

Features

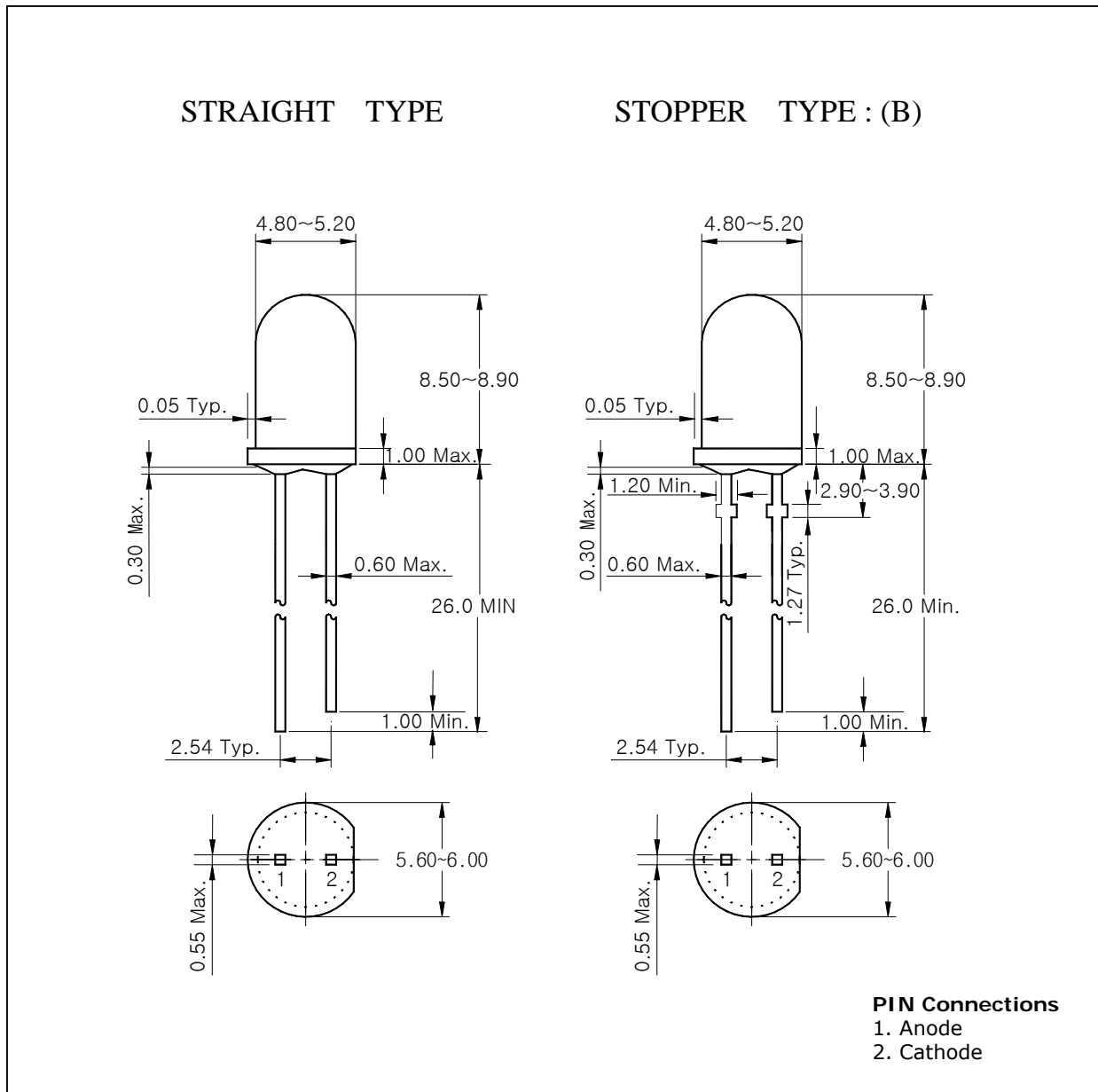
- Colorless transparency lens type
- $\phi 5\text{mm}$ (T-13/4) all plastic mold type
- Low power consumption
- High radiant intensity

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



SI5314-H / SI5314-H(B)

Absolute Maximum Ratings

(Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|-----------------------------|-----------|----------------------|------|
| Power dissipation | P_D | 145 | mW |
| Forward current | I_F | 100 | mA |
| *1Peak forward current | I_{FP} | 1 | A |
| Reverse voltage | V_R | 4 | V |
| Operating temperature range | T_{opr} | -25~85 | °C |
| Storage temperature range | T_{stg} | -30~100 | °C |
| *2Soldering temperature | T_{sol} | 260°C for 10 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 / Optical Characteristics

(Ta=25°C)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------|------------------|-------------------|------|------|------|-------|
| Forward voltage | V_F | $I_F=50\text{mA}$ | - | 1.3 | 1.45 | V |
| Radiant intensity | I_E | $I_F=50\text{mA}$ | 20 | 35 | - | mW/Sr |
| Peak wavelength | λ_P | $I_F=50\text{mA}$ | - | 950 | - | nm |
| Spectrum bandwidth | Δ_λ | $I_F=50\text{mA}$ | - | 50 | - | nm |
| Reverse current | I_R | $V_R=4\text{V}$ | - | - | 10 | uA |
| *3Half angle | $\theta^{1/2}$ | $I_F=50\text{mA}$ | - | ±25 | - | deg |

*3. 1) $\theta^{1/2}$ is the off-axis angle where the luminous intensity is 1/2 the peak intensity

2) Half angle($\theta^{1/2}$) is ±30 Degrees in transmitter

Characteristic Diagrams

Fig. 1 $I_F - V_F$

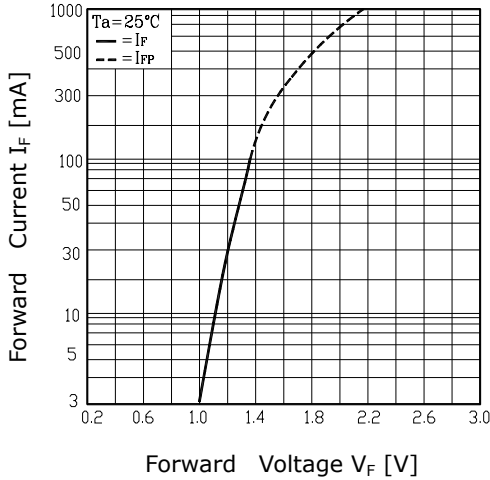


Fig. 2 $I_E - I_F$

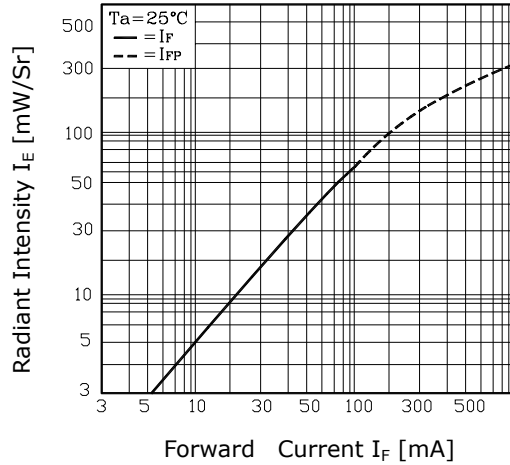


Fig. 3 $I_F - T_a$

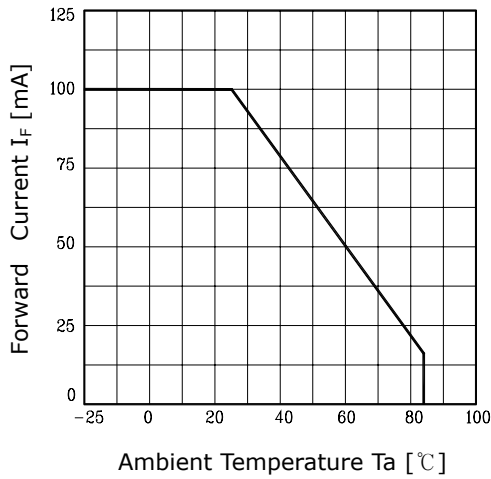


Fig. 4 Spectrum Distribution

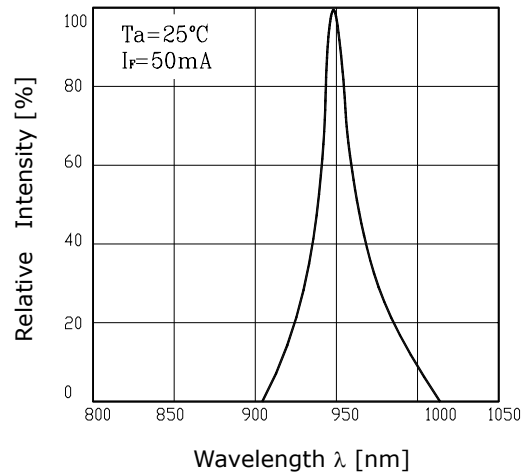
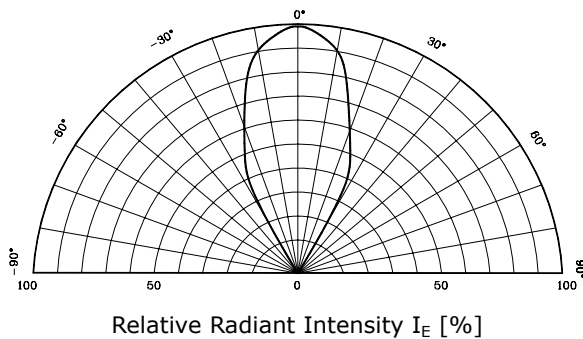


Fig. 5 Radiation Diagram



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