

Infrared light emitting diode, side-view type

SIM-22ST

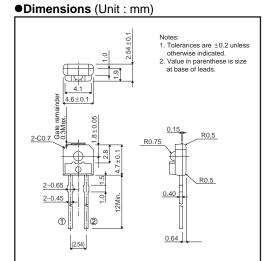
The SIM-22ST is a GaAs infrared light emitting diode housed in side emission. High output with φ1.5 lens.

Applications

Light source for sensors

Features

- 1) Compact package (4.7x4.6 mm) with lens.
- 2) High efficiency, high output.
- 3) Emission spectrum well suited to silicon detectors ($\lambda P = 950 \text{ nm}$).
- 4) Good current-optical output linearity.
- 5) Long life, high reliability.



①Cathode ∽

● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Forward current	lF	50	mA
Reverse voltage	VR	5	V
Power dissipation	Po	80	mW
Pulse forward current	IFP*	0.5	А
Operating temperature	Topr	-25 to +85	°C
Storage temperature	Tstg	-30 to +100	°C

^{*} Pulse width = 0.1ms, duty ratio 1%

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

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Emitting strength I	lεI	_	0.8	-	mW/sr	I==10mA
Emitting strength II	le II	0.48	1.3	1.94	mA	I==10mA*
Forward voltage	VF	_	1.3	1.6	V	I==50mA
Reverse current	lR	_	_	10	μΑ	V _R =5V
Peak light emitting wavelength	λρ	_	950	_	nm	I==10mA
Spectral line half width	Δλ	_	40	-	nm	I==20mA
Half-viewing angle	θ1/2	_	±30	_	deg	I _F =50mA
Response time	tr • tf	_	1.0	_	μs	I==50mA
Cut-off frequency	fc	_	1.0	_	MHz	I==50mA

^{*} According to our measurement procedures.

SIM-22ST Data Sheet

•Electrical and optical characteristic curves

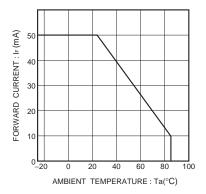


Fig.1 Forward current falloff

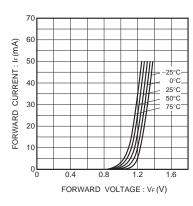


Fig.2 Forward current vs. forward voltage

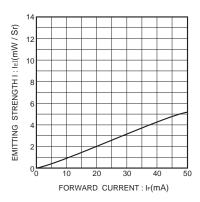


Fig.3 Emitting strength I vs. forward current

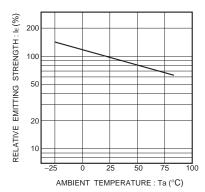


Fig.4 Relative emitting strength vs. ambient temperature

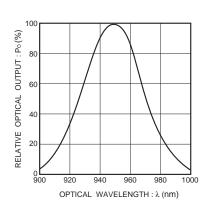


Fig.5 Wavelength

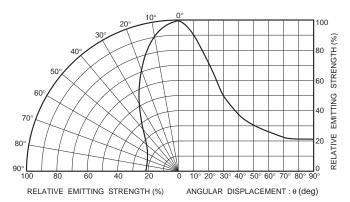


Fig. 6 Directional pattern

Notes

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