# SIT208 <br> Photo Interrupter 

The SIT208 is a photointerrupter highperformance standard type, combines high-output GaAs IRED with high sensitive phototransistor.

## Features

- PCB direct mount type
- GAP:2.0mm
- Ultra small size
- High resolution(slit 0.3mm)


## Application

-Camera

- Encoders
-Digital cameras
-Digital video cameras

Dimensions
(Unit: mm)


Maximum Ratings
( $\mathrm{Ta}=25^{\circ} \mathrm{C}$ )

| Item |  | Symbol | Ratings | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Input | Power dissipation | $\mathrm{P}_{\mathrm{D}}$ | 75 | mW |
|  | Forward current | $\mathrm{I}_{\mathrm{F}}$ | 50 | mA |
|  | Reverse voltage | $\mathrm{V}_{\mathrm{R}}$ | 5 | V |
|  | Pulse forward current | $\mathrm{I}_{\text {FP }}$ | 0.5 | A |
| Output | Collector power dissipation | $\mathrm{P}_{\mathrm{C}}$ | 75 | mW |
|  | Collector current | $\mathrm{I}_{\mathrm{c}}$ | 20 | mA |
|  | Collector-Emiter voltage | $\mathrm{V}_{\text {CEO }}$ | 30 | V |
|  | Emiter-Collector voltage | $\mathrm{V}_{\text {ECO }}$ | 5 | V |
| Operating temperature |  | Topr. | $-20 \sim+85$ | ${ }^{\circ} \mathrm{C}$ |
| Storage tempertature |  | Tstg. | $-30 \sim+100$ | ${ }^{\circ} \mathrm{C}$ |
| Soldering tempertature |  | Tsol. | 260 | ${ }^{\circ} \mathrm{C}$ |

* 1 pulse width:tw $\leqslant 100 \mu \mathrm{~s}$ 周期: $\mathrm{T}=10 \mathrm{~ms}$
* 2 No icebound or dew
* 3 For MAX. 5 seconds at the position of 1 mm from the resin edge

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## SIT208

Elector-Optical Characteristics
$\left(\mathrm{Ta}=25^{\circ} \mathrm{C}\right)$

| Item |  | Symbol | Conditions | Min | Typ | Max | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Input | Forward voltage | $\mathrm{V}_{\mathrm{F}}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ | - | 1.2 | 1.4 | V |
|  | Reverse current | $\mathrm{I}_{\mathrm{R}}$ | $\mathrm{V}_{\mathrm{R}}=5 \mathrm{~V}$ | - | - | 10 | $\mu \mathrm{A}$ |
|  | Peak wavelength | $\lambda_{P}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ | - | 940 | - | nm |
| Output | Dark current | $\mathrm{I}_{\text {CEO }}$ | $\mathrm{V}_{\mathrm{CE}}=10 \mathrm{~V}, \mathrm{E}_{\mathrm{V}}=01 \mathrm{x}$ | - | 1 | 100 | nA |
| Transfer characte ristics | Light current | $\mathrm{I}_{\text {CEL }}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}, \mathrm{~V}_{\mathrm{CE}}=5 \mathrm{~V}$, Non-shading | 0.25 | - | 1.8 | mA |
|  | Leak current | $\mathrm{I}_{\text {CEOD }}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}, \mathrm{~V}_{\mathrm{CE}}=5 \mathrm{~V}$, Shading | - | 0.5 | 10 | $\mu \mathrm{A}$ |
|  | C-E saturation voltage | $\mathrm{V}_{\text {CE(sat) }}$ | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}, \mathrm{I}_{\mathrm{C}}=0.03 \mathrm{~mA}$ | - | 0.15 | 0.4 | V |
|  | Rise time | tr | $\mathrm{I}_{\mathrm{C}}=1 \mathrm{~mA}, \mathrm{~V}_{\mathrm{CC}}=5 \mathrm{~V}, \mathrm{R}_{\mathrm{L}}=100 \Omega$ | - | 10 | - | $\mu \mathrm{s}$ |
|  | Fall time | tf |  | - | 10 | - | $\mu \mathrm{s}$ |



Light current $\mathrm{V}_{\mathrm{s}}$.






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.

## SIT208


*1 Switching time measurement circuit

*2 Method of measuring position detection characteristic


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## Packing Specification

1.Fixed quantity (max 200pcs) of the products are packed into plastic bag
2.Ten bags of the products are put into \#1 box
3.Ten \#1 boxes are put into \#2 box(max 20000pcs)
4.Two \#2 boxes are put into \#3 box(max 40000pcs)
5. Packing slit is pasted on \#3 box



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