



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Infrared light emitting diode, top view type

SIR-34ST3F

The SIR-34ST3F 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. It is small and at the same time has a wide radiation angle, making it ideal for compact optical control equipment.

●Applications

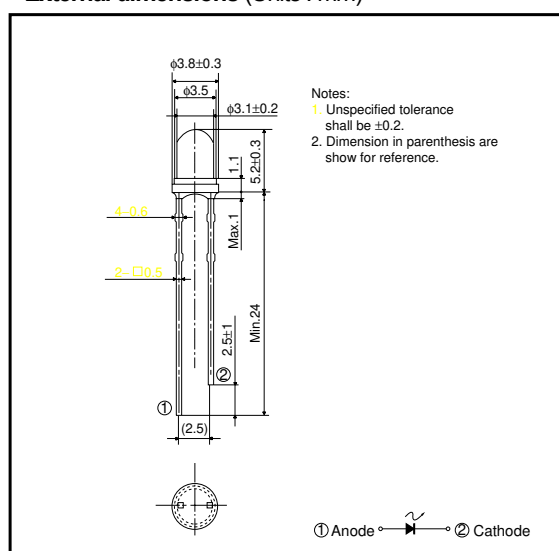
Optical control equipment

Light source for remote control devices

●Features

- 1) Compact ($\phi 3.1$ mm).
- 2) High efficiency, high output $P_O=8.0$ mW ($I_F=50$ mA).
- 3) Wide radiation angle $\theta=27^\circ$.
- 4) Emission spectrum well suited to silicon detectors ($\lambda_P=950$ nm).
- 5) Good current-optical output linearity.
- 6) Long life, high reliability.

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Forward current	I_F	100	mA
Reverse voltage	V_R	5	V
Power dissipation	P_D	160	mW
Pulse forward current	I_{FP}^*	1.0	A
Operating temperature	T_{opr}	-25~+85	°C
Storage temperature	T_{stg}	-40~+85	°C

* Pulse width=0.1msec, duty ratio 1%

Sensors

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Optical output	P _O	–	8.0	–	mW	I _F =50mA
Emitting strength	I _E	3.5	–	28.0	mW/sr	I _F =50mA
Forward voltage	V _F	–	1.3	1.6	V	I _F =100mA
Reverse current	I _R	–	–	10	μA	V _R =3V
Peak light emitting wavelength	λ _P	–	950	–	nm	I _F =50mA
Spectral line half width	Δλ	–	40	–	nm	I _F =50mA
Half-viewing angle	θ _{1/2}	–	±27	–	deg	I _F =50mA
Response time	tr·tf	–	1.0	–	μs	I _F =50mA
Cut-off frequency	f _c	–	1.0	–	MHz	I _F =50mA

●Electrical and optical characteristic curves

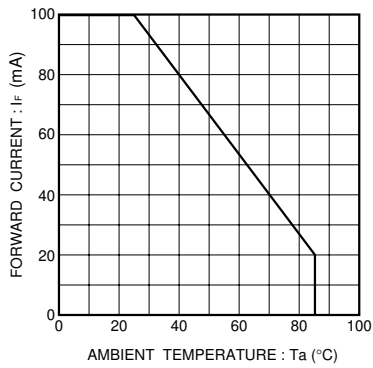


Fig.1 Forward current falloff

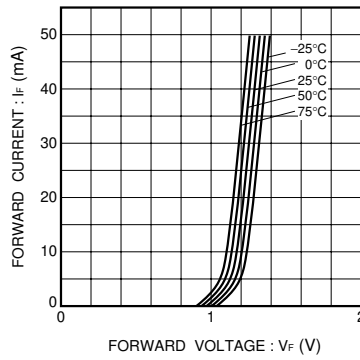


Fig.2 Forward current vs. forward voltage

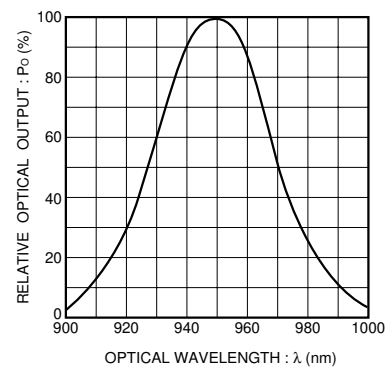


Fig.3 Wavelength

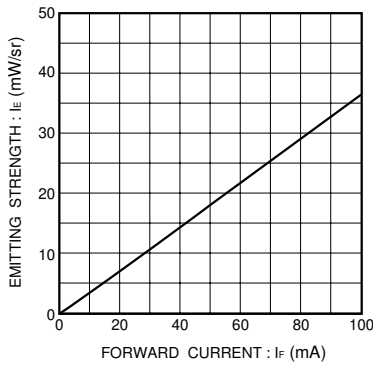


Fig.4 Emitting strength vs. forward current

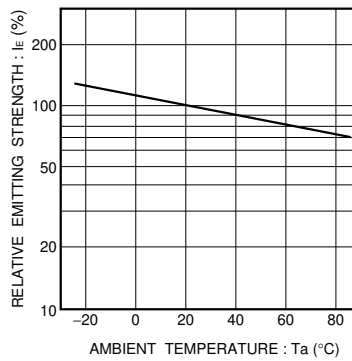


Fig.5 Relative emitting strength vs.ambient temperature

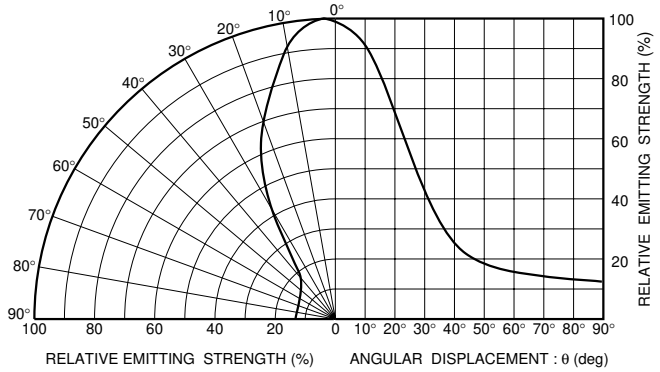


Fig.6 Directional pattern