

5mm Round Type Infrared LED



Description

THE LIR053 is high intensity gallium arsenide infrared emitting diodes encapsulated in blue transparent or water clear plastic package in T-1 or T-13/4 individually.

Features

- Hi-Radiant intensity
- Low-Average degradation
- Dice Material : GaAlAs /GaAs
- Emitted Colour : Invisible
- Lens Colour : Blue Transparent

Application

- Remote Control
- Smoke Detector
- Photo Detector
- Burglar Alarm
- Computer I/O Peripheral
- Automatic Control System
- Industrial Use

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Test
Aperture Radiant incidence	Ee	0.2	0.45	-	mW/cm ²	If=20mA
Radiant intensity	Ie	10	14	-	mW/sr	If=20mA
Peak Emission Wavelength	λ_p	-	940	-	nm	If=20mA
Forward Voltage	VF	-	1.2	1.4	V	If=20mA
Spectral Line Half-Width	$\Delta\lambda$	-	50	-	nm	If=20mA
Reverse Current	IR	-	0	100	μ A	VR=5V
Viewing Angle	2 Θ 1/2	-	16	-	Degree	
Rise Time	TR	-	-	600	nS	-
Fall Time	TF	-	-	600	nS	-

Absolute Maximum Rating

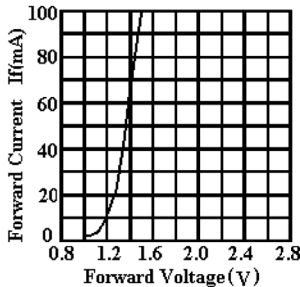
Parameter	Max. Rating	Unit
Power Dissipation	100	mW
Peak Forward Current (Pulse width = 10us 1% duty cycle)	1	A
Continuous Forward Current	50	mA
Reverse Voltage	5	V
Operating Temperature Range	-40°C to +85°C	
Storage Temperature Range	-40°C to +100°C	
Lead Soldering Temperature (1/16 inch from Body for 5sec)	260°C	

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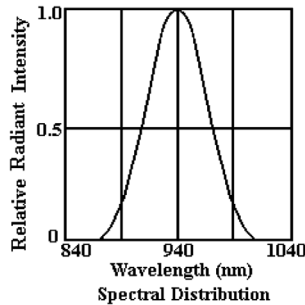


Typical Electro-Optical Characteristics Curves

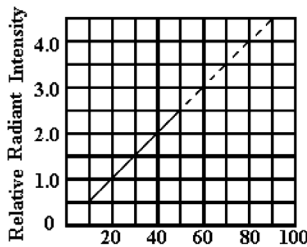
Infrared (GaAs $\lambda_P=940\text{nm}$)



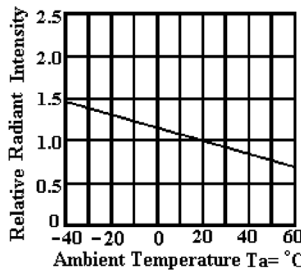
Forward current vs. Forward Voltage



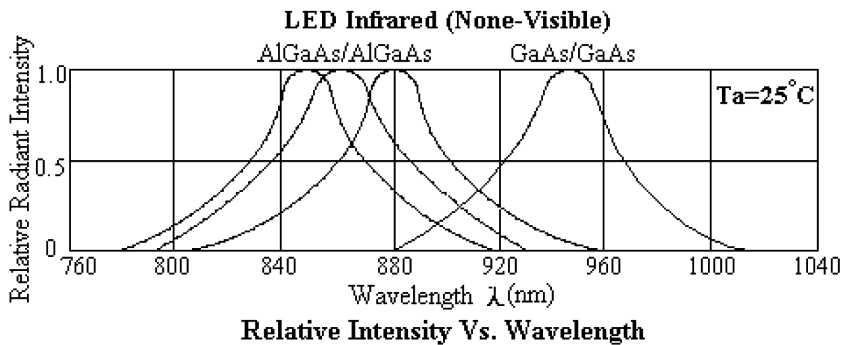
Spectral Distribution



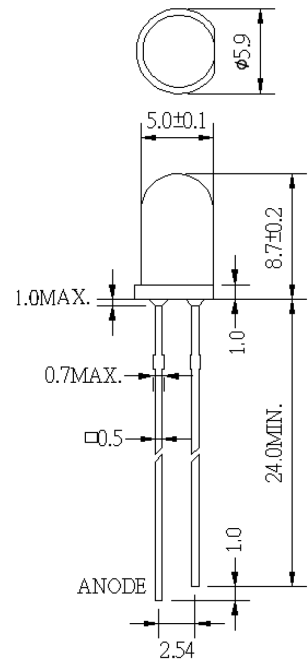
Radiant Intensity vs. Forward current



Radiant Intensity vs. Ambient Temperature



Relative Intensity Vs. Wavelength



Dimensions : Millimetres
Tolerance : $\pm 0.25\text{mm}$

Part Number Table

Description	Part Number
5mm Round Type Infrared, Blue LED	LIR053

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