Infrared light emitting diode, top view type SIR-56ST3F

The SIR-56ST3F is a GaAs infrared light emitting diode housed in clear plastic. This device has a high luminous efficiency and a 950nm spectrum suitable for silicon detectors. Low cost make it an ideal light source for household remote control devices.

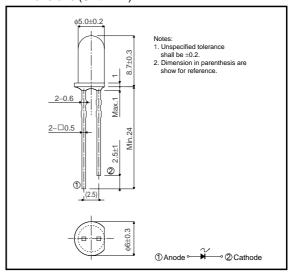
Applications

Optical control equipment Light source for remote control devices

Features

- 1) High efficiency, high output Po=8.0mW (Ir=50mA).
- 2) Emission spectrum well suited to silicon detectors.
- 3) Good current-optical output linearity.
- 4) Long life, high reliability.

●Dimensions (Unit:mm)



● Absolute maximum ratings (Ta = 25°C)

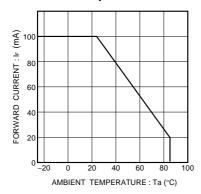
Parameter	Symbol	Limits	Unit	
Forward current	lF	100	mA	
Reverse voltage	VR	5	V	
Power dissipation	Po	160	mW	
Pulse forward current	IFP*	0.5	Α	
Operating temperature	Topr	-25 to +85	°C	
Storage temperature	Tstg	-40 to +85	°C	

^{*} Pulse width=0.1msec, duty ratio 1%

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

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Optical output	Po	-	8.0	_	mW	I==50mA
Emitting strength	ΙE	5.6	_	_	mW/sr	I==50mA
Forward voltage	VF	-	1.3	1.6	V	I=100mA
Reverse current	lR	_	_	10	μА	V _R =3V
Peak light emitting wavelength	λР	-	950	_	nm	I==50mA
Spectral line half width	Δλ	_	40	_	nm	I==50mA
Half-viewing angle	θ1/2	-	±15	_	deg	I==50mA
Pesponse time	tr∙tf	-	1.0	_	μs	I==50mA
Cut-off frequency	fc	_	1.0	_	MHz	I==50mA

•Electrical and optical characteristic curves



ORWARD VOLTAGE: VF (V)

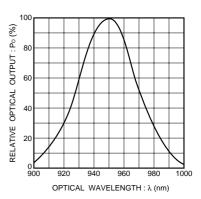
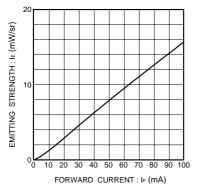
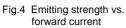


Fig.1 Forward current falloff

Fig.2 Forward current vs. forward voltage

Fig.3 Wavelength





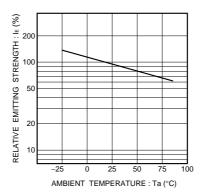


Fig.5 Relative emitting strength vs. ambient temperature

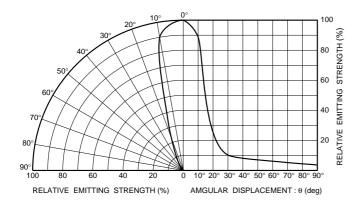


Fig.6 Directional pattern

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