

## KEL-3001A

The KEL-3001A is GaAs infrared emitting diode that is designed for high power, low forward voltage and high speed rise / fall time. This device is optimized for speed and efficiency at emission wavelength 940nm and has a high radiant efficiency over a wide range of forward current.

## FEATURES

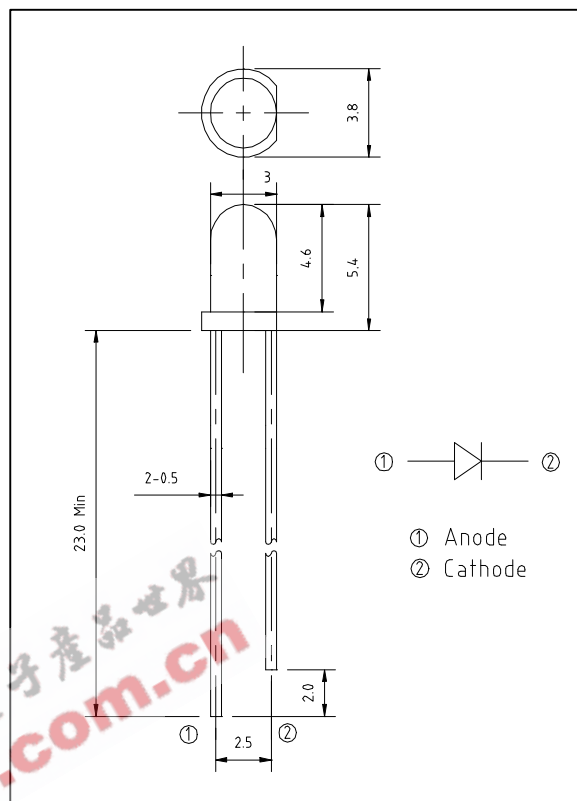
- 940nm wavelength
- Low forward voltage
- High power and high reliability
- Available for pulse operating

## APPLICATIONS

- IR Audio and Telephone
- Communication
- Optical Switch
- Available for wireless digital data transmission

## DIMENSIONS

(Unit : mm)



## ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Ratings	Unit
Power dissipation	PD	75	mW
Forward current	IF	50	mA
Pulse forward current *1	IFP	0.5	A
Reverse voltage	VR	5	V
Operating temp.	Topr.	-25 ~ +85	°C
Storage temp.	Tstg.	-30 ~ +85	°C
Soldering temp. *2	Tsol.	240	°C

\*1. Duty ratio=1/100, pulse width=0.1ms

\*2. Lead Soldering Temperature (3mm from case for 5sec).

## ELECTRO-OPTICAL CHARACTERISTICS

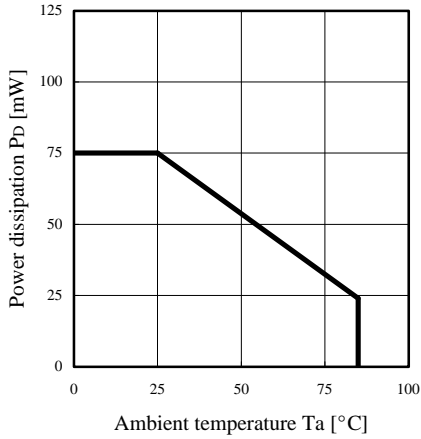
(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	VF	IF=50mA	-	1.4	1.7	V
Reverse current	IR	VR=5V	-	-	10	uA
Capacitance	Ct	f=1MHz, V=0V	-	70	-	pF
Radiant intensity	Po	IF=50mA	5.0	8.0	-	mW
Peak emission wavelength	$\lambda_p$	IF=50mA	-	940	-	nm
Spectral bandwidth 50%	$\Delta\lambda$	IF=50mA	-	45	-	nm
Half angle	$\Delta\theta$	IF=50mA	-	$\pm 20$	-	deg.

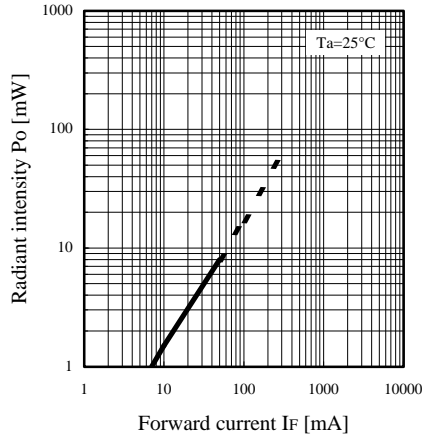
# Infrared Emitting Diodes(GaAs)

## KEL-3001A

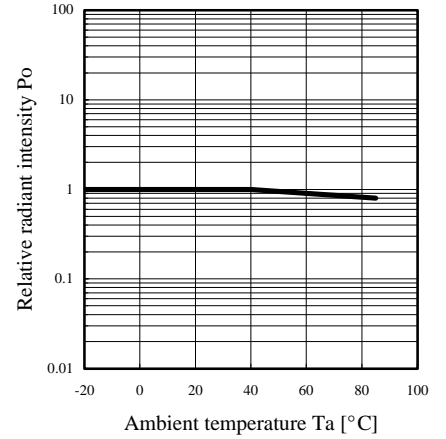
**Power dissipation Vs. Ambient temperature**



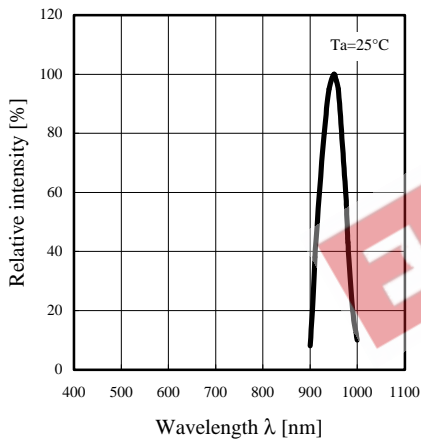
**Radiant intensity Vs. Forward current**



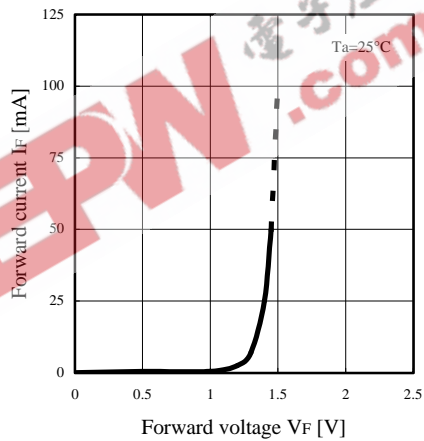
**Relative radiant intensity Vs. Ambient temperature**



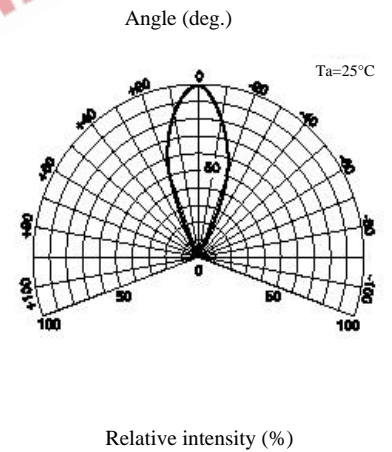
**Relative intensity Vs. Wavelength**



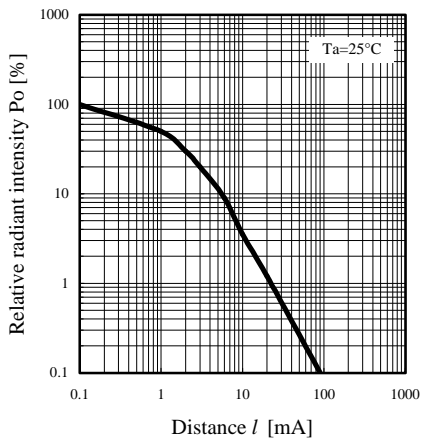
**Forward current Vs. Forward voltage**



**Radiant Pattern**



**Relative radiant intensity Vs. Distance**



**Relative radiant intensity Vs. Distance test method**

