Technical Data Sheet

3mm Infrared LED SIR3015

■ Features

- High reliability
- High radiant intensity
- Peak wavelength λp=940nm
- 2.54mm Lead spacing
- Low forward voltage
- Pb free
- The product itself will remain within RoHS compliant version.

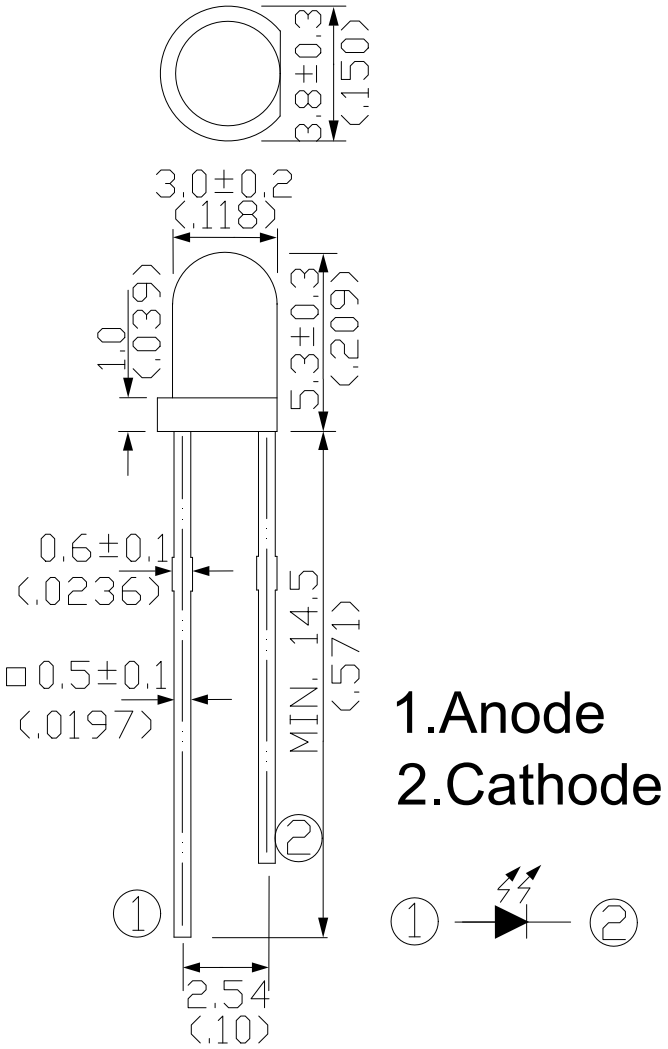
■ Descriptions

- SHUGUAN'S Infrared Emitting Diode(SIR3015) is a high intensity diode , molded in a black plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

■ **Applications**

- Free air transmission system
- Infrared remote control units
- Smoke detector
- Infrared applied system

■ Package Dimensions



Note: 1. All dimensions are in millimeters(inches)
2. Tolerances unless dimensions ± 0.25mm(.01")

■ Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Units
Continuous Forward Current	I_F	50	mA
Peak Forward Current	I_{FP}	0.5	A
Reverse Voltage	V_R	5	V
Lead Soldering Temperature	Tsol	260	℃
Operating Temperature	Topr	-20 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +85	℃
Power Dissipation at(or below) 25℃Free Air Temperature	P_d	100	mW

Notes: *1:I_{FP} Conditions--Pulse Width≦100 μ s and Duty≦1%.

*2:Soldering time≦5 seconds.

■ Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	Ee	IF=20mA	3.5	5.0	--	mW/sr
		IF=50mA Pulse Width≦100μs,Duty≦1%	--	10	--	
		IF=0.5A Pulse Width≦100μs,Duty≦1%.	--	68	--	
Peak Wavelength	λp	IF=20mA	--	940	--	nm
Spectral Bandwidth	Δλ	IF=20mA	--	50	---	nm
Forward Voltage	VF	IF=20mA	--	1.2	1.5	V
		IF=50mA Pulse Width≦100μs,Duty≦1%	--	1.4	1.8	
		IF=0.5A Pulse Width≦100μs,Duty≦1%.	--	2.3	3.0	
Reverse Current	IR	VR=5V	--	--	10	μA
View Angle	2θ1/2	IF=20mA	--	30	--	deg

■ Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

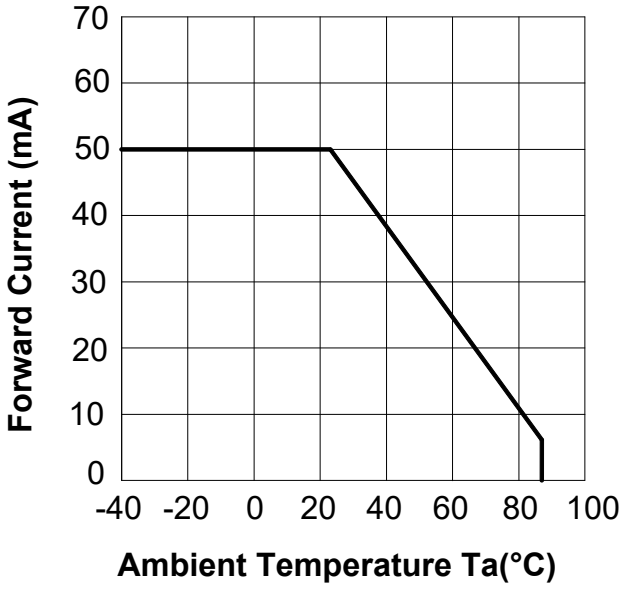


Fig.2 Spectral Distribution

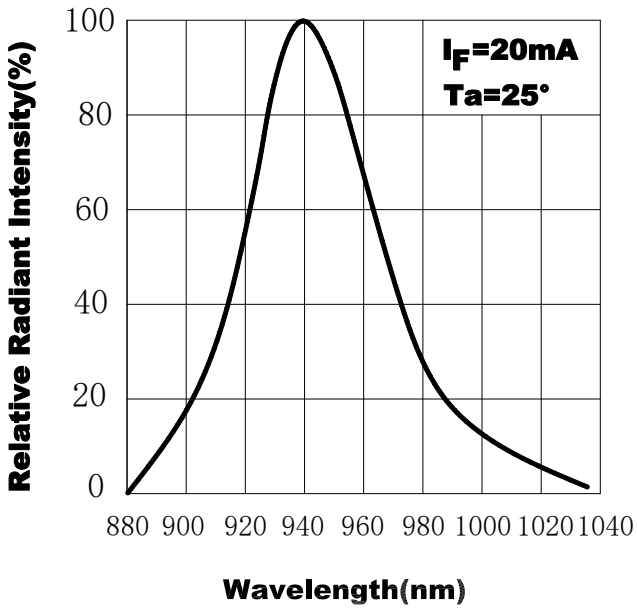


Fig.3 Peak Emission Wavelength vs. Ambient Temperature

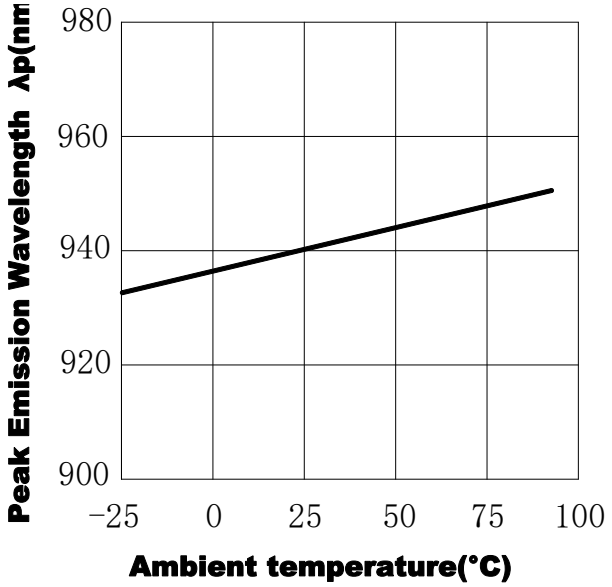


Fig.4 Forward Current vs. Forward Voltage

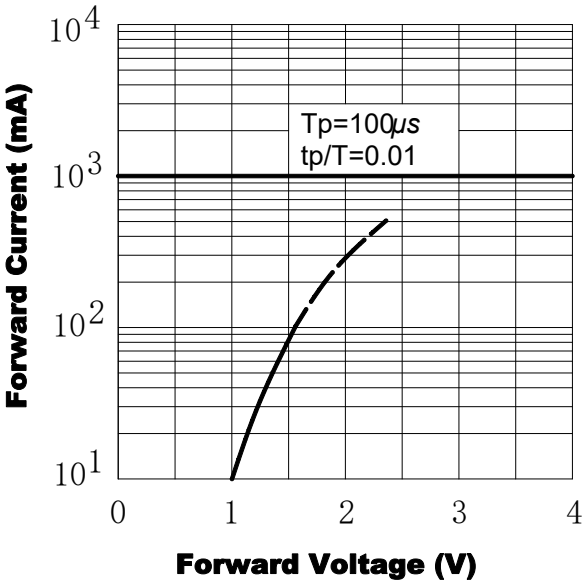


Fig.5 Radiant Intensity vs. Forward Current

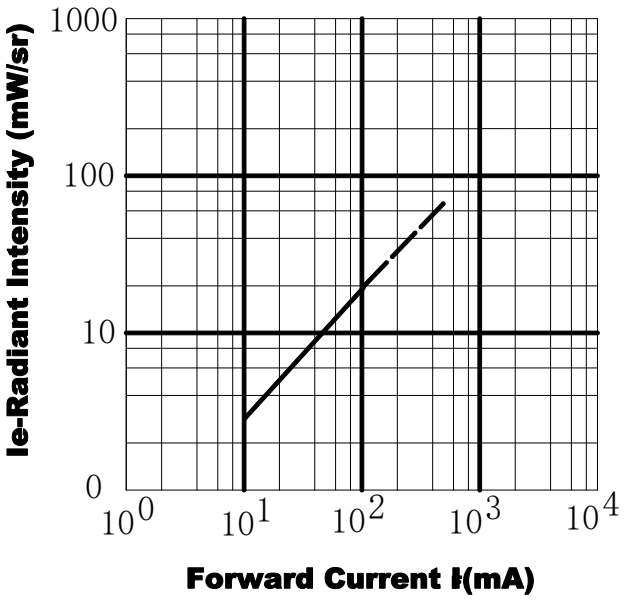


Fig.6 Relative Radiant Intensity vs. Angular Displacement

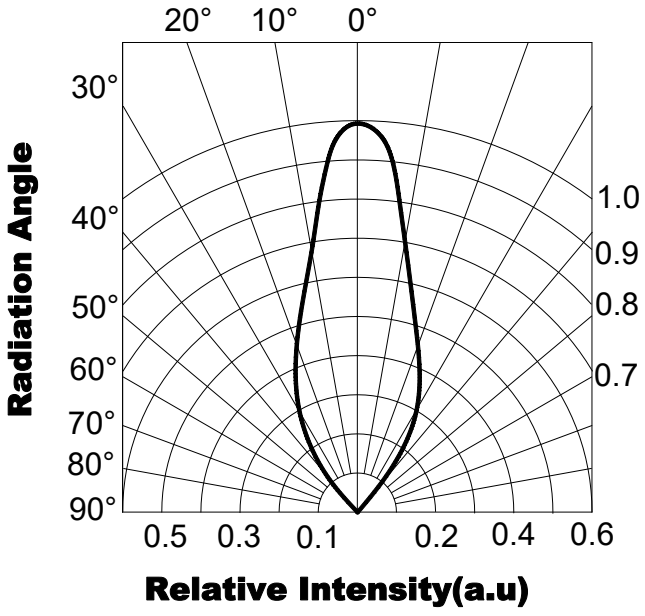


Fig.7 Relative Intensity vs. Ambient Temperature (℃)

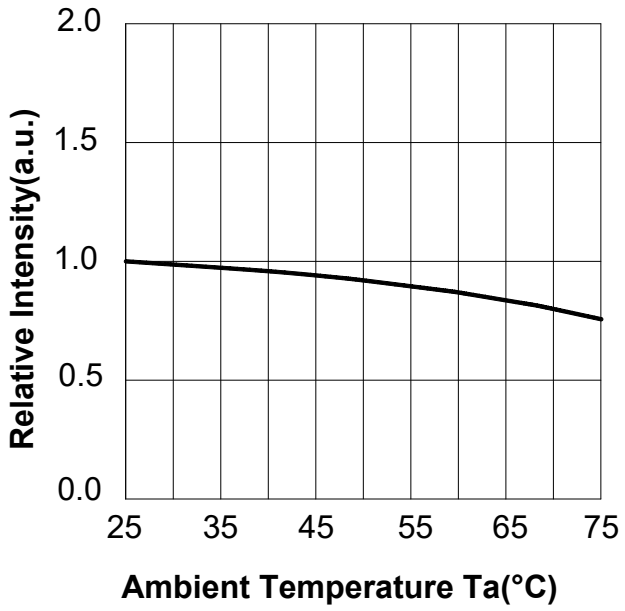
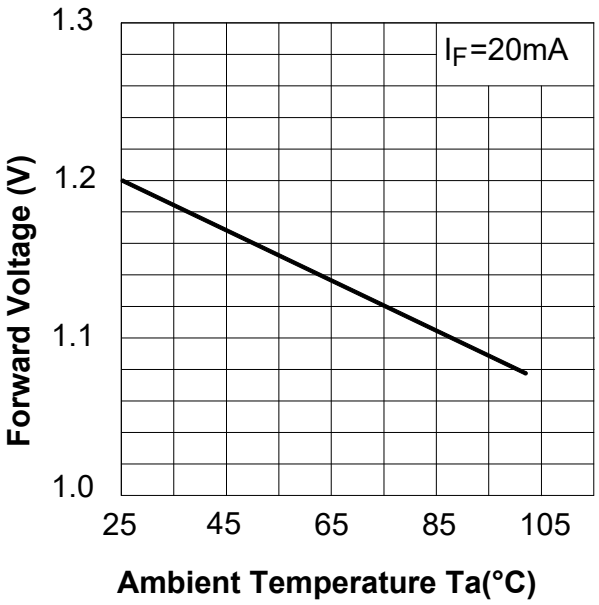


Fig.8 Forward Voltage vs. Ambient Temperature (℃)



Notes:

1. Above specification may be changed without notice. SHUGUAN will reserve authority on material change for above specification
2. When using this product , please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. SHUGUAN assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification