## NEW PRODUCT

## SIR765-02

## Photo Interrupter

Dimensions
The SIR765-02 is a photointerrupter consisting of GaAs IRED and phototransistor.

## Features

- Fast response time
- High sensitivity
- Cut-off visible wavelength
- RoHS Compliance


## Applications

- Copier
- Scanner
- Printer
- Non-contact switching



C1


General Tolerance ( $\pm 0.2$ )

## Maximum Ratings

$\left(\mathrm{Ta}=25^{\circ} \mathrm{C}\right)$

| Item |  | Symbol | Rating | 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 |
|  | 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 ${ }^{* 1}$ | Topr. | $-20 \sim+85$ | ${ }^{\circ} \mathrm{C}$ |  |
| Storage temperature ${ }^{* 1}$ | Tstg. | $-30 \sim+85$ | ${ }^{\circ} \mathrm{C}$ |  |
| Soldering temperature ${ }^{* 2}$ | Tsol. | 260 | ${ }^{\circ} \mathrm{C}$ |  |

*1. No icebond or dew.
*2. The soldering should be 1.2 mm away from bottom of the holder $\mathrm{t}=$ within 3 s

[^0]
## SIR765-02

Elector-Optical Characteristics

| 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 | $\mathrm{I}_{\text {ceo }}$ | $\mathrm{V}_{\mathrm{CE}}=10 \mathrm{~V} \quad \mathrm{E}_{\mathrm{V}}=0 \mathrm{~lx}$ | - | 3 | 100 | nA |
|  | Peak SENS.Wavelength | $\lambda_{P}$ | - | - | 880 |  | nm |
| Transfer characteristics | Light current *3 | $\mathrm{I}_{\text {CEL }}$ | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA} \mathrm{~V} \mathrm{~V}_{\text {ce }}=5 \mathrm{~V}$ d $=5 \mathrm{~mm}$ | 0.5 | - | 6.0 | mA |
|  | Leak current ${ }^{* 4}$ | $\mathrm{I}_{\text {CEOD }}$ | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA} \mathrm{~V} \mathrm{~V}_{\mathrm{CE}}=5 \mathrm{~V}$ | - | - | 20 | $\mu \mathrm{A}$ |
|  | C-E sat.voltage | $\mathrm{V}_{\text {CE(sat) }}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA} \mathrm{I}_{\mathrm{C}}=0.1 \mathrm{~mA}$ | - | 0.15 | 0.4 | V |
|  | Rise time | tr | $\mathrm{I}_{\mathrm{C}}=100 \mu \mathrm{~A} \mathrm{~V}_{\mathrm{CC}}=5 \mathrm{~V} \mathrm{R}_{\mathrm{L}}=100 \Omega$ | - | 10 | - | $\mu \mathrm{s}$ |
|  | Fall time | t |  | - | 10 | - | $\mu \mathrm{s}$ |

*3. d=5mm KODAK 90\% Reflex Paper
*4. NO Reflector


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.

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Relative output current Vs.
(\%) $\%$ )


Distance between device and reflector d

Emitting diode Relative intensity Vs.
(\%) Wavelength


Relative output current Vs.


Moving distance d

Photo transistors relative sensitivity Vs.
(\%) Wavelength


Wavelength $\lambda$

Method of measuring position
$※ 1$ detection characteristic

No reflective paper $90 \%$ reflective paper
(-)


[^1] would you please refer to the latest specifications.

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## SIR765-02

## Packing Specification

1.Fixed quantity (max 100pcs) of the products are packed into plastic bag
2.Five bags of the products are put into \#1 box
3.Ten \#1 boxes are put into \#2 box and two \#2 boxes are put into \#3 box(max 10000pcs)
4. Packing slit is pasted on \#3 box


\#2 box*2

\#3 box (max 10K pcs)

packing slit

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