

SIM-012SB

Sensors

High power chip sensor, side view type

SIM-012SB

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

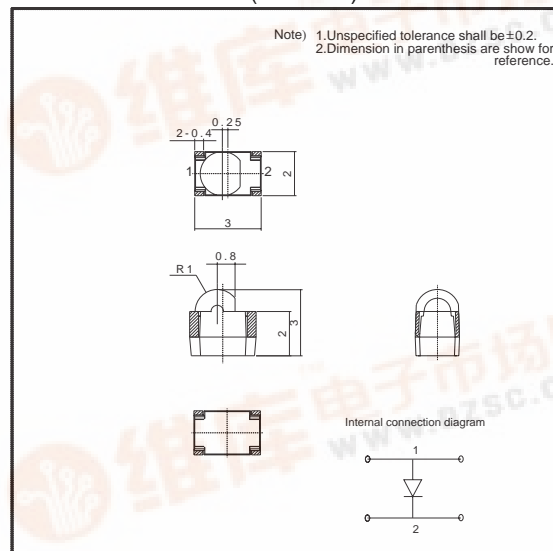
●Applications

Optical control equipment
Light source for remote control devices

●Features

- 1) High power by $\phi 2$ 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 _{FB} *	0.5	A
Operating temperature	T _{opr}	-30~+85	°C
Storage temperature	T _{stg}	-40~+100	°C

* Pulse width=0.1msec, duty ratio 1%

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●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	Δλ	-	40	-	nm	I _F =20mA
Half-viewing angle	θ _{1/2}	-	±12	-	deg	I _F =20mA
Response 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

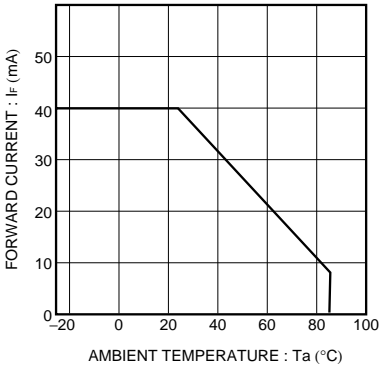


Fig.1 Forward current falloff

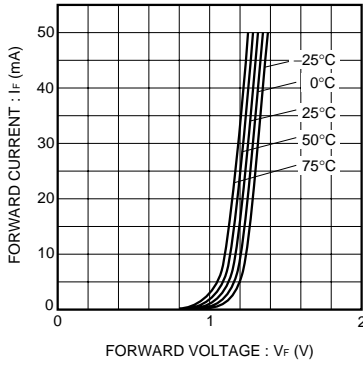


Fig.2 Forward current vs. forward voltage

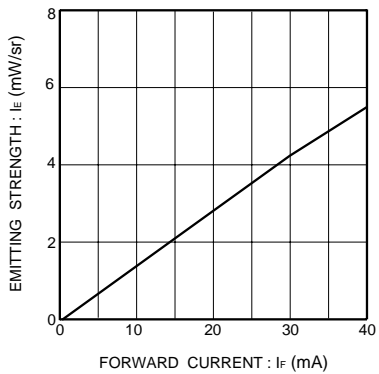


Fig.3 Emitting strength vs. forward current

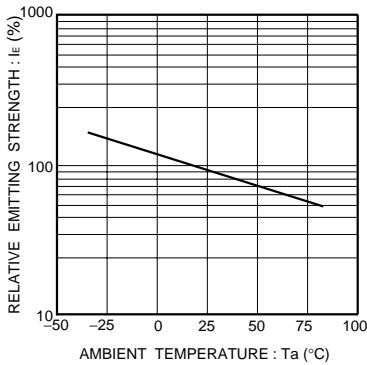


Fig.4 Relative emitting strength vs.ambient temperature

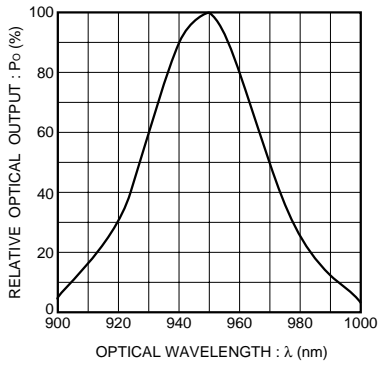


Fig.5 Wavelength

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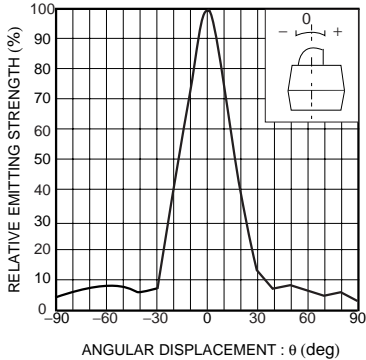


Fig.6 Directional pattern(1)

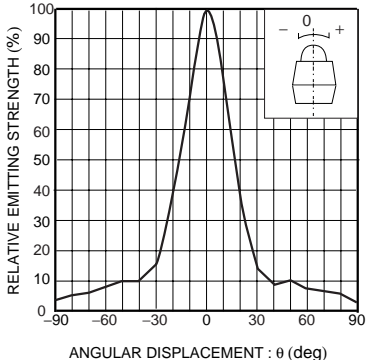


Fig.7 Directional pattern(2)

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