

AL - 402

The AL - 402 is a high - power GaAlAs IRED, with precision optical designed attachment lens. It emits parallel infrared lights.

FEATURES

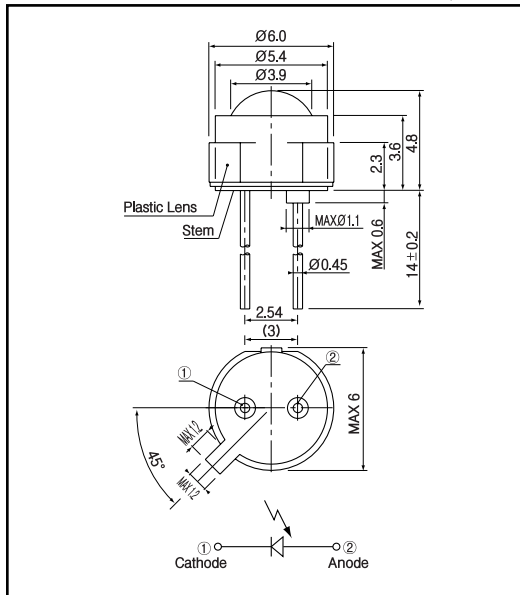
- Parallel rays
- Low profile
- sidelooking plastic package

APPLICATIONS

- Encoders
- Emitters for automatic focusing

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Reverse voltage	V _R	5	V
Forward current	I _F	100	mA
Pulse forward current	I _{FP}	0.3	A
Power dissipation	P ₀	150	mW
Operating temp.	T _{opr.}	- 25 ~ +70	
Storage temp.	T _{stg.}	- 30 ~ +80	
Soldering temp. *1	T _{sol.}	240	

*1. For MAX.5 seconds at the position of 2 mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

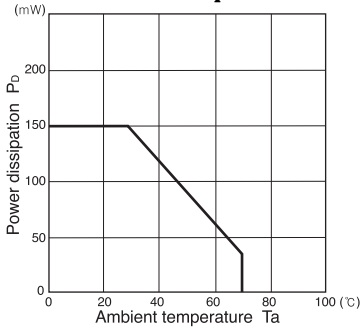
(Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward voltage	V _F	I _F =50mA		1.4	2.0	V
Reverse current	I _R	V _R =5V			10	μA
Capacitance	C _t	f=1MHz		20		pF
Radiant intensity	P ₀	I _F =50mA		2.2		mW/sr
Peak emission wavelength	λ _p	I _F =50mA		910		nm
Spectral bandwidth 50%		I _F =50mA		50		nm
Half angle					12	deg.
Effective emitting diameter	D			Ø3.9		mm

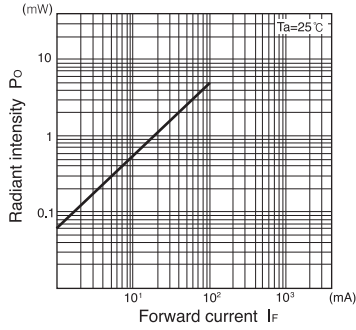
Infrared Emitting Diodes(GaAlAs)

AL - 402

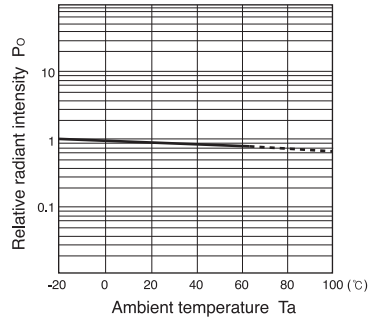
Power dissipation Vs. Ambient temperature



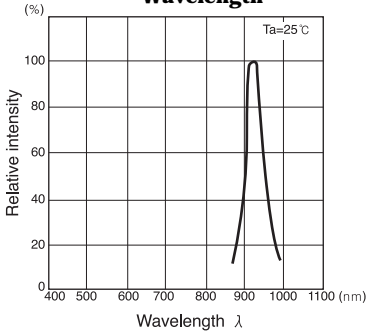
Radiant intensity Vs. Forward current



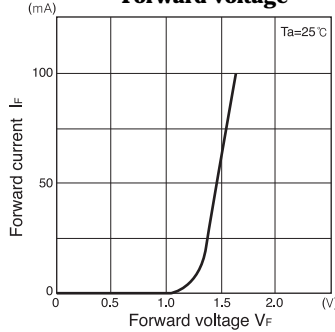
Relative radiant intensity Vs. Ambient temperature



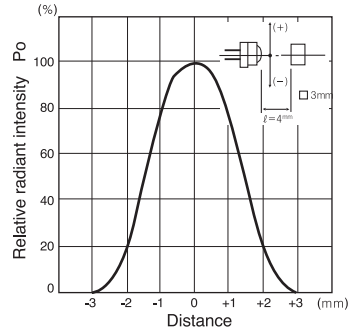
Relative intensity Vs. Wavelength



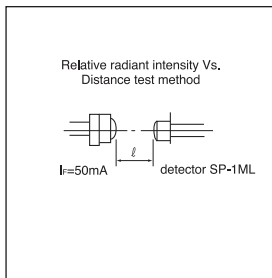
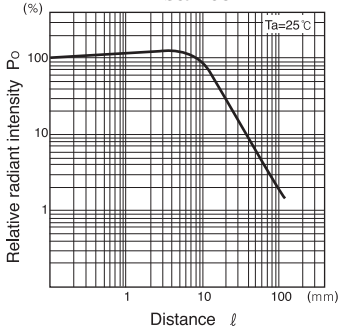
Forward current Vs. Forward voltage



Radiant Pattern



Relative radiant intensity Vs. Distance



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