

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

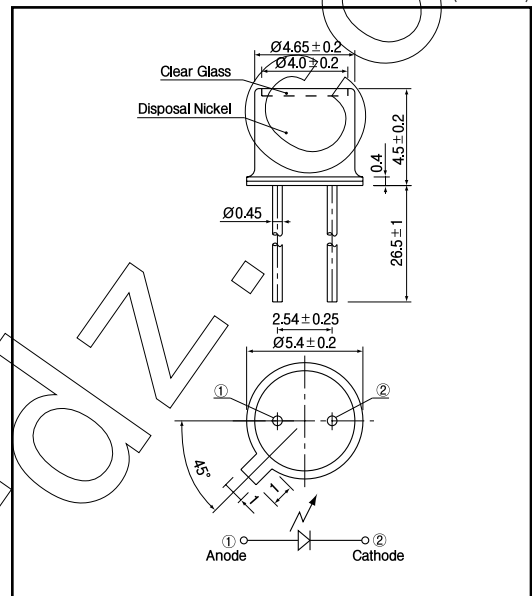
- Wide beam angle
- Durable
- High reliability in demanding environments

APPLICATIONS

- Optical emitters
- Optical switches
- Smoke sensors

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	5	V
Forward current	I_F	100	mA
Pulse forward current ^{*1}	I_{FP}	1	A
Power dissipation	P_D	200	mW
Operating temp.	$T_{opr.}$	- 30 ~ + 100	°C
Storage temp.	$T_{stg.}$	- 55 ~ + 125	°C
Soldering temp. ^{*2}	$T_{sol.}$	260	°C

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

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

ELECTRO-OPTICAL CHARACTERISTICS

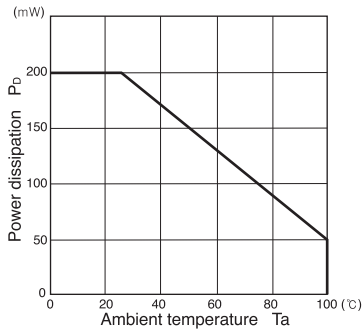
(Ta = 25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward voltage	V_F	$I_F = 100\text{mA}$		1.35	1.7	V
Reverse current	I_R	$V_R = 5\text{V}$			10	μA
Capacitance	C_t	$f = 1\text{MHz}$		25		pF
Radiant intensity	P_D	$I_F = 100\text{mA}$	2.2	4.0		mW/sr
Peak emission wavelength	λ_p	$I_F = 100\text{mA}$		940		nm
Spectral bandwidth 50%	$\Delta \lambda$	$I_F = 100\text{mA}$		50		nm
Half angle	$\Delta \theta$			± 36		deg.

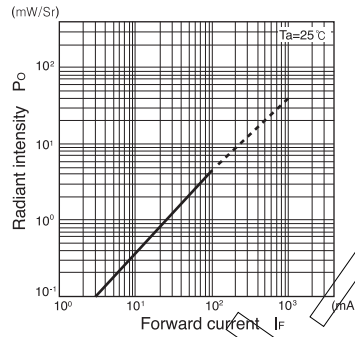
Infrared Emitting Diodes(GaAs)

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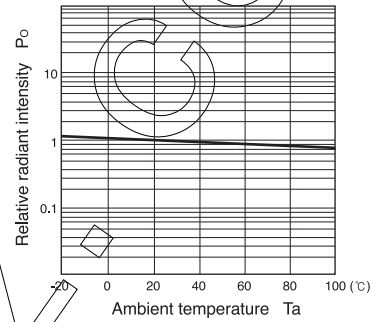
Power dissipation Vs. Ambient temperature



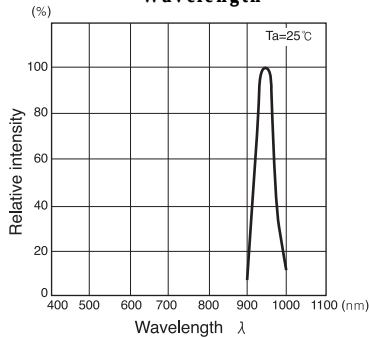
Radiant intensity Vs. Forward current



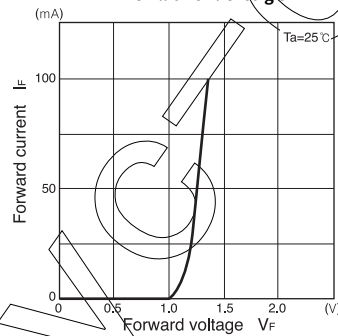
Relative radiant intensity Vs. Ambient temperature



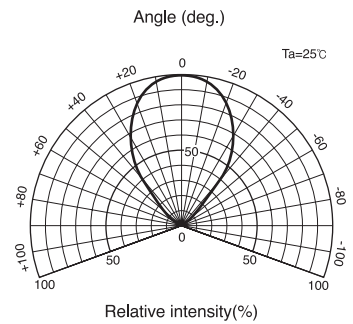
Relative intensity Vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern



Relative radiant intensity Vs. Distance

