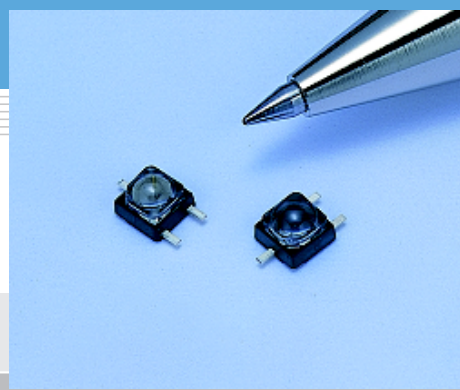


# Infrared LED

## L6007-01

Small spot LED with current-confined structure chip, designed for camera auto focus



### Features

- Small light emission diameter: approx.  $\phi 400\ \mu\text{m}$
- Subminiature package:  $4.0 \times 4.0\ \text{mm}$
- Uniform emission pattern

### Applications

- Light source for camera auto focus (specifically developed for this application)

#### ■ Absolute maximum ratings ( $T_a=25\ ^\circ\text{C}$ )

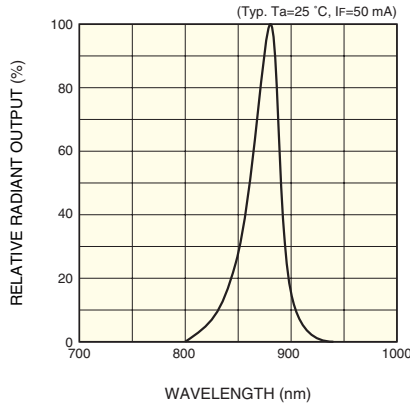
Parameter	Symbol	Condition	Value	Unit
Forward current	$I_F$		70	mA
Reverse voltage	$V_R$		3	V
Pulse forward current	$I_{FP}$	$t_w=100\ \mu\text{s}$ , $T=1\ \text{ms}$ , 130 times 1 Hz, 5000 shots	1.5	A
Operating temperature	$T_{opr}$		-25 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-30 to +75	$^\circ\text{C}$

#### ■ Electrical and optical characteristics ( $T_a=25\ ^\circ\text{C}$ )

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	$\lambda_p$	$I_F=50\ \text{mA}$	860	880	900	nm
Spectral half width	$\Delta\lambda$	$I_F=50\ \text{mA}$	-	30	-	nm
Forward voltage	$V_F$	$I_F=50\ \text{mA}$	-	1.4	1.6	V
Pulse forward voltage	$V_{FP}$	$I_F=1\ \text{A}$	-	2.8	3.2	V
Reverse current	$I_R$	$V_R=3\ \text{V}$	-	-	20	$\mu\text{A}$
Radiant flux	$\phi_e$	$I_F=50\ \text{mA}$	-	2.0	-	mW
Radiant output	$P_E$	*	15	19	-	mW
Rise time	$t_r$	$I_F=50\ \text{mA}$ , 10 to 90 %	-	0.1	0.15	$\mu\text{s}$
Fall time	$t_f$	$I_F=50\ \text{mA}$ , 90 to 10 %	-	0.1	0.15	$\mu\text{s}$

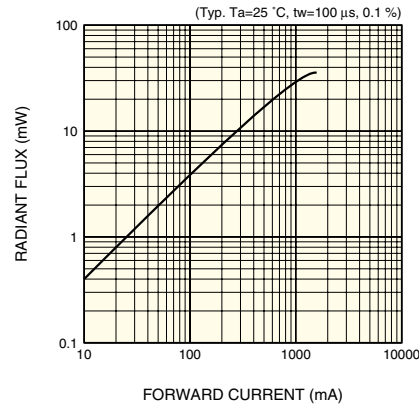
\*  $I_F=1.0\ \text{A}$ , Pulse width = 120  $\mu\text{s}$ , sampling = 60  $\mu\text{s}$   
 Light receiving angle to photodiode is  $\pm 21.5^\circ$ .

## Emission spectrum



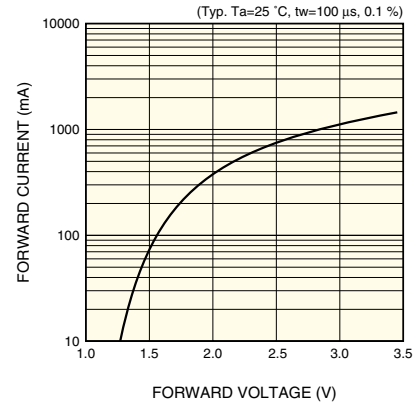
KLEDB0163EA

## Radiant flux vs. forward current



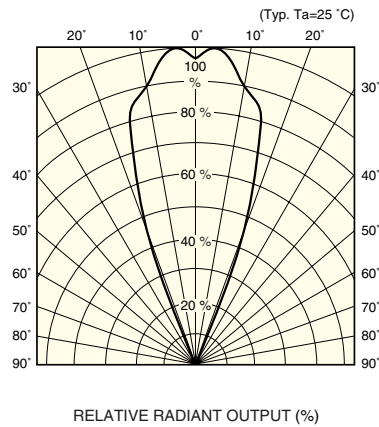
KLEDB0164EA

## Forward current vs. forward voltage



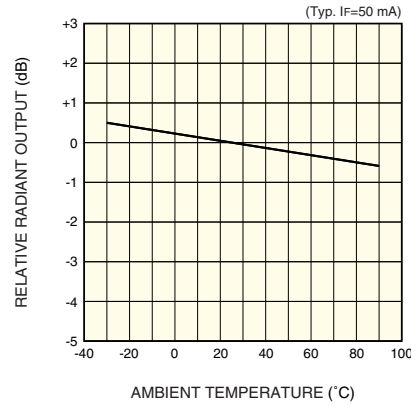
KLEDB0165EA

## Directivity



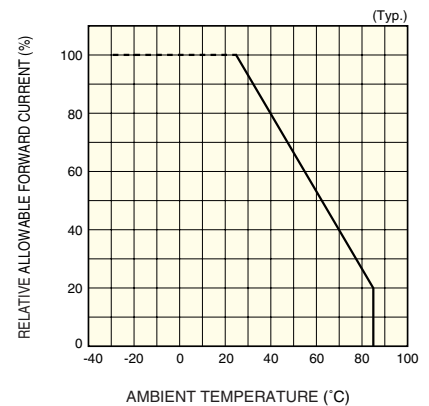
KLEDB0166EA

## Radiant output vs. ambient temperature



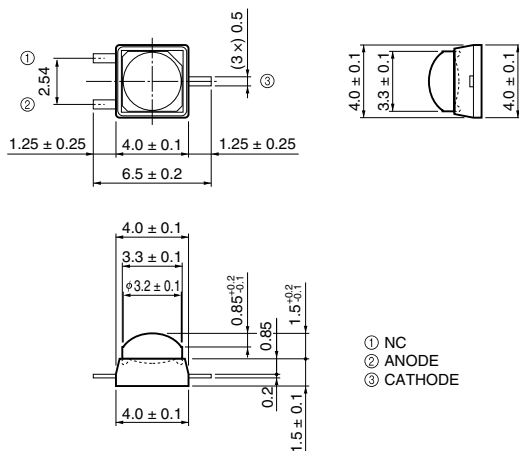
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## Allowable forward current vs. ambient temperature



KLEDB0027EB

## Dimensional outline (unit: mm)



KLEDA0061EA

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