

# Infrared LED

## L4492

Low forward voltage LED for camera auto-focus



### Features

- High radiant output power
- Low forward voltage: 2.4 V ( $I_F=1.0$  A)
- High radiant output power by constant voltage drive
- Small emission spot (reflector size)

### Applications

- Auto-focus

#### ■ Absolute maximum ratings ( $T_a=25$ °C)

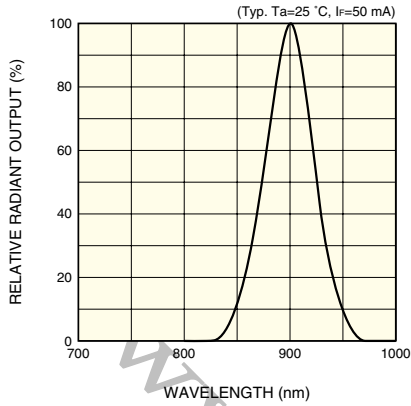
Parameter	Symbol	Condition	Value	Unit
Forward current	$I_F$		80	mA
Reverse voltage	$V_R$		3	V
Pulse forward current	$I_{FP}$	Pulse width=10 $\mu$ s Duty ratio=1 %	1.0	A
Operating temperature	$T_{opr}$		-30 to +85	°C
Storage temperature	$T_{stg}$		-40 to +100 *	°C

\* Guaranteed to resist temperature cycle test of up to 5 cycles.

#### ■ Electrical and optical characteristics ( $T_a=25$ °C)

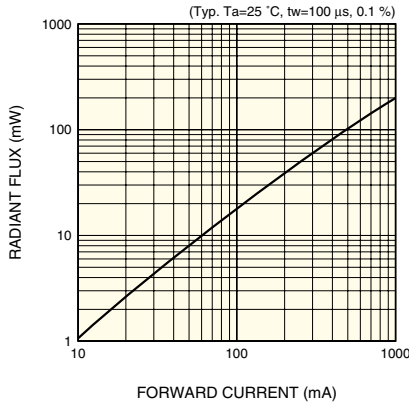
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	$\lambda_p$	$I_F=50$ mA	880	900	930	nm
Spectral half width	$\Delta\lambda$	$I_F=50$ mA	-	60	-	nm
Forward voltage	$V_F$	$I_F=50$ mA	-	1.35	1.45	V
Pulse forward voltage	$V_{FP}$	$I_F=1.0$ A	-	2.4	2.8	V
Reverse current	$I_R$	$V_R=3$ V	-	-	30	$\mu$ A
Radiant flux	$\phi_e$	$I_F=50$ mA	6.0	8.0	-	mW
Radiant illuminance	$P_E$	$I_F=50$ mA	-	1.1	-	mW/cm <sup>2</sup>
Rise time	$t_r$	$I_F=50$ mA, 10 to 90 %	-	0.45	0.7	$\mu$ s
Fall time	$t_f$	$I_F=50$ mA, 90 to 10 %	-	0.45	0.7	$\mu$ s

## Emission spectrum



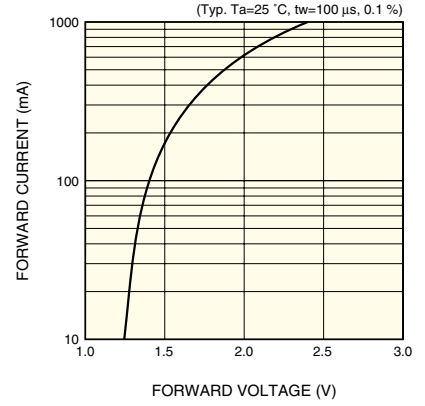
KLEDB0138EB

## Radiant flux vs. forward current



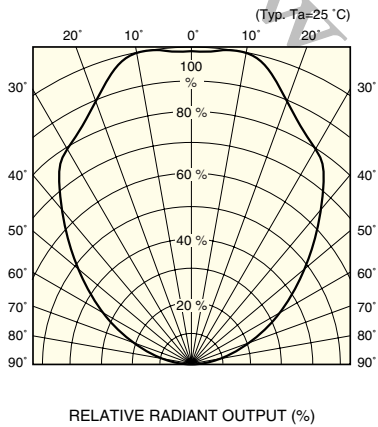
KLEDB0197EA

## Forward current vs. forward voltage



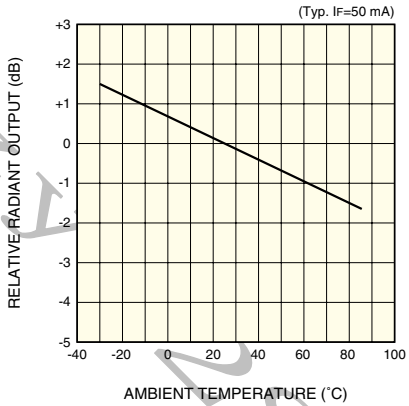
KLEDB0198EA

## Directivity



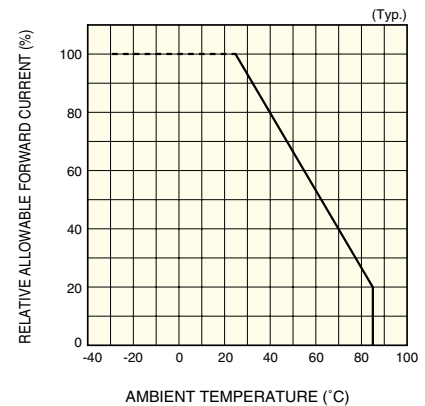
KLEDB0199EA

## Radiant output vs. ambient temperature



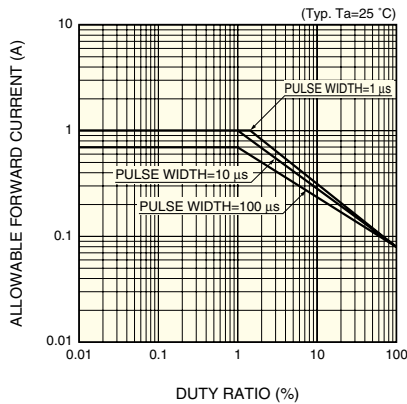
KLEDB0200EA

## Allowable forward current vs. ambient temperature



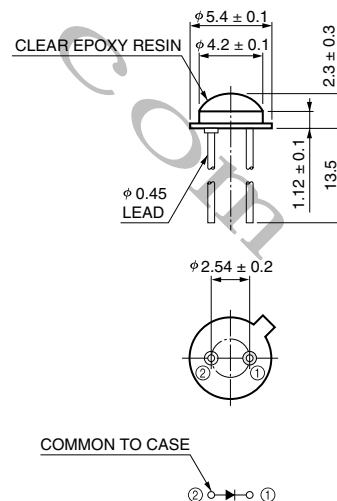
KLEDB0027EB

## Allowable forward current vs. duty ratio



KLEDB0038EA

## Dimensional outline (unit: mm)



KLEDA0009ED