

Model no: SX534IR-730
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5mm 730nm infrared diode
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## Specification for Approval

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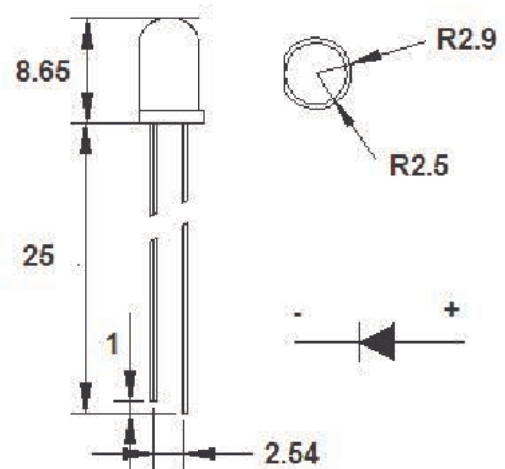
### ● Feature

- water clear type
- 5mm standard directivity
- superior weather-resistance
- high radiant intensity

### ● Applications

- Free air transmission system
- Up to electronic switch
- Infrared remote control units with high power requirement
- Floppy disk drive
- Smoke detector
- Medical equipment

### ◆ Appearance



### ■ Notes

1. All dimensions are in millimeter.
2. Protruded resin under flange 1.5mm Max
3. Lead spacing is measured where the lead emerge from the package.
4. lens color : Water clear.
5. Above specification may be changed without notice . Our company will reserve authority on material change for above specification.
6. These specification sheets include materials protected under copyright of sealand corporation.

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PART NO	CHIP	LENS COLOR
	MATERIAL	
NIR	GaALAs	Water clear

### Absolute Maximum Rating (Ta=25°C)

Item	Symbol	Value	Unit
DC forward current	I <sub>F</sub>	50	mA
Pulse forward current	I <sub>FP</sub>	1.00	A
Power dissipation	P <sub>D</sub>	100	mW
Operating temperature	T <sub>opr</sub>	-40~+85	°C
Storage temperature	Y <sub>stg</sub>	-40~+80	°C
Reverse voltage	V <sub>R</sub>	5	V
Sold soldering temperature	T <sub>sol</sub>	260°C/3Sec	---

Plus with Max 10ms,duty ratio max1/10

### ■ Initial Electrical/Optical Characteristics (Ta=25°C)

Item	Symbol	condition	Min	Type	Max	Unit
DC forward Voltage	V <sub>F</sub>	I=20mA	1.7	1.8	2.0	V
		I <sub>F</sub> =100mA,tp=100 μ s,tp/T=0.01	----	1.85	2.05	
		I <sub>F</sub> =1.00A,tp=100 μ s,tp/T=0.01	----	2.5		
DC reverse Current	I <sub>R</sub>	V=5V	----	----	10	μ A
Dome Wavelength	W <sub>D</sub>	I=20mA	720	730	740	Nm
Spectrum Radiation Bandwidth	Δ λ	I=20mA	----	45	----	nm
Ourput power	Ee	I=20mA	10	17	----	MW/sr
		I <sub>F</sub> =100mA,tp=100 μ s, tp/T=0.01		22		
		I <sub>F</sub> =1.00A,tp=100 μ s, tp/T=0.01		35		
Luminous Intensity		I=20mA		65		med
50%Power Angle	2 θ 1/2	I=20mA	----	25	----	deg

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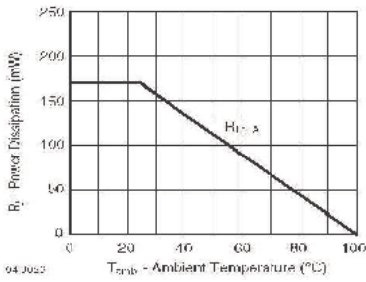


Figure 1. Power Dissipation vs. Ambient Temperature

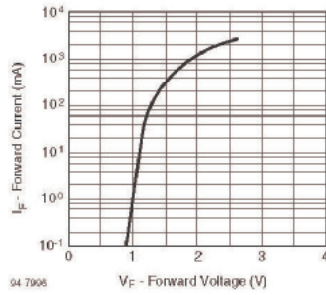


Figure 3. Forward Current vs. Forward Voltage

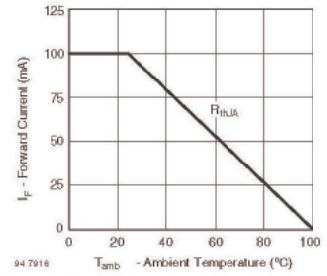


Figure 2. Forward Current vs. Ambient Temperature

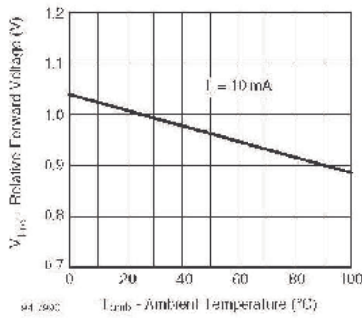


Figure 4. Relative Forward Voltage vs. Ambient Temperature

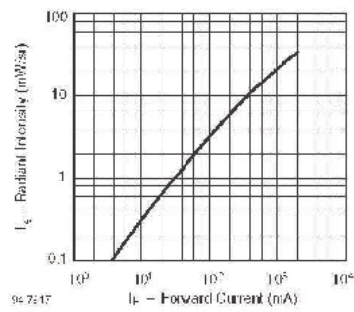


Figure 5. Radiant Intensity vs. Forward Current

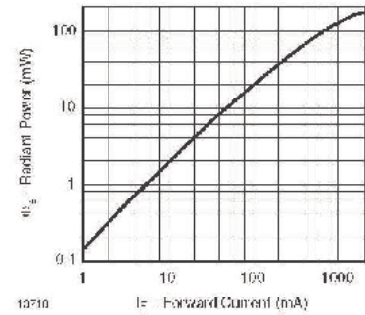


Figure 6. Radiant Power vs. Forward Current

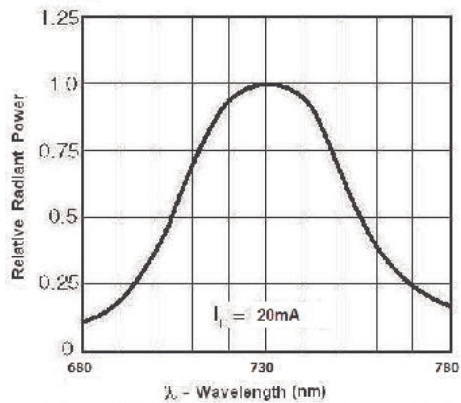


Figure 7. Relative Radiant Power vs. Wavelength

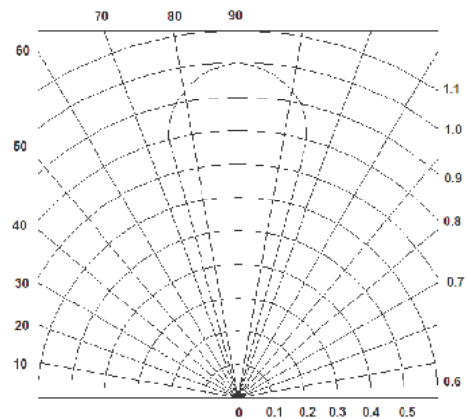


Diagram characteristics of radiation

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Reliability performance

Test items and result

Test classification	Test item	Test condionts	Test duration	Sample size	AC/RE
Life test	Room temperature DC operating life test	Ta=25±5°C IF=50mA	1000hrs	30pcs	0/1
Environment test	Thermal shock Test	-10±5°C ← → +100±5°C 5min 10sec 5min	50cycles	30pcs	0/1
	Temperature cycle test	-40±5°C ← → +85±5°C 30min 5sec 30min	50cycles	30pcs	0/1
	High temperature & High humidity test	Ta=85±5°C RH=85% ±0.5%RH	1000hrs	30pcs	0/1
	High temperature storage	Ta =100±5°C	1000hrs	30pcs	0/1
	Low temperture storage	Ta =-55±5°C	1000hrs	30pcs	0/1
Mechanical test	Resistance to soldering heat	Ta =230±5°C	5sec	30pcs	0/1
	Lead integrity	Load 2.5N(0.25KGf) 0°C ∞ 90°C ∞ 0°C	3times	30pcs	0/1