



New Rev


APPROVAL SHEET

CUSTOMER : _____

DEVICE NAME : **Infrared LED**

MODEL NO. : **SIR- 5B446-B1**

ISSUED DATE : **Nov.15. 2012**

	ISSUE	REVIEW	REVIEW	APPR'D
ISSUED DEPT.			蒋宏华	

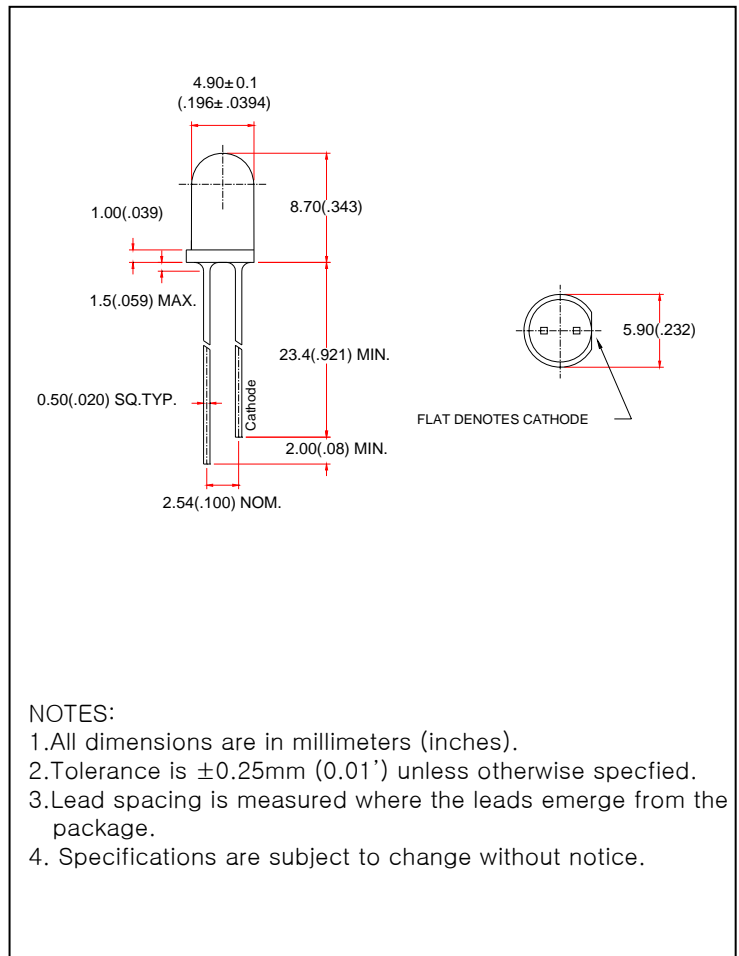
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● Features:

1. High radiant power and high radiant intensity.
2. Standard T-1 1/4(5mm) package.
3. Peak wavelength $\lambda_p=940\text{nm}$.
4. Good spectral matching to si-photodetector.
5. Radiant angle: 40° .
6. Lens Appearance: Light Blue Transparent.
7. This product doesn't contain restriction substance, comply ROHS standard.

● Applications:

1. Remote Control.
2. Automatic Control System.

● Package dimensions:

● Absolute Maximum Ratings(Ta=25°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 Conditions	Min	TYP	Max	Unit
Radiant Intensity	I_e	$I_f=50mA$	11.78	23.8	-	mW/sr
Forward Voltage	V_F	$I_F=20mA$	-	1.2	1.4	V
Forward Voltage	V_F	$I_F=50mA$	-	1.25	1.5	V
Forward Voltage	V_F	$I_F=500mA$		1.8	2.5	V
Forward Voltage	V_F	$I_F=1A$			3.0	V
Reverse Current	I_R	$V_R=5V$	-	-	100	μA
Peak Wavelength	λ_p	$I_F=50mA$	-	940	-	nm
Spectral Line Half- Width	$\Delta \lambda$	$I_F=50mA$	-	50	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=50mA$	-	40	-	deg

● **Typical electro-optical characteristics curves**

Fig.1 Spectral Distribution

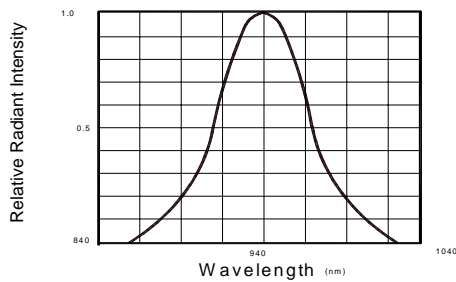


Fig.2 Forward Current Vs Ambient Temperature

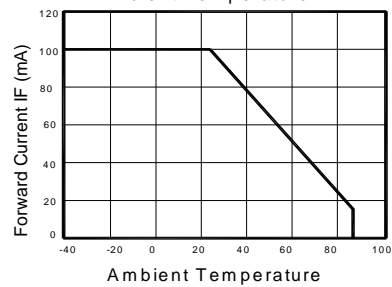


Fig.3 Forward Current Vs

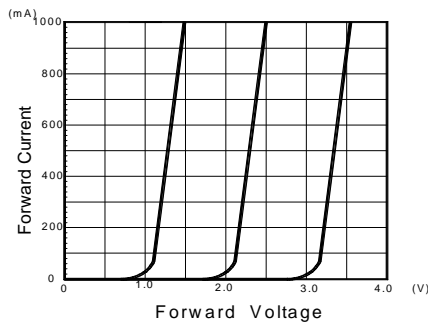


Fig.4 Relative Radiant Intensity Vs Ambient Temperature

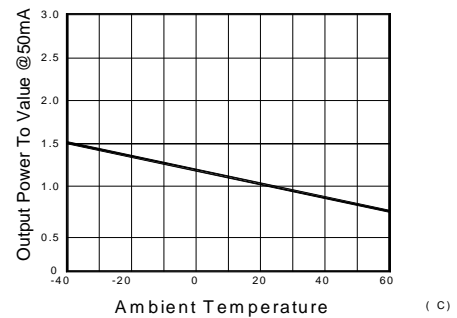


Fig.5 Relative Radiant Intensity Vs Forward Current

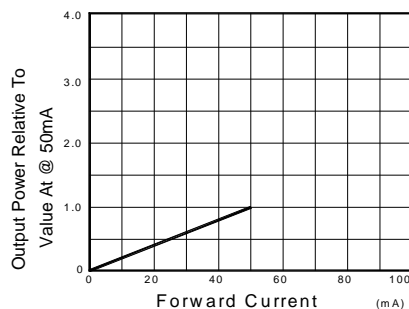
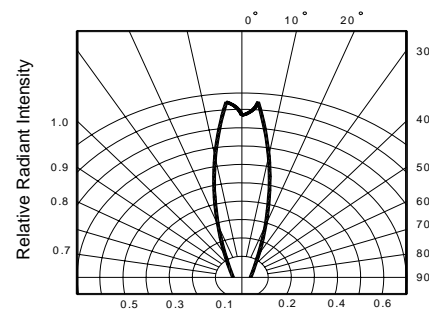


FIG.5 Radiant Diagram



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