

KBL-1KL3

1. Description

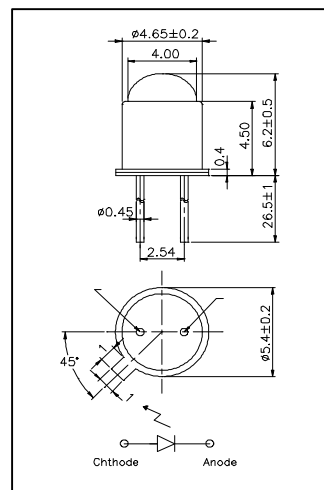
The KBL-1KL3 is a GaAlAs IRED mounted in durable, hermetically sealed TO-18 metal can type, which provide years of reliable performance, even under demanding conditions such as use outdoors.

2. Features

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

3. Applications

- Optical encoders
- Fiber optic communications



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	
Storage Temperature	$T_{stg.}$	-55 ~ +125	
Soldering Temperature (see notes *2)	$T_{sol.}$	260	

Notes : *1. 100KHz , Duty 10%

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

6. Electro-optical Characteristics

[$T_A = 25$]

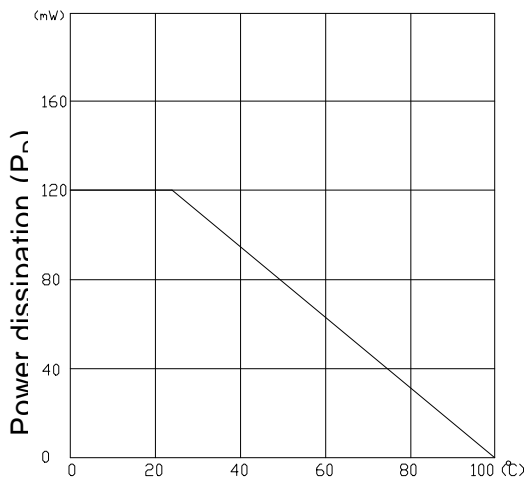
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	-	1.8	2.2	V
Reverse Voltage	V_R	$I_R = 10 \mu\text{A}$	5	-	-	V
Capacitance	C_T	$f = 1\text{MHz}$	-	40	-	pF
Out power * 1	P_O	$I_F = 20\text{mA}$	10	18	-	mW
Radiant Intensity	I_v	$I_F = 20\text{mA}$	-	450	-	mcd
Peak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

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

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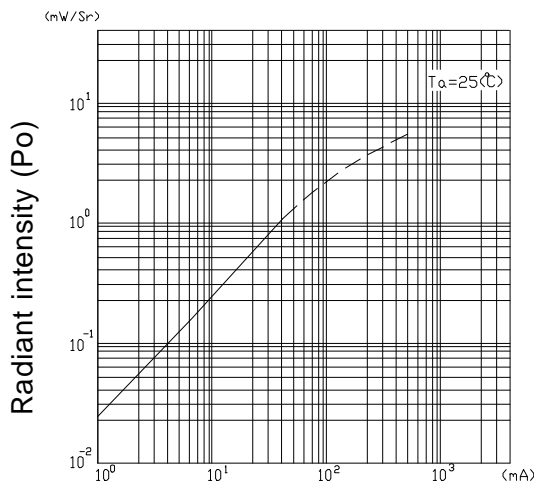
Typical Characteristics

Power dissipation Vs Ambient temperature



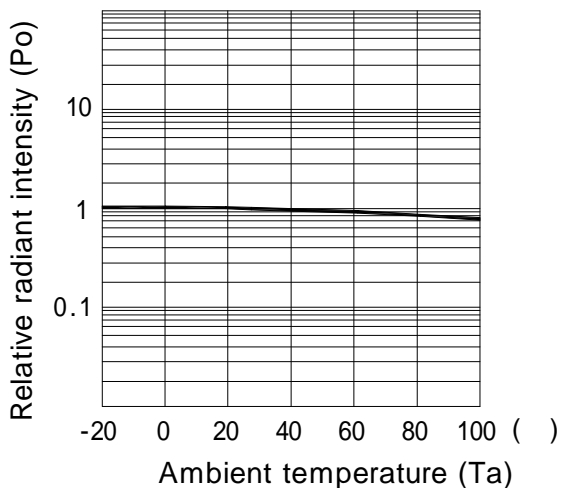
Ambient temperature (Ta)

Radiant intensity Vs Forward current



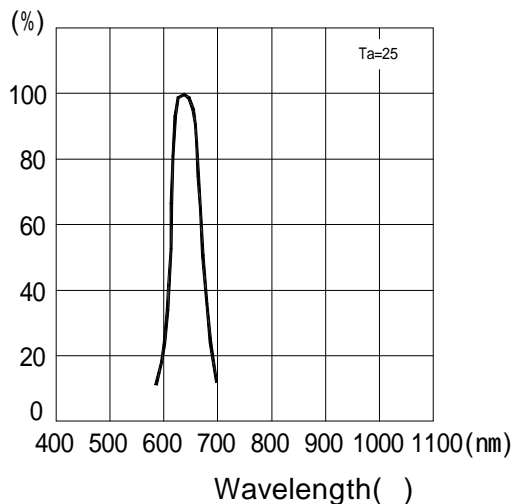
Forward current (If)

Relative radiant intensity Vs Ambient temperature



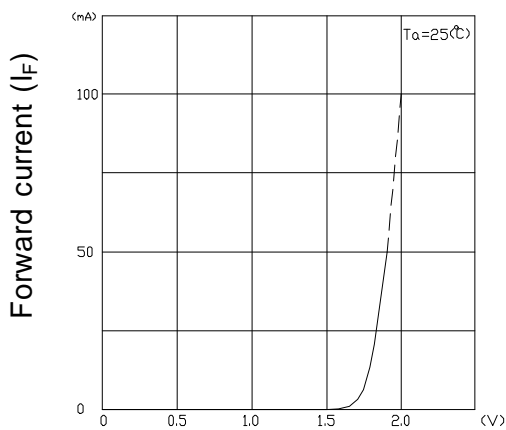
Ambient temperature (Ta)

Relative intensity Vs Wavelength



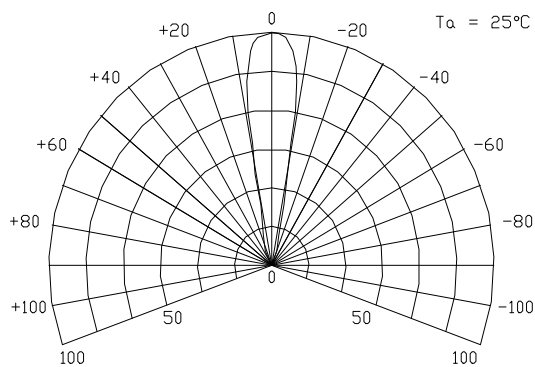
Wavelength ()

Forward current Vs Forward voltage



Forward voltage (Vf)

Sensitivity diagram Vs Angular displacement Angle (deg.)



Relative intensity(%)