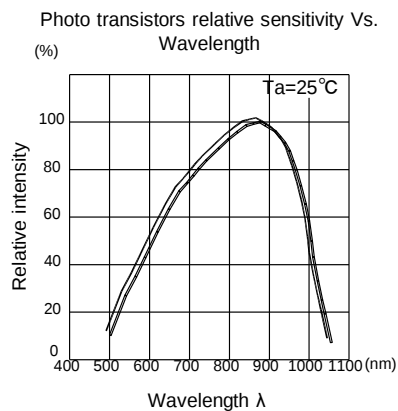
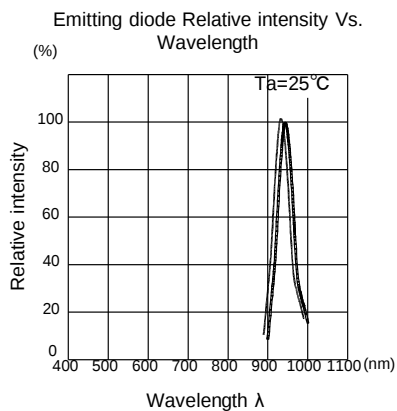
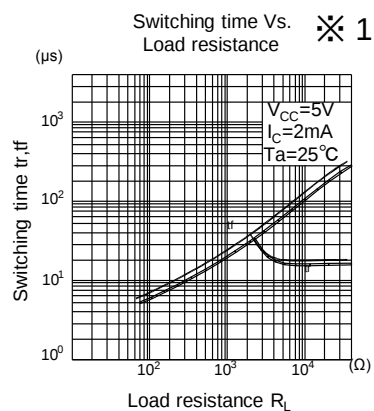
| Item                     |                      | Symbol        | Conditions                                            | Min. | Typ. | Max. | Unit          |
|--------------------------|----------------------|---------------|-------------------------------------------------------|------|------|------|---------------|
| Input                    | Forward voltage      | $V_F$         | $I_F=20\text{mA}$                                     | -    | 1.2  | 1.4  | V             |
|                          | Reverse current      | $I_R$         | $V_R=5\text{V}$                                       | -    | -    | 10   | $\mu\text{A}$ |
|                          | Peak wavelength      | $\lambda_P$   | $I_F=20\text{mA}$                                     | -    | 940  | -    | nm            |
| Output                   | Dark current         | $I_{CEO}$     | $V_{CE}=10\text{V}$ $E_V=0\text{ lx}$                 | -    | 1    | 100  | nA            |
|                          | Peak SENS.Wavelength | $\lambda_P$   | -                                                     | -    | 880  | -    | nm            |
| Transfer characteristics | Light current        | $I_{CEL}$     | $I_F=20\text{mA}$ , $V_{CE}=5\text{V}$ , Non-shading  | 0.2  | -    | 10   | mA            |
|                          | Leak current         | $I_{CEOD}$    | $I_F=20\text{mA}$ , $V_{CE}=5\text{V}$ , Shading      | -    | 0.5  | 10   | $\mu\text{A}$ |
|                          | C-E sat.voltage      | $V_{CE(sat)}$ | $I_F=20\text{mA}$ $I_C=0.1\text{mA}$                  | -    | 0.15 | 0.4  | V             |
|                          | Rise time            | $t_r$         | $I_C=2\text{mA}$ $V_{CC}=5\text{V}$ $R_L=100\ \Omega$ | -    | 4    | -    | $\mu\text{s}$ |
|                          | Fall time            | $t_f$         |                                                       | -    | 5    | -    | $\mu\text{s}$ |



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# Photo Interrupter

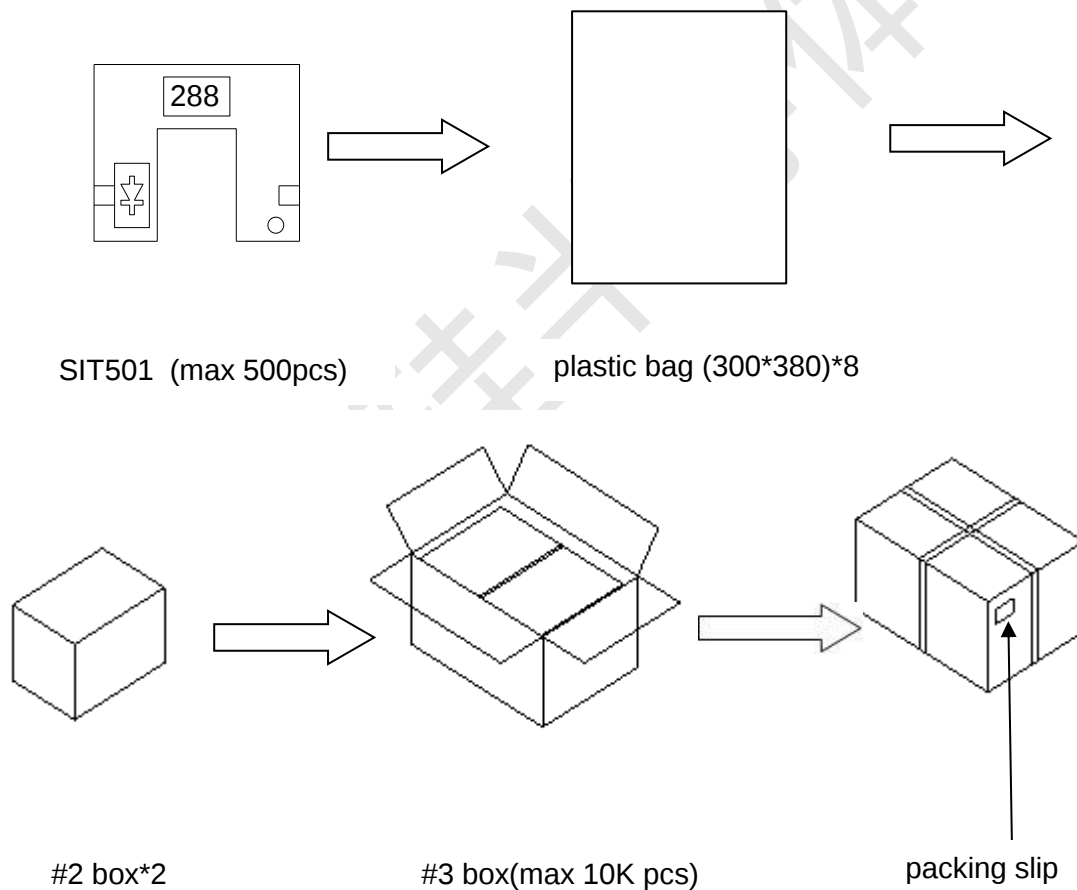
## SIT501



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## Packing Specification

- 1.Fixed quantity (max 500pcs) of the products are packed into plastic bag(300\*380)
- 2.Seven bags of the products are put into #2 box
3. Two #2 boxes are put into #3 box(max 8000pcs)
4. Packing slip is pasted on #3 box.



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# SIT501

## Photo Interrupter

Unit:mm

### DIMENSIONS

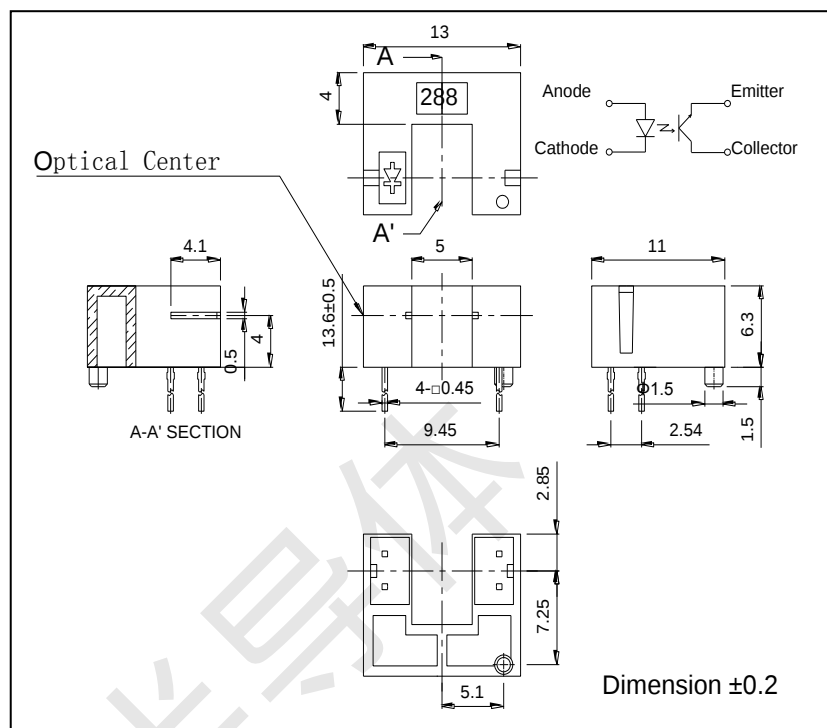
The SIT501 is a photointerrupter high-performance standard type, combines high-output GaAs IRED with high sensitive phototransistor.

### Features

- PWB direct mount type
- GAP:5.0mm
- With the installation positioning boss
- Horizontal slit
- RoHS Compliance

### Application

- FAX
- Mouses
- Rotary encoders



### MAXIMUM RATINGS

| Item                                | Symbol                      | Ratings   | Unit    |
|-------------------------------------|-----------------------------|-----------|---------|
| Input                               | Power dissipation           | $P_D$     | 100     |
|                                     | Forward current             | $I_F$     | 60      |
|                                     | Reverse voltage             | $V_R$     | 5       |
| Output                              | Collector power dissipation | $P_C$     | 100     |
|                                     | Collector current           | $I_C$     | 40      |
|                                     | Collector-Emitter voltage   | $V_{CEO}$ | 30      |
|                                     | Emitter-Collector voltage   | $V_{ECO}$ | 5       |
| Operating temperature <sup>*1</sup> |                             | $T_{opr}$ | -20~+85 |
| Storage temperature <sup>*1</sup>   |                             | $T_{stg}$ | -30~+85 |
| Soldering temperature <sup>*2</sup> |                             | $T_{sol}$ | 260     |

\* 1.NO icebound or dew

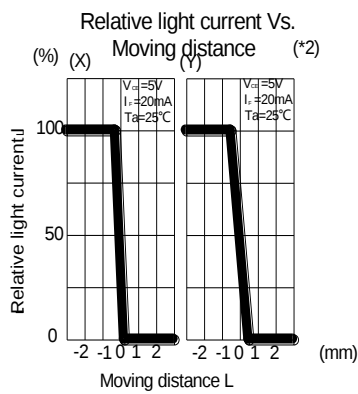
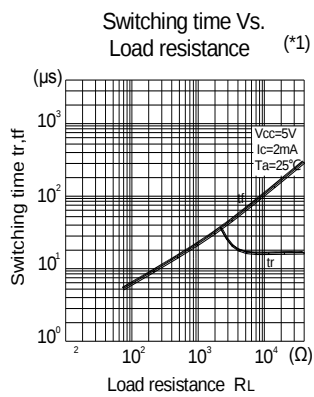
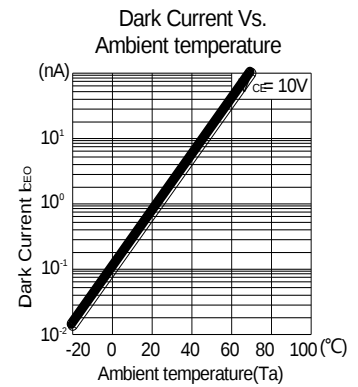
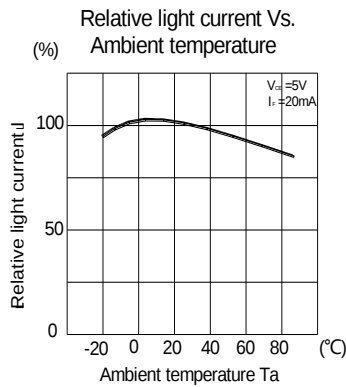
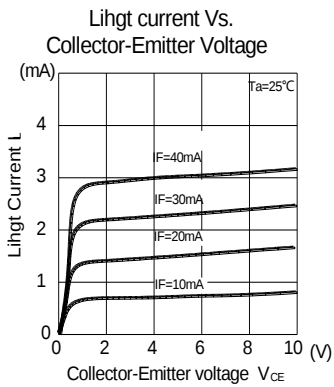
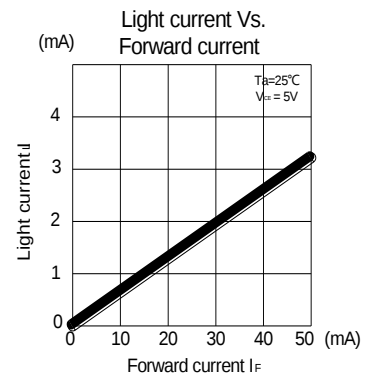
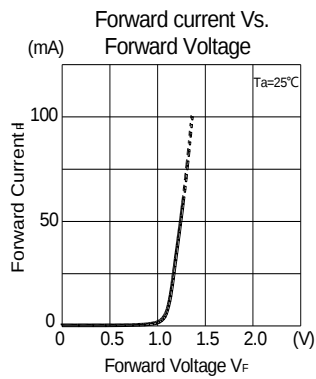
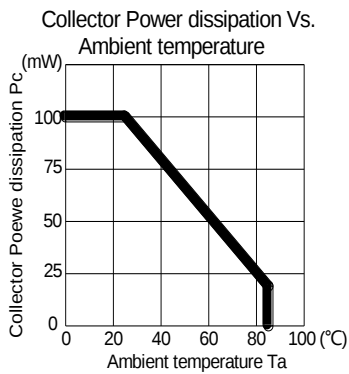
\* 2.For Max 5 seconds at the position of 1mm from the resin edge

### Electro-Optical Characteristics

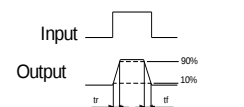
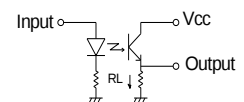
| Item                     | Symbol               | Conditions     | Min                                              | Typ | Max  | Unit |
|--------------------------|----------------------|----------------|--------------------------------------------------|-----|------|------|
| Input                    | Forward voltage      | $V_F$          | $I_F=20mA$                                       | -   | 1.2  | 1.4  |
|                          | Reverse current      | $I_R$          | $V_R=5V$                                         | -   | -    | 10   |
|                          | Peak wavelength      | $\lambda_p$    | $I_F=20mA$                                       | -   | 940  | -    |
| Output                   | Dark current         | $I_{CEO}$      | $V_{CE}=10V, E_v=0lx$                            | -   | 1    | 100  |
|                          | Peak SENS,Wavelength | $\lambda_p$    | -                                                | -   | 880  | -    |
| Transfer characteristics | Light current        | $I_C$          | $I_F=20mA, V_{CE}=5V, \text{入光状态 (Non-shading)}$ | 0.2 | -    | 10   |
|                          | Leak current         | $I_{CEOD}$     | $I_F=20mA, V_{CE}=5V, \text{遮光状态 (Shading)}$     | -   | 0.5  | 10   |
|                          | C-E sat.voltage      | $V_{CE} (sat)$ | $I_F=20mA, I_C=0.1mA$                            | -   | 0.15 | 0.4  |
|                          | Rise time            | $t_r$          | $I_C=2mA, V_{CC}=5V, R_L=100\Omega$              | -   | 4    | -    |
|                          | Fall time            | $t_f$          | $I_C=2mA, V_{CC}=5V, R_L=100\Omega$              | -   | 5    | -    |

# Photo Interrupter

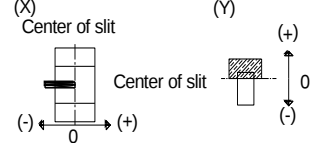
## SIT501



\*1 Switching time measurement circuit

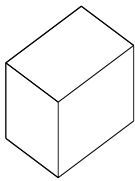


\*1 Switching time measurement circuit (X)

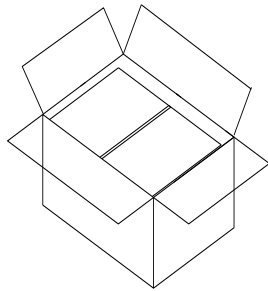


## Packing Specification

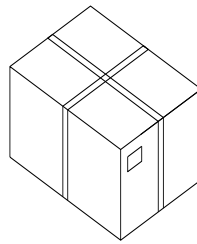
- 1.Fixed quantity (Max 500pcs) of the products are packed into plastic bags
- 2.Ten bags of the products are put into #2 Box(Max 5000pcs)
3. Two #2 Boxes are put into #3 Boxes
- 4.Paste packing slit



2个#2箱



1个#3箱



lit

百硅半导体

百硅半导体

百硅半导体

百硅半导体

百硅半导体

百硅半导体