

SIR-505STA47

●Applications

● Features

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

Technical drawing of a cathodic protection system for a vertical structure. The drawing includes a side view and a cross-section.

Side View Dimensions:

- Top section: $\phi 6.0 \pm 0.3$, $\phi 5.0$, 5.1, 7.3 ± 0.3
- Main body: $2 - 0.5 \pm 0.2$, $2 - \square 0.4 \pm 0.1$, Max. 1.0, (2.2)
- Bottom section: Min. 18.0, (5.0), (2.0)

Cross-section Dimensions:

- Diameter: 2.5 ± 0.3

Legend:

- ① Anode
- ② Cathode

Parameter	Symbol	Limits	Unit
Forward current	I_F	100	mA
Reverse voltage	V_R	5	V
Power dissipation	P_D	160	mW
Pulse forward current	I_{FP}^*	0.5	A
Operating temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Optical output	P _O	—	8.0	—	mW	I _F =50mA
Emitting strength	I _E	5.6	10.0	25.7	mW/sr	I _F =50mA
Forward voltage	V _F	—	1.38	1.6	V	I _F =100mA
Reverse current	I _R	—	—	10	μA	V _R =3V
Peak light emitting wavelength	λ _P	—	950	—	nm	I _F =50mA
Spectral line half width	Δλ	—	40	—	nm	I _F =50mA
Half-viewing angle	θ _{1/2}	—	±15	—	deg	I _F =50mA
Response time	tr • tf	—	1.0	—	μs	I _F =50mA
Cut-off frequency	fc	—	1.0	—	MHz	I _F =50mA

Sensors

●Electrical and optical characteristic curves

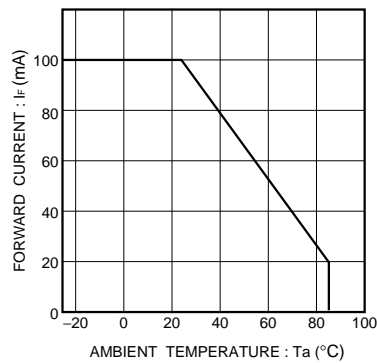


Fig.1 Forward current falloff

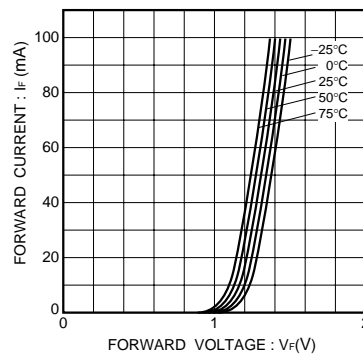


Fig.2 Forward current vs. forward voltage

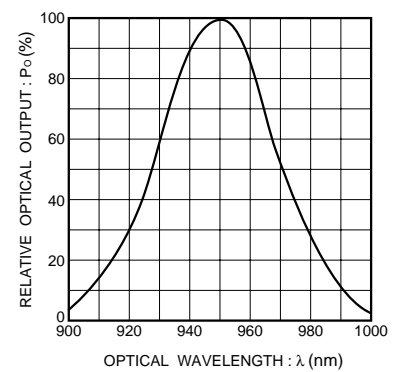


Fig.3 Wavelength characteristics

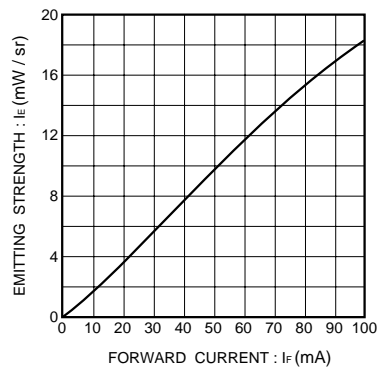


Fig.4 Emitting strength vs. forward current

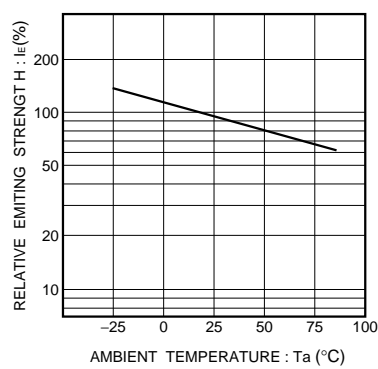


Fig.5 Relative emitting strength vs. ambient temperature

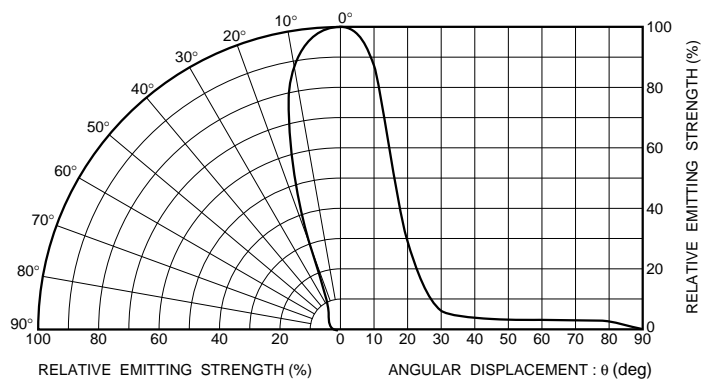


Fig.6 Directional pattern

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