

## EL - 1K3

The EL - 1K3 is a high - power GaAs IRED mounted in durable, hermetically sealed TO - 18 metal can package, which provides years of reliable performance even under demanding conditions such as use outdoors.

### FEATURES

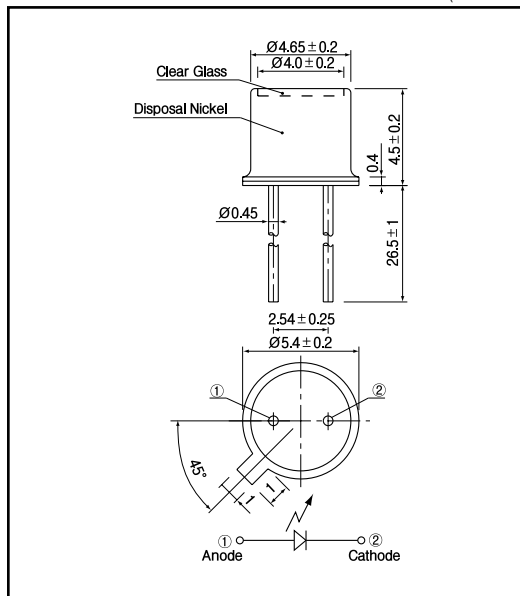
- Wide beam angle
- Durable
- High reliability in demanding environments

### APPLICATIONS

- Optical emitters
- Optical switches
- Smoke sensors

### 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 <sup>*1</sup>	$I_{FP}$	1	A
Power dissipation	$P_D$	200	mW
Operating temp.	$T_{opr.}$	- 30 - + 100	
Storage temp.	$T_{stg.}$	- 55 - + 125	
Soldering temp. <sup>*2</sup>	$T_{sol.}$	260	

\*1. pulse width :  $t_w$  100  $\mu$ sec.period : T=10msec.

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

### ELECTRO-OPTICAL CHARACTERISTICS

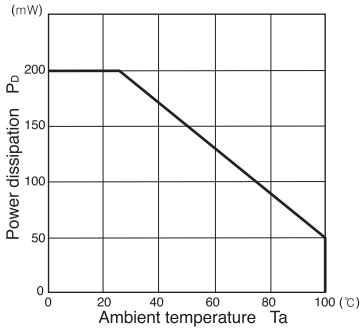
(Ta=25 )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward voltage	$V_f$	$I_F=100mA$		1.35	1.7	V
Reverse current	$I_R$	$V_R=5V$			10	$\mu A$
Capacitance	$C_t$	$f=1MHz$		25		pF
Radiant intensity	$P_o$	$I_F=100mA$	2.2	4.0		mW/sr
Peak emission wavelength	$\lambda$	$I_F=100mA$		940		nm
Spectral bandwidth 50%		$I_F=100mA$		50		nm
Half angle				$\pm 36$		deg.

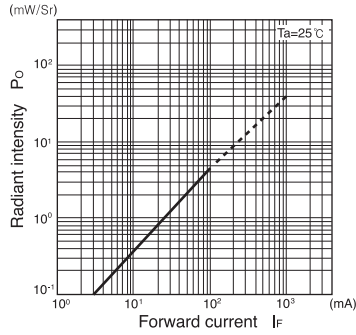
# Infrared Emitting Diodes(GaAs)

EL - 1K3

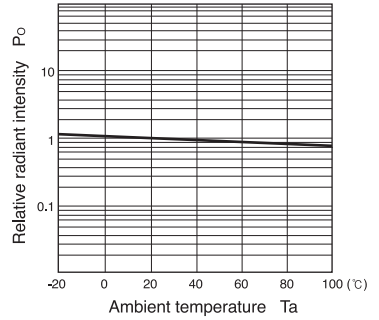
**Power dissipation Vs. Ambient temperature**



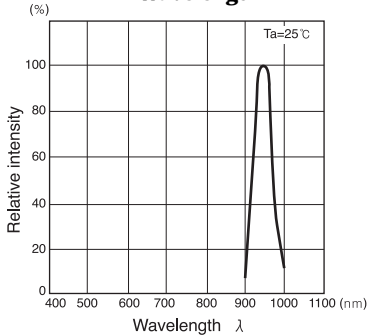
**Radiant intensity Vs. Forward current**



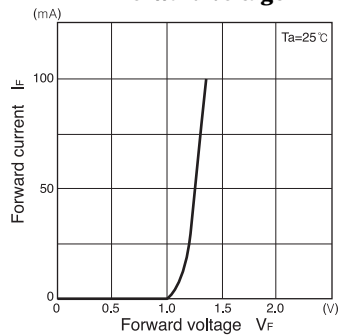
**Relative radiant intensity Vs. Ambient temperature**



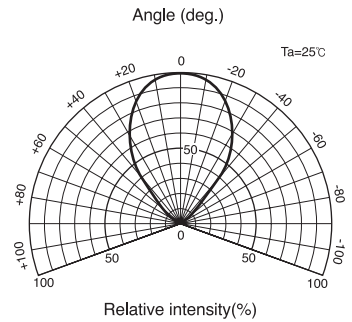
**Relative intensity Vs. Wavelength**



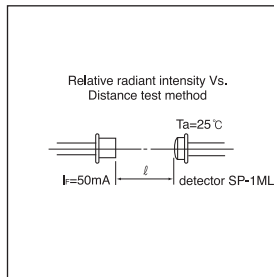
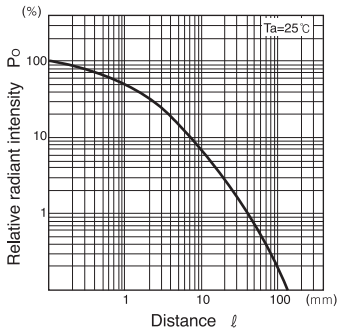
**Forward current vs. Forward voltage**



**Radiant Pattern**



**Relative radiant intensity Vs. Distance**





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