Infrared light emitting diode, top view type SIR-505STA47

The SIR-505STA47 is optimal for tape-end sensors in VTR's and other equipment. It can be directly mounted on a printed circuit board.

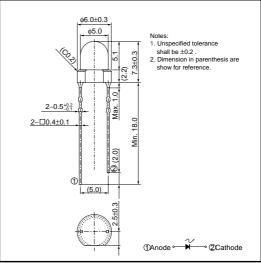
Applications

VCR's, Optical control equipment

Features

- 1) ϕ 5 mm plastic package.
- 2) Direct-mount type.
- 3) Long life and high reliability.





Parameter	Symbol	Limits	Unit
Forward current	lF	100	mA
Reverse voltage	VR	5	V
Power dissipation	PD	160	mW
Pulse forward current	IFP*	0.5	А
Operating temperature	Topr	-25 to +85	°C
Storage temperature	Tstg	-40 to +85	°C

• Absolute maximum ratings (Ta = 25°C)

* Pulse width = 0.1 ms, duty ratio 1%

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

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Optical output	Po	-	8.0	-	mW	I⊧=50mA
Emitting strength	le	5.6	10.0	25.7	mW/sr	l⊧=50mA
Forward voltage	VF	-	1.38	1.6	V	I⊧=100mA
Reverse current	IR	-	-	10	μA	Vr=3V
Peak light emitting wavelength	λρ	-	950	-	nm	l⊧=50mA
Spectral line half width	Δλ	-	40	-	nm	l⊧=50mA
Half-viewing angle	θ1/2	-	±15	-	deg	l⊧=50mA
Response time	tr•tf	_	1.0	_	μs	l⊧=50mA
Cut-off frequency	fc	_	1.0	_	MHz	l⊧=50mA



Sensors

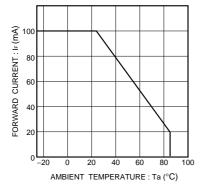


Fig.1 Forward current falloff

•Electrical and optical characteristic curves

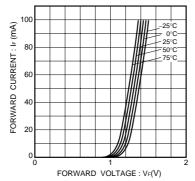
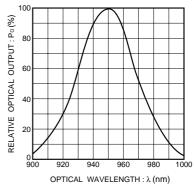


Fig.2 Forward current vs. forward voltage





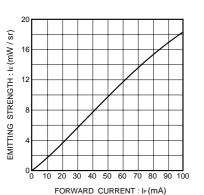
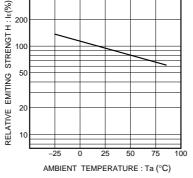
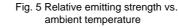


Fig.4 Emitting strength vs.

forward current





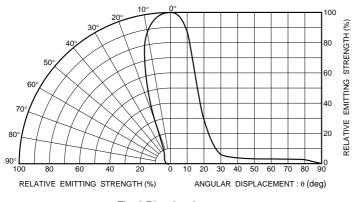


Fig. 6 Directional pattern

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