

KBL-1KL3

1. Description

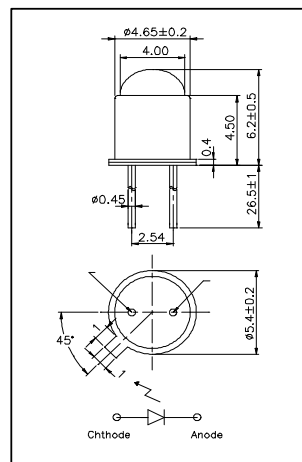
The KBL-1KL3 is a GaAlAs IRED mounted in durable, hermetically sealed TO-18 metal can type, which provide years of reliable performance, even under demanding conditions such as use outdoors.

2. Features

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

3. Applications

- Optical encoders
- Fiber optic communications



Dimensions (Unit: mm)

4. Package Outline

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	Topr.	-40 ~ +100	
Storage Temperature	Tstg.	-55 ~ +125	
Soldering Temperature (see notes *2)	Tsol.	260	

Notes : *1. 100KHz , Duty 10%

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

6. Electro-optical Characteristics

[$T_A = 25$]

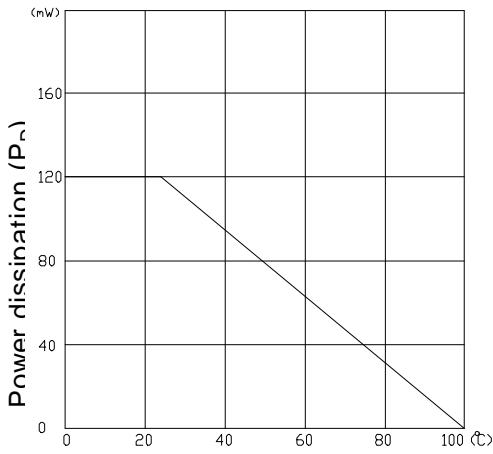
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	-	1.8	2.2	V
Reverse Voltage	V_R	$I_R = 10 \mu\text{A}$	5	-	-	V
Capacitance	C_T	$f = 1\text{MHz}$	-	40	-	pF
Out power * 1	P_O	$I_F = 20\text{mA}$	10	18	-	mV
Radiant Intensity	I_V	$I_F = 20\text{mA}$	-	450	-	mcd
Peak Emission Wavelength	ρ	$I_F = 50\text{mA}$	-	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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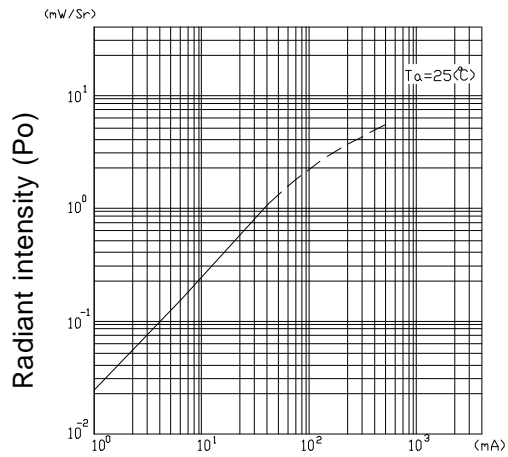
Typical Characteristics

Power dissipation Vs Ambient temperature



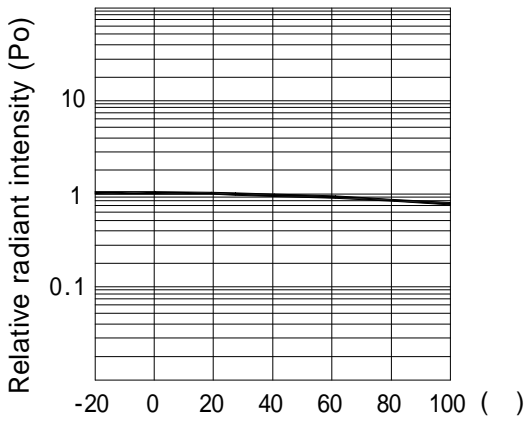
Ambient temperature (T_a)

Radiant intensity Vs Forward current



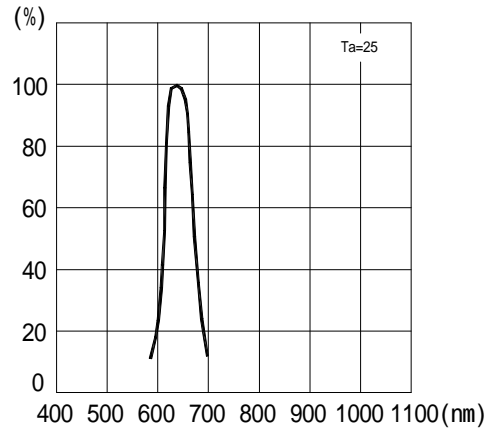
Forward current (I_f)

Relative radiant intensity Vs Ambient temperature



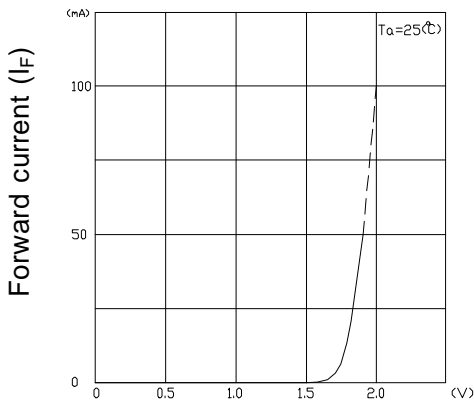
Ambient temperature (T_a)

Relative intensity Vs Wavelength



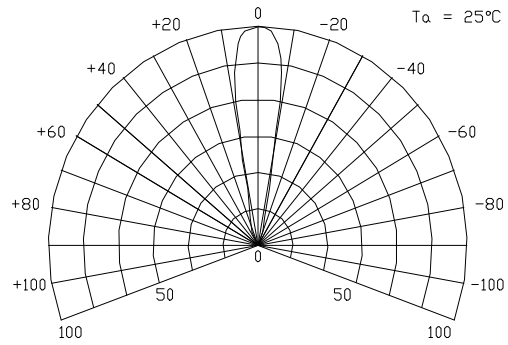
Wavelength ()

Forward current Vs Forward voltage



Forward voltage (V_f)

Sensitivity diagram Vs Angular displacement Angle (deg.)



Relative intensity (%)