

KBL-1KL3

1. Description

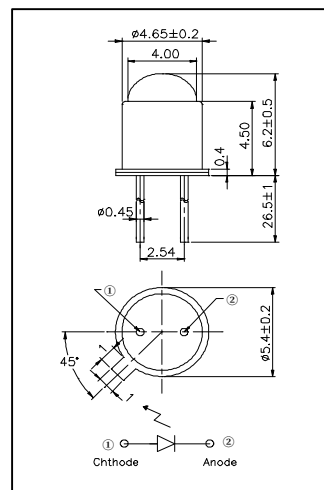
The KBL-1KL3 is a GaAlAs IRED mounted in durable, hermetically sealed TO-18 metal can type, which provide years of reliable performance, even under demanding conditions such as use outdoors.

2. Features

- ◆ Narrow beam angle
- ◆ Durable
- ◆ High reliability in demanding environments

3. Applications

- ◆ Optical encoders
- ◆ Fiber optic communications



4. Package Outline

Dimensions (Unit: mm)

5. Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	50	mA
Pulse Forward Current (see notes *1)	I_{FP}	0.5	A
Power Dissipation	P_D	120	mW
Operating Temperature	$T_{opr.}$	-40 ~ +100	°C
Storage Temperature	$T_{stg.}$	-55 ~ +125	°C
Soldering Temperature (see notes *2)	$T_{sol.}$	260	°C

Notes : *1. 100KHz , Duty 10%

2. Distance from end of the package = 2.0mm, time = 5sec max.

6. Electro-optical Characteristics

[$T_A = 25^\circ\text{C}$]

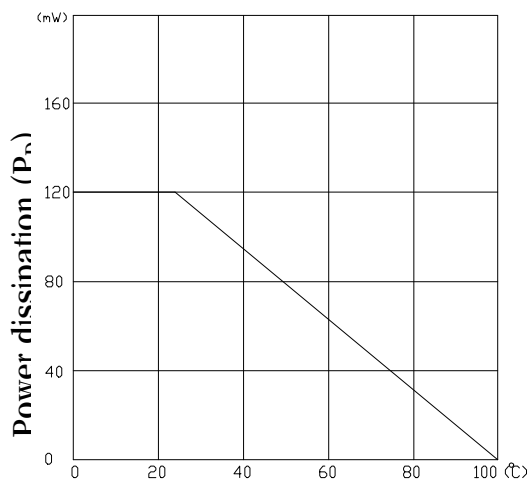
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	-	1.8	2.2	V
Reverse Voltage	V_R	$I_R = 10\ \mu\text{A}$	5	-	-	V
Capacitance	C_T	$f = 1\text{MHz}$	-	40	-	pF
Out power * 1	P_O	$I_F = 20\text{mA}$	10	18	-	mW
Radiant Intensity	I_v	$I_F = 20\text{mA}$	-	450	-	mcd
Peak Emission Wavelength	λ_p	$I_F = 50\text{mA}$	-	660	-	nm
Spectral Half Bandwidth	$\Delta\lambda$	$I_F = 20\text{mA}$	-	20	-	nm
Half Angle	$\Delta\theta$		-	± 8	-	deg.

* 1 : measured by our TO-18 package type tester

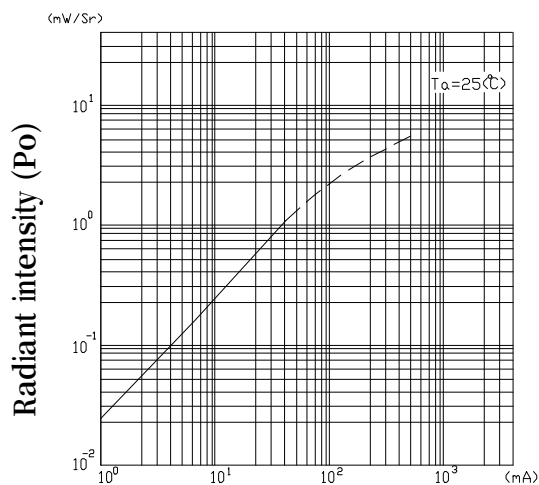
KBL-1KL3

◆ Typical Characteristics

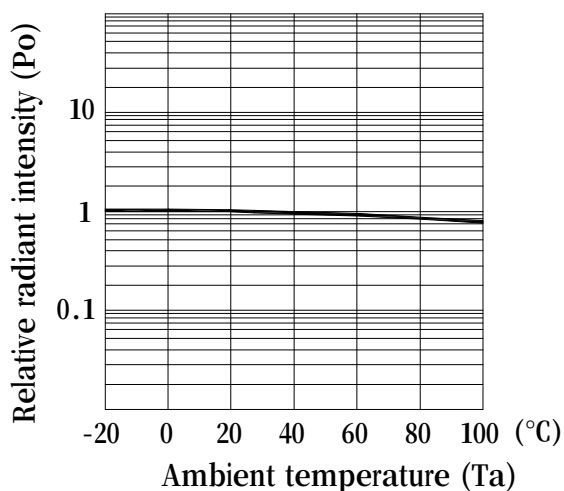
■ Power dissipation Vs Ambient temperature

Ambient temperature (T_a)

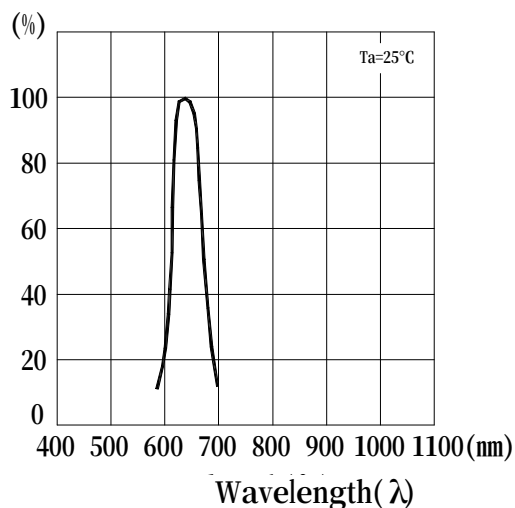
■ Radiant intensity Vs Forward current

Forward current (I_F)

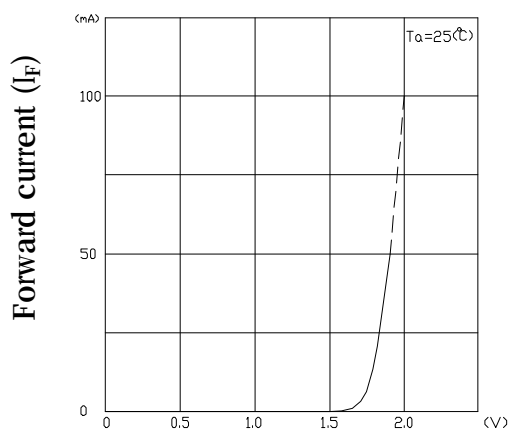
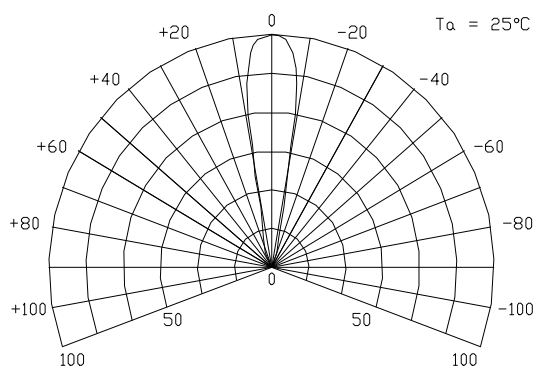
■ Relative radiant intensity Vs Ambient temperature

Ambient temperature (T_a)

■ Relative intensity Vs Wavelength

Wavelength (λ)

■ Forward current Vs Forward voltage

Forward voltage (V_F)■ Sensitivity diagram Vs Angular displacement
Angle (deg.)

Relative intensity(%)