



New Rev


APPROVAL SHEET

CUSTOMER : _____

DEVICE NAME : **Infrared LED**

MODEL NO. : **SIR- 5A452-A3**

ISSUED DATE : **JUL.10. 2012**

| | ISSUE | REVIEW | REVIEW | APPR'D |
|--------------|-------|--------|--------|---|
| ISSUED DEPT. | | 蒋宏华 | 邱丽红 |  |



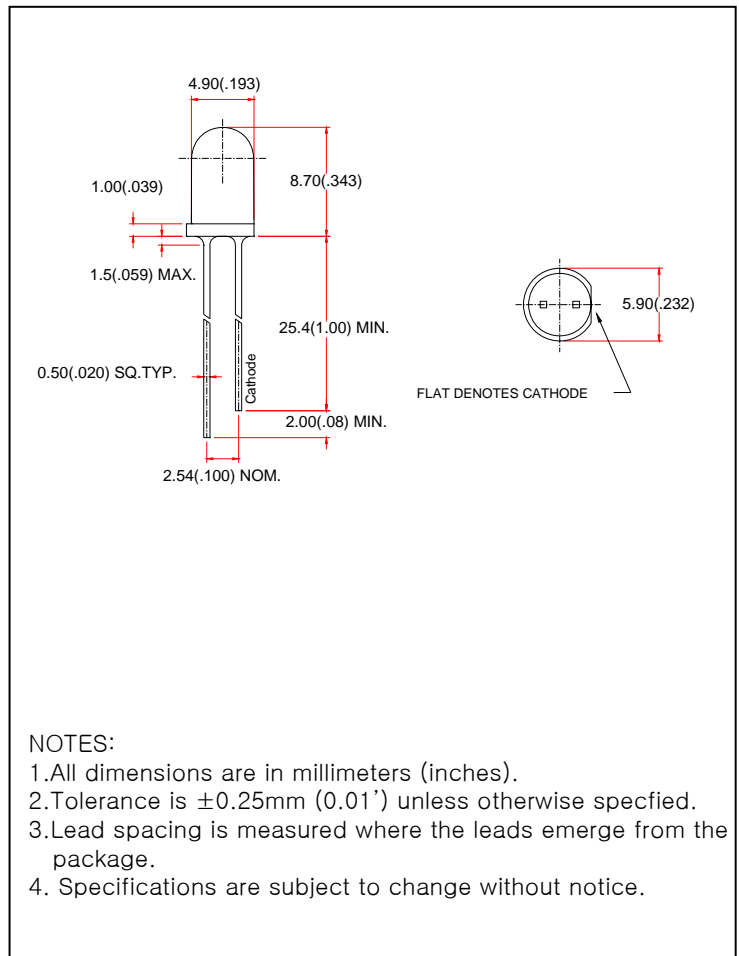
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<http://www.seksemi.com>

● Features:

- 1.High radiant power and high radiant intensity.
2. Standard T-1 3/4(5mm)package.
3. Peak wavelength $\lambda_p=850\text{nm}$.
4. Good spectral matching to si-photodetector.
5. Radiant angle: 20° .
6. Lens Appearance: Water Clear
7. This product doesn't contain restriction substance, comply ROHS standard.

● Applications:

1. Remote Control.
2. Automatic Control System.

● Package dimensions:

● Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

| Parameter | Symbol | Rating | Unit |
|------------------------------------|-----------|--|------|
| Power Dissipation | P_d | 100 | mW |
| Continuous Forward Current | I_F | 100 | mA |
| Peak Forward Current ^{*1} | I_{FP} | 1.0 | A |
| Reverse Voltage | V_R | 5 | V |
| Operating Temperature | T_{opr} | $-45^\circ\text{C} \sim 85^\circ\text{C}$ | - |
| Storage Temperature | T_{stg} | $-45^\circ\text{C} \sim 100^\circ\text{C}$ | - |
| Soldering Temperature | T_{sol} | 260°C (for 5 seconds) | - |

*1Condition for IFP is pulse of 1/10 duty and 0.1msec width.

● Electrical and optical characteristics(Ta=25°C)

| Parameter | Symbol | Test Condition s | Min | TYP | Max | Unit |
|--------------------------|------------------|------------------|-------|-------|-----|---------|
| Radiant Intensity | I_e | $I_F=50mA$ | 45.31 | 128.5 | - | mW/sr |
| Forward Voltage | V_F | $I_F=50mA$ | - | 1.5 | 1.8 | V |
| Reverse Current | I_R | $V_R=5V$ | - | - | 100 | μA |
| Peak Wavelength | λ_p | $I_F=20mA$ | - | 850 | - | nm |
| Spectral Line Half-Width | $\Delta \lambda$ | $I_F=20mA$ | - | 50 | - | nm |
| Viewing Angle | $2\theta_{1/2}$ | $I_F=20mA$ | - | 20 | - | deg |

● Typical electro-optical characteristics curves`

Fig.1 Spectral Distribution

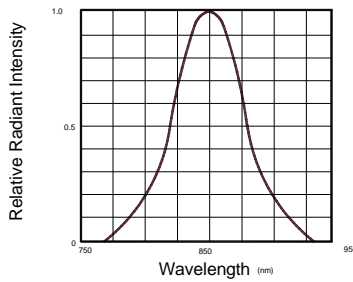


Fig.2 Forward Current Vs Ambient Temperature

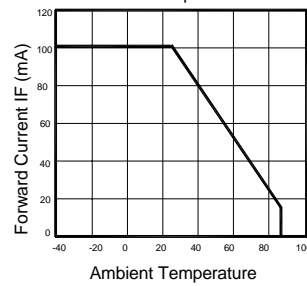


Fig.3 Forward Current Vs

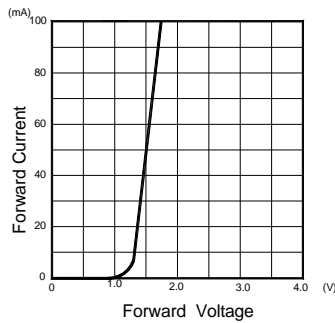


Fig.4 Relative Radiant Intensity Vs Ambient Temperature

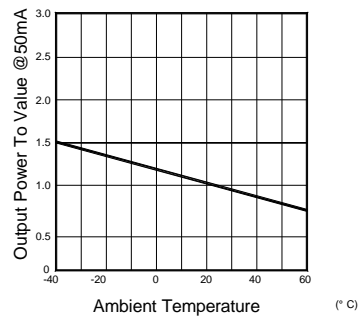


Fig.5 Relative Radiant Intensity Vs Forward Current

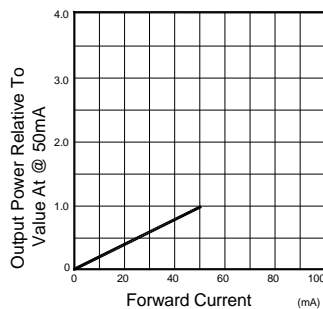
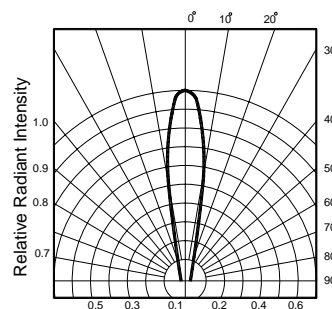


Fig.6 Radiation Diagram



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