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-563ST3F

The SIR-563ST3F is a GaAs infrared light emitting diode housed in clear plastic. This device has a high luminous efficiency and a 940nm peak wavelength suitable for silicon detectors. It has a wide radiation angle and is ideal for compact optical control equipment.

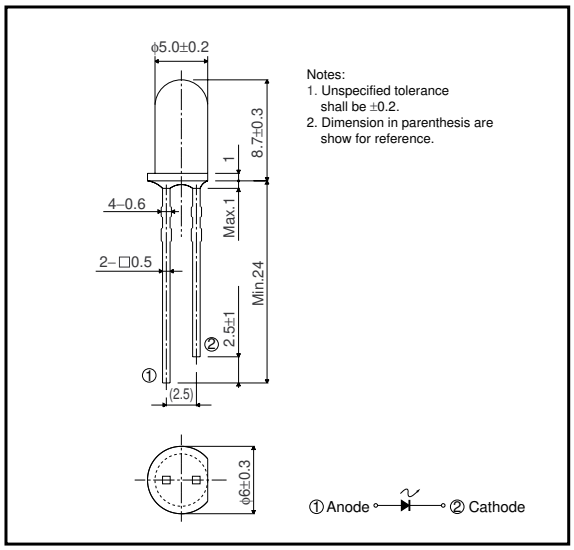
●Applications

Optical control equipment
Light source for remote control devices

●Features

1) High efficiency, high output P_O=11.0mW (I_F=50mA).
2) Wide radiation angle θ1/2=15deg.
3) Emission spectrum well suited to silicon detectors. (λP=940nm).
4) Good current-optical output linearity.
5) Long life, high reliability.

●Dimensions (Unit : mm)



●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Forward current	I_F	100	mA
Reverse voltage	V_R	5.0	V
Power dissipation	P_D	160	mW
Pulse forward current	I_{FP}*	0.5	A
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.	Typ.	Max.	Unit	Conditions
Optical output	P_O	–	11	–	mW	I_F=50mA
Emitting strength	I_E	9.0	21	–	mW/sr	I_F=50mA
Forward voltage	V_F	–	1.34	1.6	V	I_F=50mA
Reverse current	I_R	–	–	10	μA	V_R=3V
Peak light emitting wavelength	λ_P	–	940	–	nm	I_F=50mA
Spectral line half width	$\Delta\lambda$	–	40	–	nm	I_F=50mA
Half-viewing angle	$\theta_{1/2}$	–	±15	–	deg	I_F=50mA
Pesponse 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**

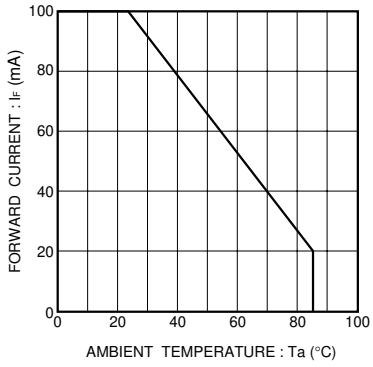


Fig.1 Forward current

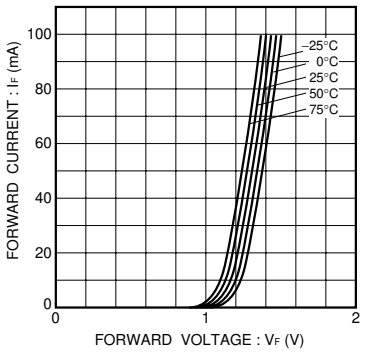


Fig.2 Forward current vs. forward voltage

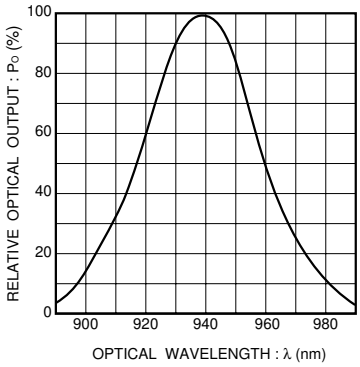


Fig.3 Wavelength

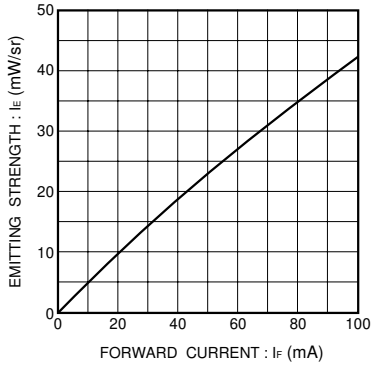


Fig.4 Emitting strength vs. forward current

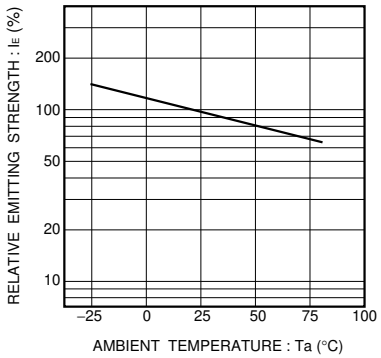


Fig.5 Relative emitting strength vs. ambient temperature

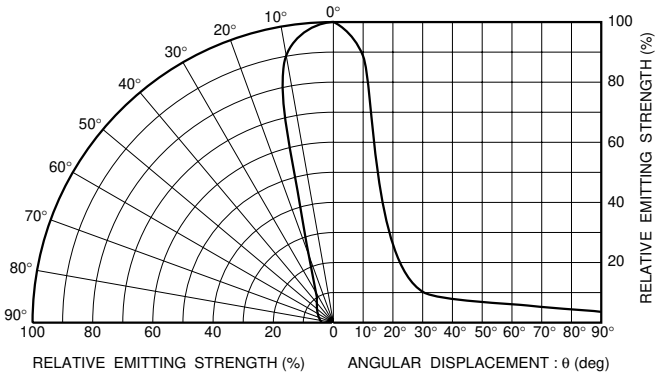


Fig.6 Directional pattern

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).
Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.
In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.