High power chip sensor, side view type

SIM-012SB

The SIM-012SB is ultra small size and high power ohip sensor. Original technology, original structure and original Optical design enable to use Automatic moantinig machine, Reflow, ultra smallsize, High power.

●Applications

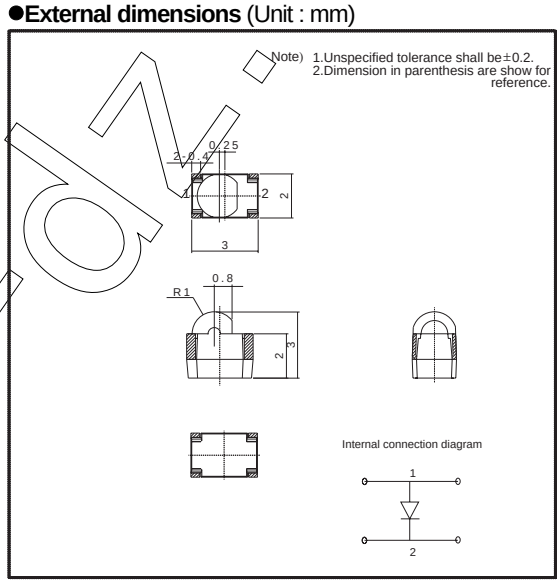
Optical control equipment

Light source for remote control devices

●Features

1) High power by ϕ2 lenze.
2) Emitting pore can have 7time high power then substruk type with parabola structure.
3) Ultra -compact surface mount package.
   (3mmx3mmx2mm)
4) It is possible to do Reflow.

●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Forward current	I_F	40	mA
Reverse voltage	V_R	5	V
Power dissipation	P_D	60	mW
Pulse forward current	I_{FP}*	0.5	A
Operating temperature	Topr	–30~+85	°C
Storage temperature	Tstg	–40~+100	°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	–	3.5	–	mW	I_F=20mA
Emitting strength	I_E	0.9	–	7.1	mW/sr	I_F=20mA
Forward voltage	V_F	–	1.2	1.5	V	I_F=20mA
Reverse current	I_R	–	–	10	μA	V_R=3V
Peak light emitting wavelength	λ_P	–	950	–	nm	I_F=20mA
Spectral line half width	$\Delta\lambda$	–	40	–	nm	I_F=20mA
Half-viewing angle	$\theta_{1/2}$	–	±12	–	deg	I_F=20mA
Pesponse time	tr·tf	–	1.0	–	μs	I_F=20mA
Cut-off frequency	f_C	–	1.0	–	MHz	I_F=20mA

●Electrical and optical characteristic curves

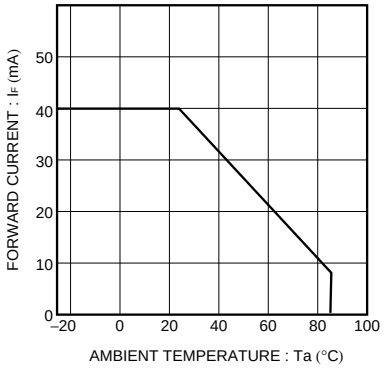


Fig.1 Forward current faloff

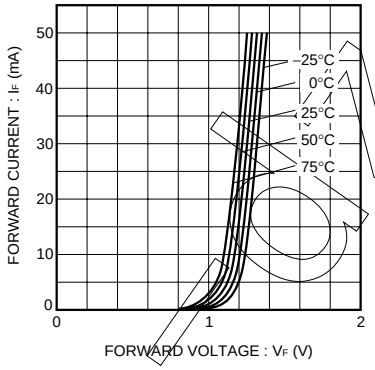


Fig.2 Forward current vs. forward voltage

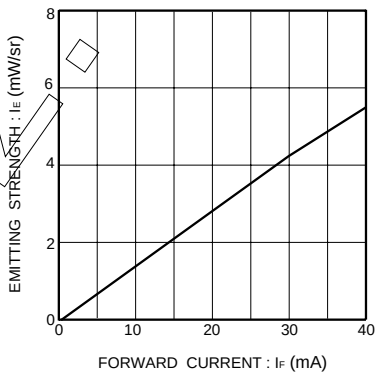


Fig.3 Emitting strength vs. forward current

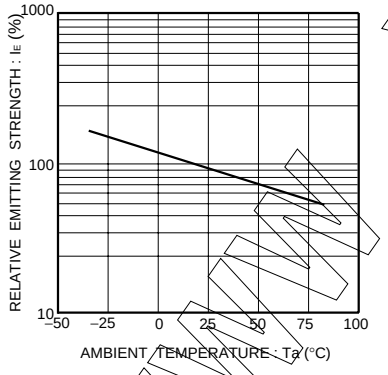


Fig.4 Relative emitting strength vs.ambient temperature

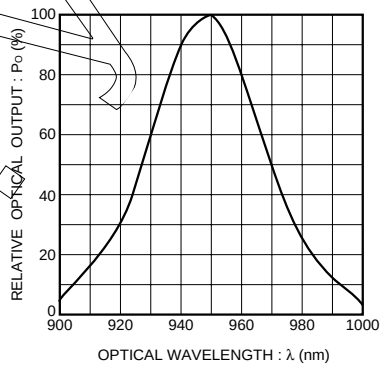


Fig.5 Wavelength

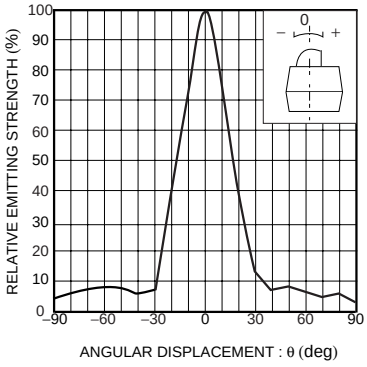


Fig.6 Directional pattern(1)

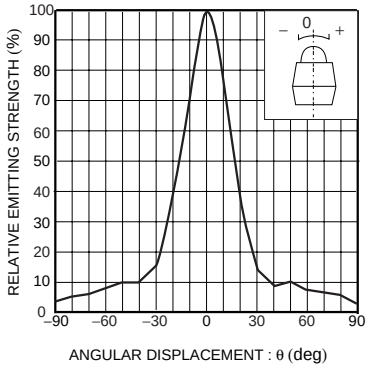


Fig.7 Directional pattern(2)

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