High power chip sensor, side view type

SIM-012ST

The SIM-012ST 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.

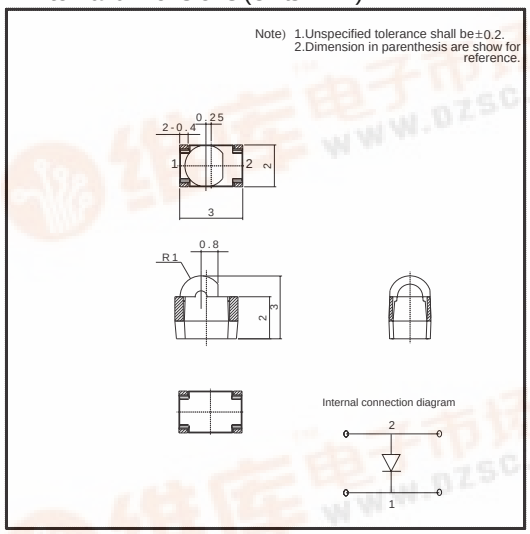
●Applications

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 Refliw.

●External dimensions (Units : 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 frrequency	fc	–	1.0	–	MHz	I_F=20mA

●Electrical and optical characteristic curves

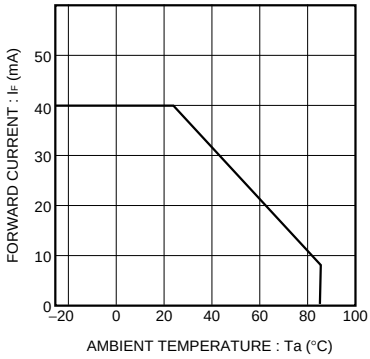


Fig.1 Forward current faloff

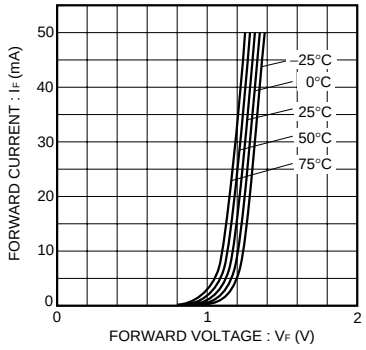


Fig.2 **Forward current vs. forward voltage**

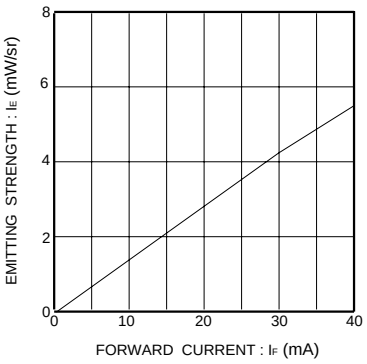


Fig.3 Emitting strength vs. forward currnt

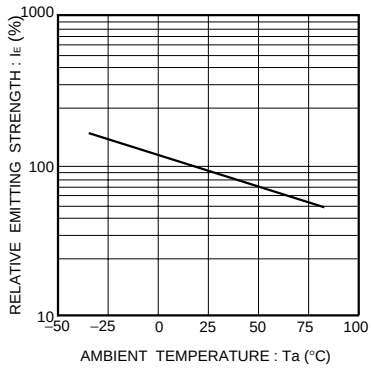


Fig.4 Relative emitting strength vs.ambient temperature

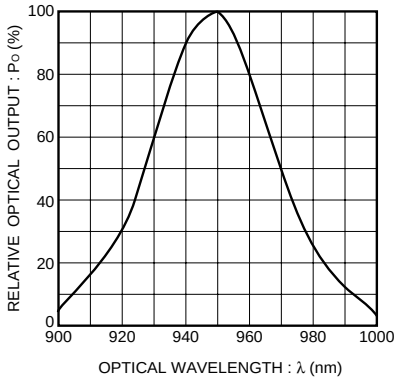


Fig.5 Wavelength

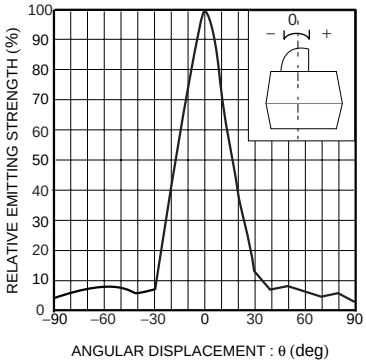


Fig.6 Directional pattem(1)

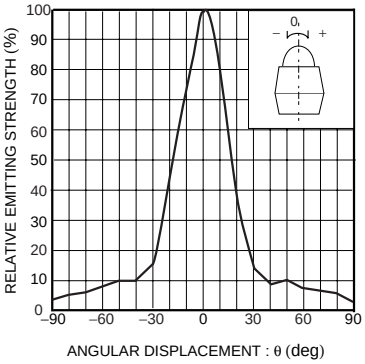


Fig.7 Directional pattem(2)

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