

# AL - 402

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

## FEATURES

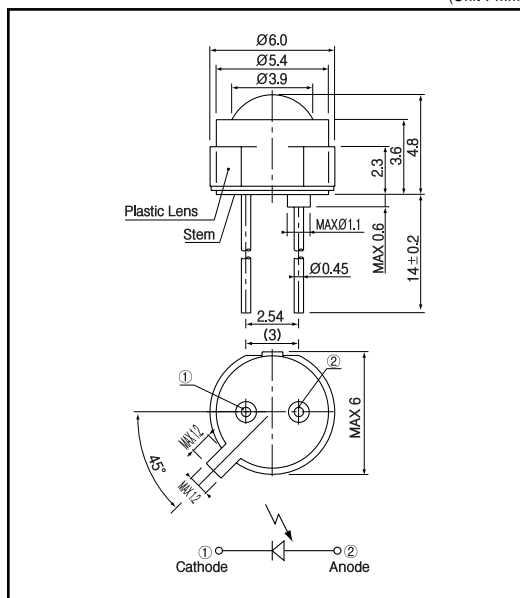
- Parallel rays
- Low profile
- sidelooking plastic package

## 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	$P_D$	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

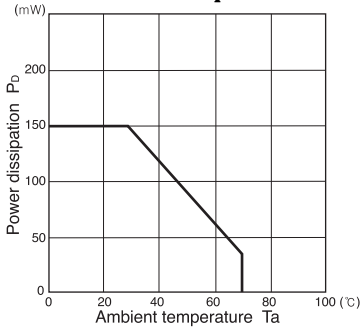
(Ta=25 )

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	$\mu A$
Capacitance	$C_t$	$f=1MHz$		20		pF
Radiant intensity	$P_D$	$I_F=50mA$		2.2		mW/sr
Peak emission wavelength	$\lambda_p$	$I_F=50mA$		910		nm
Spectral bandwidth 50%		$I_F=50mA$		50		nm
Half angle					12	deg.
Effective emitting diameter	D			$\varnothing 3.9$		mm

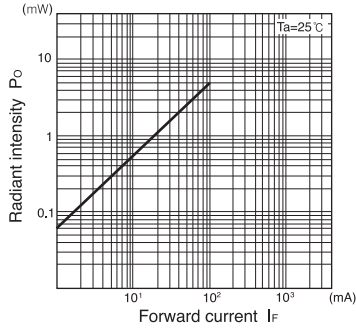
# Infrared Emitting Diodes(GaAlAs)

## AL - 402

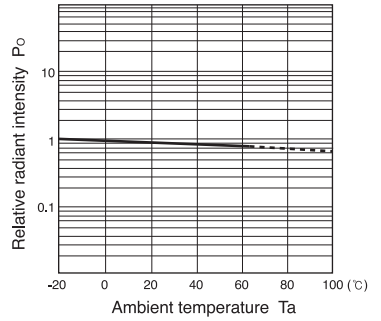
**Power dissipation Vs. Ambient temperature**



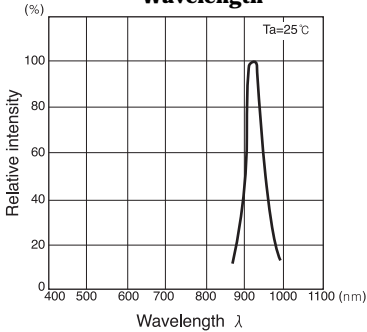
**Radiant intensity Vs. Forward current**



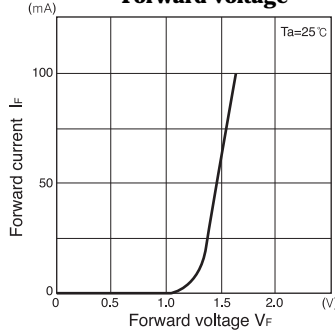
**Relative radiant intensity Vs. Ambient temperature**



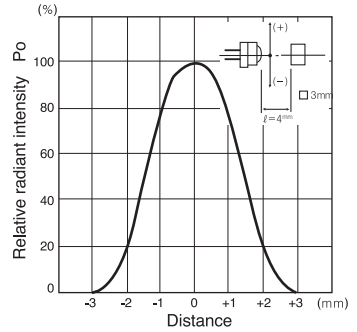
**Relative intensity Vs. Wavelength**



**Forward current Vs. Forward voltage**



**Radiant Pattern**



**Relative radiant intensity Vs. Distance**

