

# SG - 266

The SG - 266 photointerrupter high - performance standard type,combines high - output GaAs IRED with high sensitive phototransistor.

## FEATURES

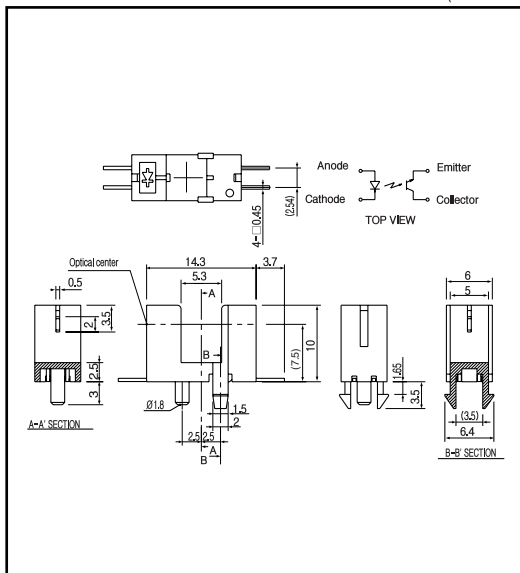
- PWB direct mount type
- GAP : 5.3mm
- Snap-in mount
- With the installation positioning boss

## APPLICATIONS

- Printers
- Facsimiles
- CD changers
- Amusement machines

## DIMENSIONS

(Unit : mm)



## MAXIMUM RATINGS

(Ta=25 )

|        | Item                                | Symbol            | Rating     | Unit |
|--------|-------------------------------------|-------------------|------------|------|
| Input  | Power dissipation                   | P <sub>d</sub>    | 100        | mW   |
|        | Forward current                     | I <sub>F</sub>    | 60         | mA   |
|        | Reverse voltage                     | V <sub>R</sub>    | 5          | V    |
|        | Pulse forward current <sup>*1</sup> | I <sub>FP</sub>   | 1          | A    |
| Output | Collector power dissipation         | P <sub>c</sub>    | 100        | mW   |
|        | Collector current                   | I <sub>c</sub>    | 40         | mA   |
|        | C - E voltage                       | V <sub>CEO</sub>  | 30         | V    |
|        | E - C voltage                       | V <sub>ECO</sub>  | 5          | V    |
|        | Operating temp. <sup>*2</sup>       | T <sub>opr.</sub> | - 20 ~ +85 |      |
|        | Storage temp. <sup>*2</sup>         | T <sub>stg.</sub> | - 30 ~ +85 |      |
|        | Soldering temp. <sup>*3</sup>       | T <sub>sol.</sub> | 260        |      |

\*1. pulse width : t w 100 ꝑec.period : T=10msec.

\*2. No icebound or dew

\*3. For MAX.5 seconds at the position of 1mm from the package

## ELECTRO-OPTICAL CHARACTERISTICS

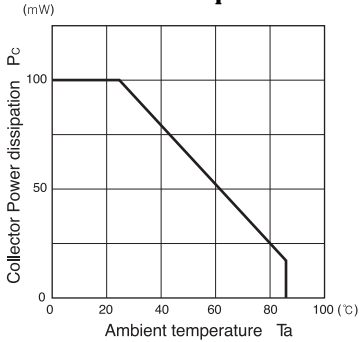
(Ta=25 )

|            | Item                     | Symbol               | Conditions  | Min. | Typ. | Max. | Unit. |
|------------|--------------------------|----------------------|---|------|------|------|-------|
| Input      | Forward voltage          | V <sub>F</sub>       | I <sub>F</sub> =20mA                                    |      | 1.2  | 1.4  | V     |
|            | Reverse current          | I <sub>R</sub>       | V <sub>R</sub> =5V                                      |      |      | 10   | µA    |
|            | Peak wavelength          | p                    | I <sub>F</sub> =20mA                                    |      | 940  |      | nm    |
| Output     | Collector dark current   | I <sub>CEO</sub>     | V <sub>CE</sub> =10V                                    |      | 1    | 100  | nA    |
|            | Light current            | I <sub>c</sub>       | I <sub>F</sub> =20mA, V <sub>E</sub> =5V, Non - shading | 0.5  |      | 10   | mA    |
| Transmissi | leakage current          | I <sub>CEOD</sub>    | I <sub>F</sub> =20mA, V <sub>E</sub> =5V(shading)       |      | 0.5  | 10   | µA    |
|            | C - E saturation voltage | V <sub>CE(sat)</sub> | I <sub>F</sub> =20mA, I <sub>c</sub> =0.1 mA            |      | 0.15 | 0.4  | V     |
|            | Rise time                | t <sub>r</sub>       | V <sub>CC</sub> =5V, I <sub>F</sub> =2mA, R=100         |      | 4    |      | µsec. |
|            | Fall time                | t <sub>f</sub>       |   |      | 5    |      | µsec. |

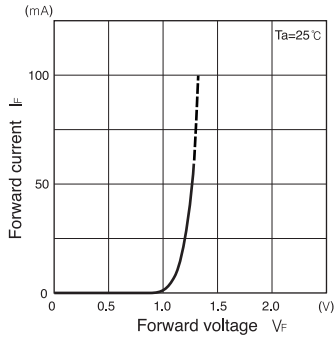
# Photointerrupters(Transmissive)

## SG - 266

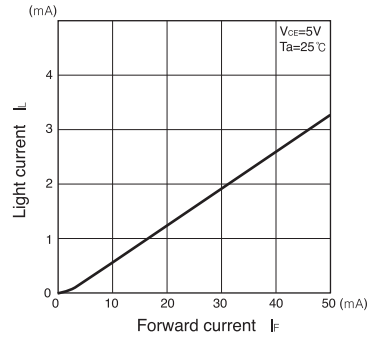
**Collector power dissipation Vs. Ambient temperature**



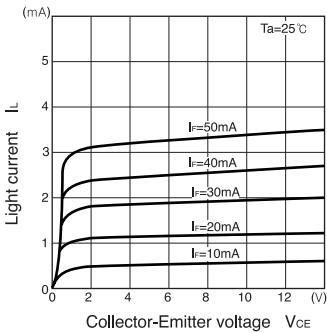
**Forward current Vs. Forward voltage**



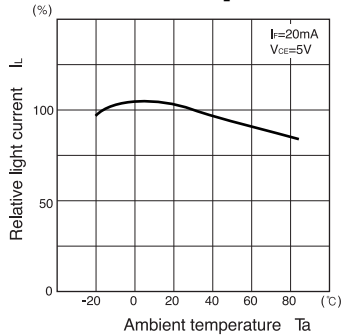
**Light current Vs. Forward current**



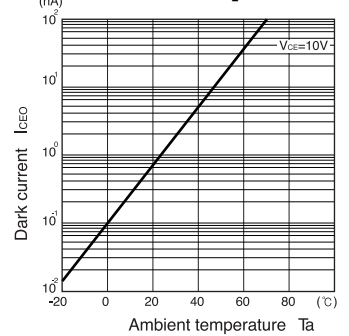
**Light current Vs. Collector-Emitter voltage**



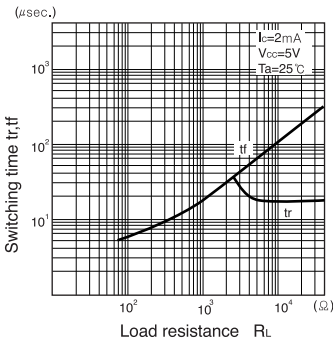
**Relative light current Vs. Ambient temperature**



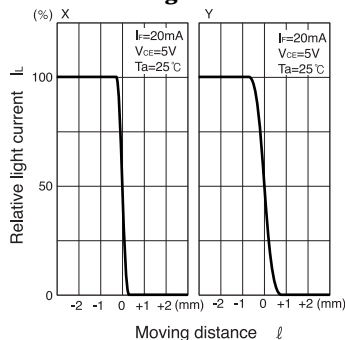
**Dark current Vs. Ambient temperature**



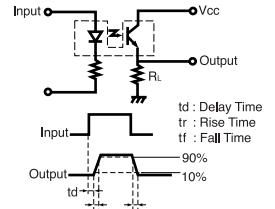
**Switching time Vs. Load resistance**



**Relative light current Vs. Moving distance**



**Switching time measurement circuit**



**Method of measuring position detection characteristic**

