

AL - 402

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

FEATURES

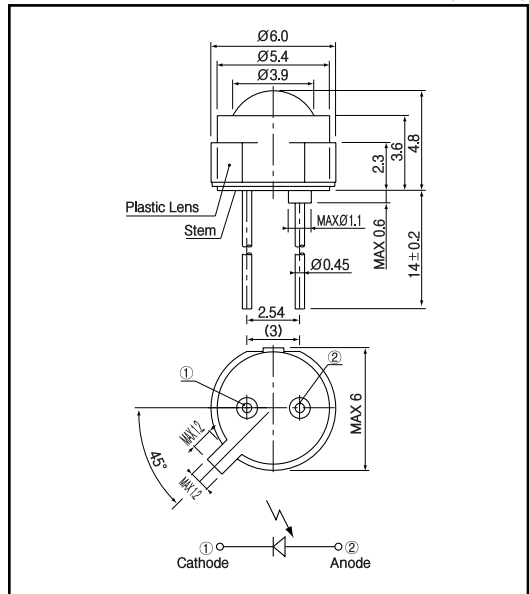
- Parallel rays
- Low profile
- sidelooking plastic package

APPLICATIONS

- Encoders
- Emitters for automatic focusing

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 °C)

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

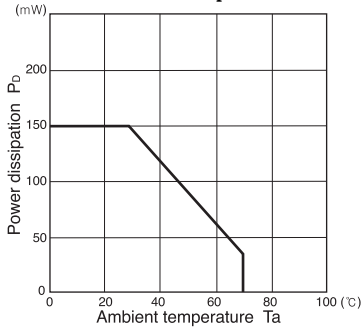
(Ta=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward voltage	V_F	$I_F = 50\text{mA}$		1.4	2.0	V
Reverse current	I_R	$V_R = 5\text{V}$			10	μA
Capacitance	C_t	$f = 1\text{MHz}$		20		pF
Radiant intensity	P_D	$I_F = 50\text{mA}$		2.2		mW/sr
Peak emission wavelength	λ_p	$I_F = 50\text{mA}$		910		nm
Spectral bandwidth 50%	$\Delta \lambda$	$I_F = 50\text{mA}$		50		nm
Half angle	θ				12	deg.
Effective emitting diameter	D			Ø3.9		mm

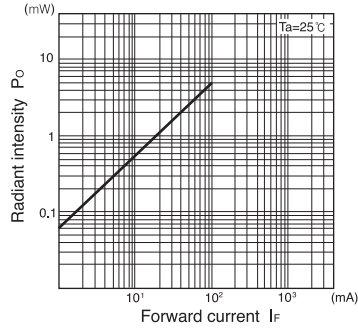
Infrared Emitting Diodes(GaAlAs)

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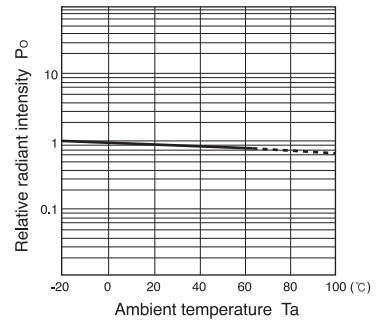
Power dissipation Vs. Ambient temperature



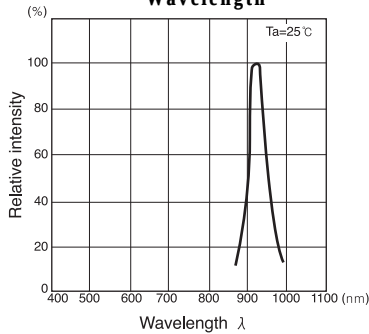
Radiant intensity Vs. Forward current



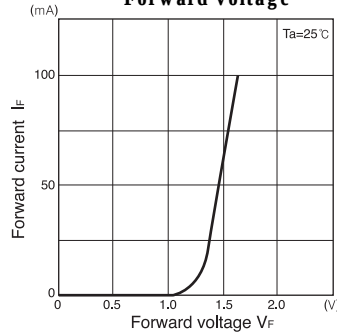
Relative radiant intensity Vs. Ambient temperature



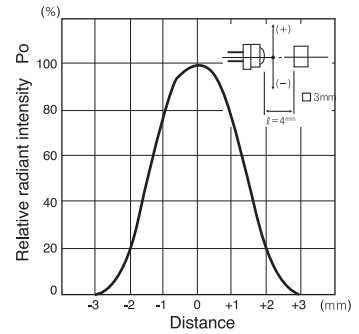
Relative intensity Vs. Wavelength



Forward current Vs. Forward voltage



Radiant Pattern



Relative radiant intensity Vs. Distance

