

# 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**

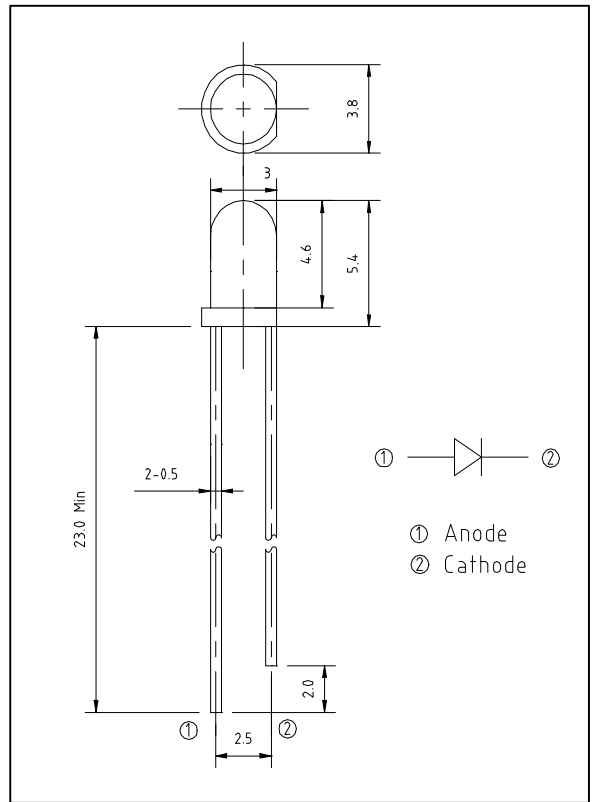
- 940nm wavelength
- Low forward voltage
- High power and high reliability
- Available for pulse operating

**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	P <sub>D</sub>	75	mW
Forward current	I <sub>F</sub>	50	mA
Pulse forward current *1	I <sub>FP</sub>	0.5	A
Reverse voltage	V <sub>R</sub>	5	V
Operating temp.	T <sub>opr.</sub>	-25 ~ +85	°C
Storage temp.	T <sub>stg.</sub>	-30 ~ +85	°C
Soldering temp. *2	T <sub>sol.</sub>	240	°C

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

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

**ELECTRO-OPTICAL CHARACTERISTICS**

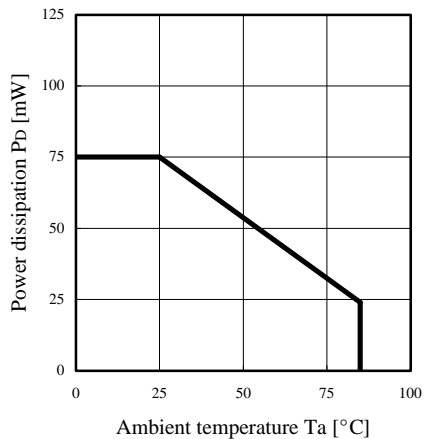
(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =50mA	-	1.4	1.7	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	uA
Capacitance	C <sub>t</sub>	f=1MHz, V=0V	-	70	-	pF
Radiant intensity	P <sub>o</sub>	I <sub>F</sub> =50mA	5.0	8.0	-	mW
Peak emission wavelength	λ <sub>p</sub>	I <sub>F</sub> =50mA	-	940	-	nm
Spectral bandwidth 50%	Δλ	I <sub>F</sub> =50mA	-	45	-	nm
Half angle	Δθ	I <sub>F</sub> =50mA	-	± 20	-	deg.

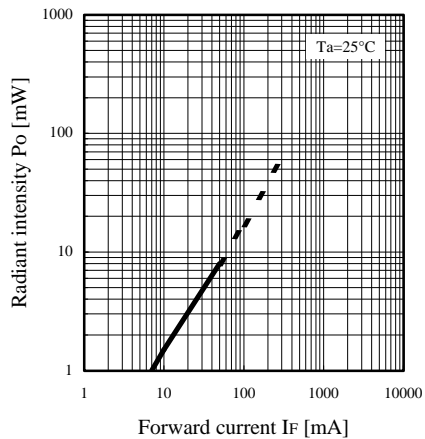
# Infrared Emitting Diodes(GaAs)

## KEL-3001A

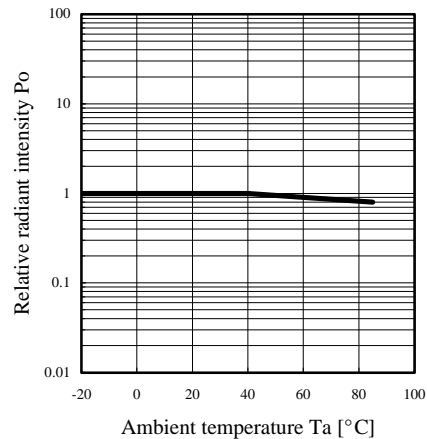
**Power dissipation Vs. Ambient temperature**



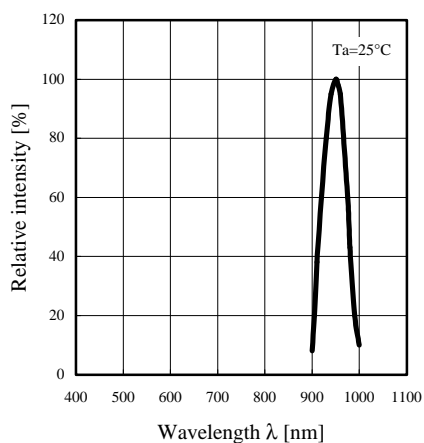
**Radiant intensity Vs. Forward current**



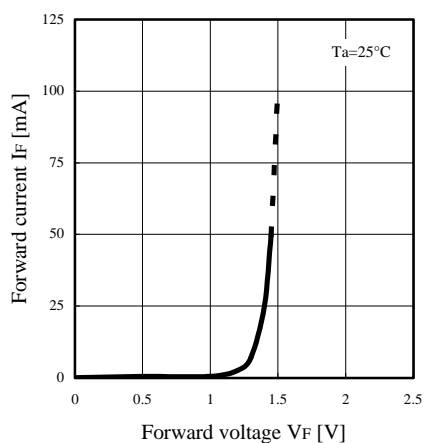
**Relative radiant intensity Vs. Ambient temperature**



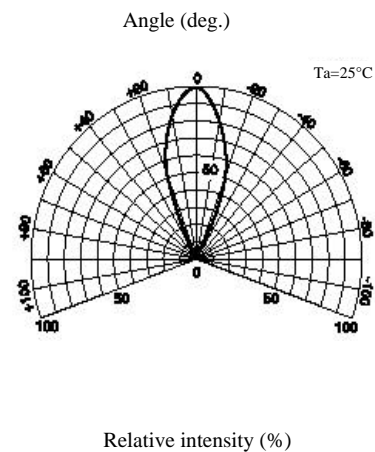
**Relative intensity Vs. Wavelength**



**Forward current Vs. Forward voltage**



**Radiant Pattern**



**Relative radiant intensity Vs. Distance**

