AUK Semiconductor

# SI5312-H / SI5312-H(B)

**IRED**

## Features

- Colorless transparency lens type
- ϕ5mm(T-13/4) all plastic mold type
- Low power consumption
- High radiant intensity

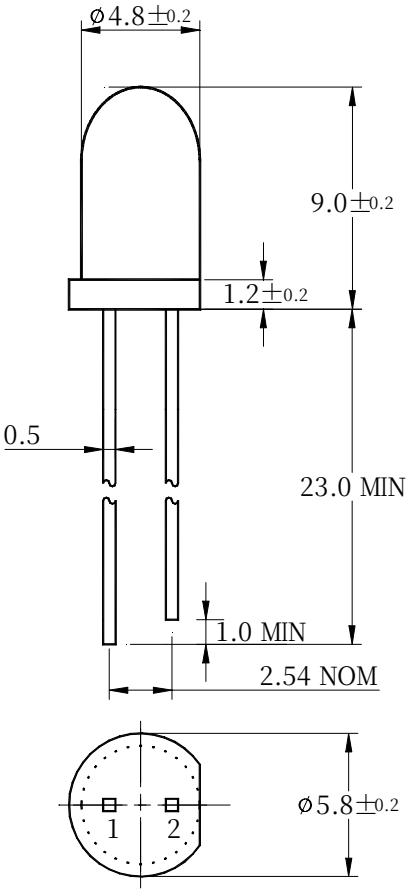
## Applications

- Infrared remote control and free air transmission systems with low forward voltage and comfortable radiation angle requirements in combination with PIN photodiodes or phototransistors.

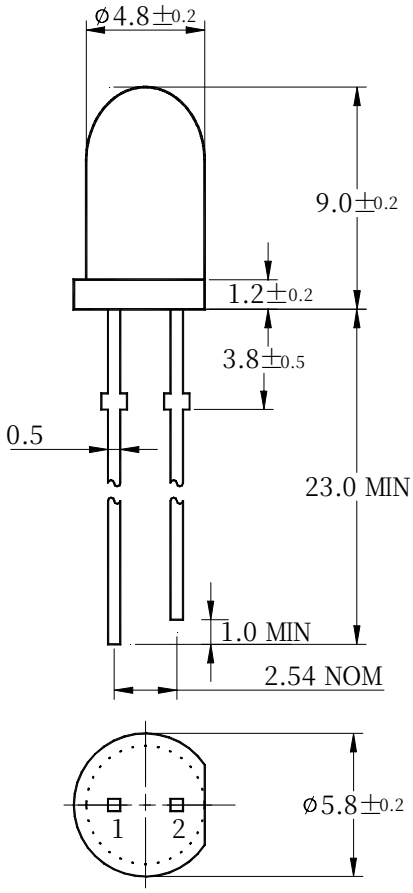
## Outline Dimensions

**unit : mm**

STRAIGHT TYPE




STOPPER TYPE




**PIN Connections**
1.Anode
2.Cathode

## Absolute maximum ratings

| Characteristic | Symbol | Ratings | Unit |
|---|---|---|---|
| Power Dissipation | $P_D$ | 150 | mW |
| Forward Current | $I_F$ | 100 | mA |
| *1Peak Forward Current | $I_{FP}$ | 1 | A |
| Reverse Voltage | $V_R$ | 4 | V |
| Operating Temperature | $T_{opr}$ | -25 85 | ℃ |
| Storage Temperature | $T_{stg}$ | -30 100 | ℃ |
| *2Soldering Temperature | $T_{sol}$ | 260℃ for 5 seconds | |

*1.Duty ratio = 1/16, Pulse width = 0.1ms
*2.Keep the distance more than 2.0mm from PCB to the bottom of IRED package

## Electrical Characteristics

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$= 50mA | - | 1.3 | 1.7 | V |
| Radiant Intensity | $I_E$ | $I_F$= 50mA | 30 | 70 | - | mW/Sr |
| Peak Wavelength | $\lambda_P$ | $I_F$= 50mA | - | 950 | - | nm |
| Spectrum Bandwidth | $\Delta\lambda$ | $I_F$= 50mA | - | 50 | - | nm |
| Reverse Current | $I_R$ | $V_R$=4V | - | - | 10 | uA |
| *3Half angle | $\theta^1/_2$ | $I_F$= 50mA | - | ±8 | - | deg |

*3. θ1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

## Characteristic Diagrams

**Fig. 1 $I_F$ - $V_F$**

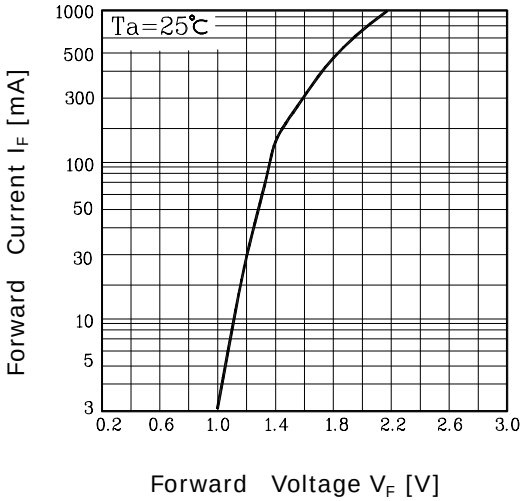



**Fig. 2 $I_E$ - $I_F$**

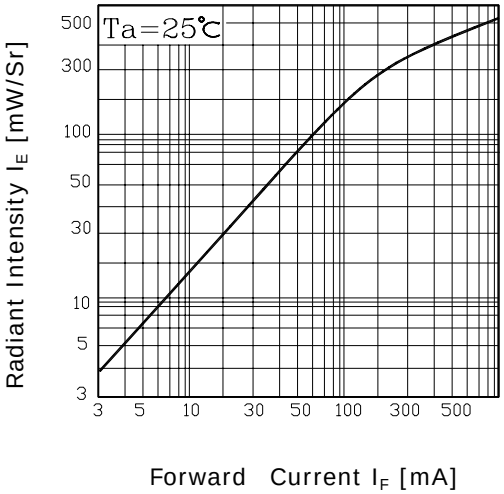



**Fig. 3 $I_F$ – Ta**

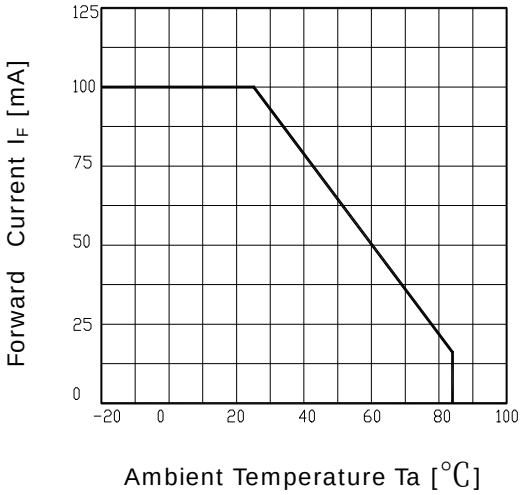



**Fig.4 Spectrum Distribution**

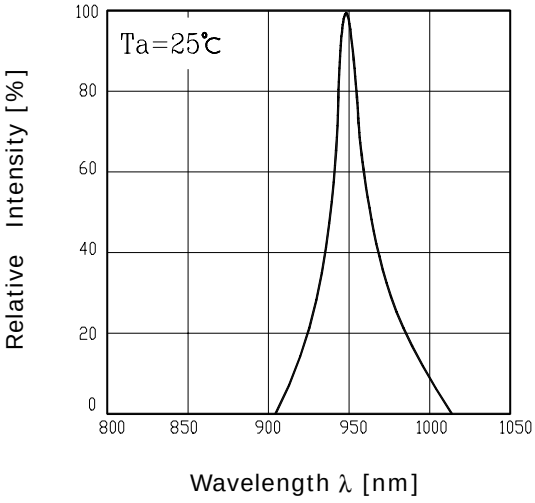



**Fig. 5 Radiation Diagram**