

Infrared Emitting Diodes(GaAs)

KODENSHI

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

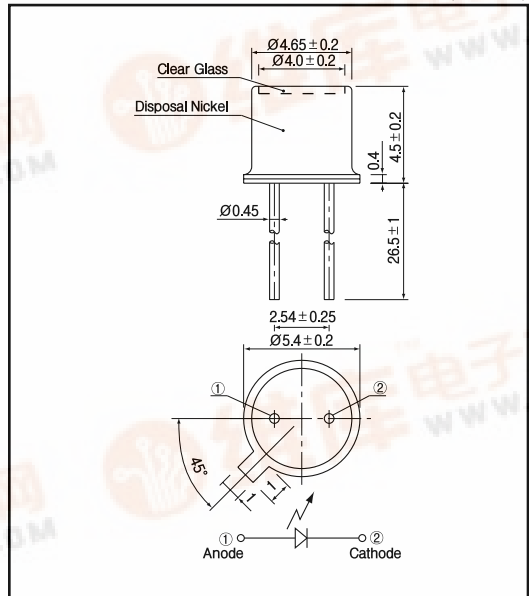
- Wide beam angle
- Durable
- High reliability in demanding environments

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 ¹	I _{FP}	1	A
Power dissipation	P _o	200	mW
Operating temp.	T _{opr.}	-30 ~ +100	
Storage temp.	T _{stg.}	-55 ~ +125	
Soldering temp. ²	T _{sol.}	260	

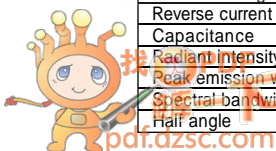
*1. pulse width : t_w 100 μsec, period : T=10msec.

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

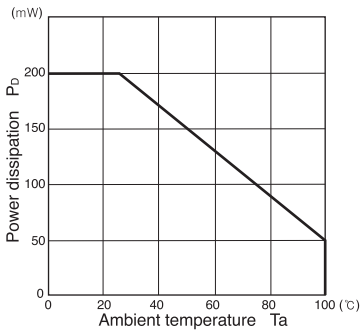
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward voltage	V _F	I _F =100mA		1.35	1.7	V
Reverse current	I _R	V _R =5V			10	μA
Capacitance	C _t	f=1MHz		25		pF
Radiant intensity	P _o	I _F =100mA	2.2	4.0		mW/sr
Peak emission wavelength	λ _p	I _F =100mA		940		nm
Spectral bandwidth 50%		I _F =100mA		50		nm
Half angle				±36		deg.



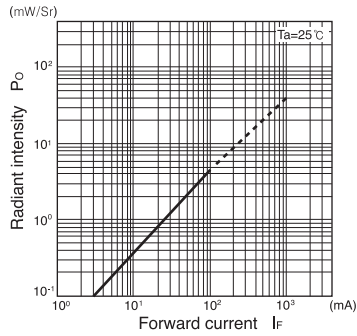
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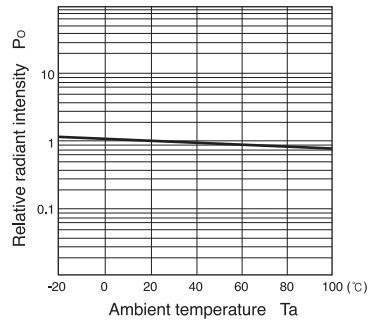
Power dissipation Vs. Ambient temperature



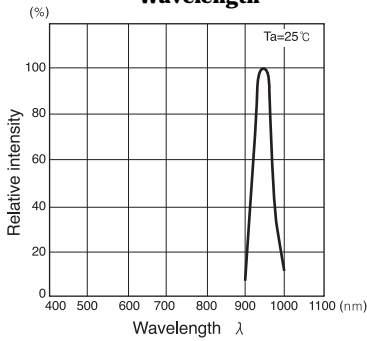
Radiant intensity Vs. Forward current



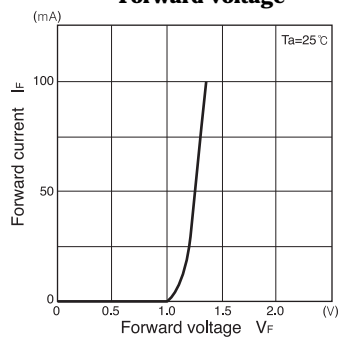
Relative radiant intensity Vs. Ambient temperature



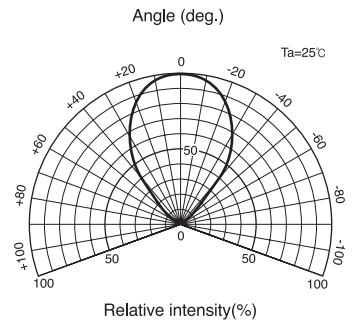
Relative intensity Vs. Wavelength



Forward current vs. Forward voltage



Radiant Pattern



Relative radiant intensity Vs. Distance

