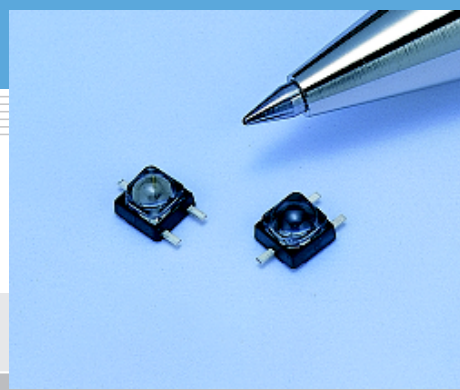


Infrared LED

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 ($T_a=25\ ^\circ\text{C}$)

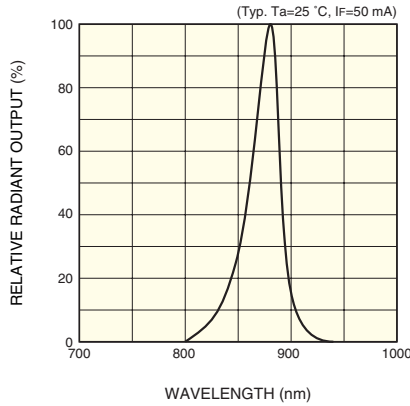
Parameter	Symbol	Condition	Value	Unit
Forward current	I_F		70	mA
Reverse voltage	V_R		3	V
Pulse forward current	I_{FP}	$t_w=100\ \mu\text{s}$, $T=1\ \text{ms}$, 130 times 1 Hz, 5000 shots	1.5	A
Operating temperature	T_{opr}		-25 to +75	$^\circ\text{C}$
Storage temperature	T_{stg}		-30 to +75	$^\circ\text{C}$

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ_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	μA
Radiant flux	ϕ_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	μs
Fall time	t_f	$I_F=50\ \text{mA}$, 90 to 10 %	-	0.1	0.15	μs

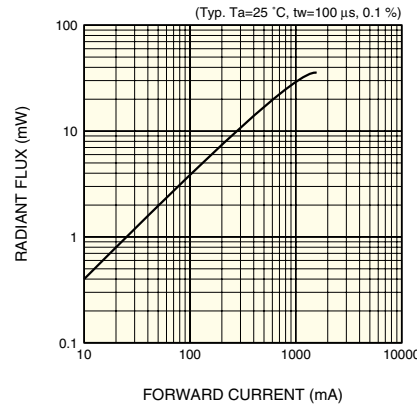
* $I_F=1.0\ \text{A}$, Pulse width = 120 μs , sampling = 60 μs
 Light receiving angle to photodiode is $\pm 21.5^\circ$.

Emission spectrum



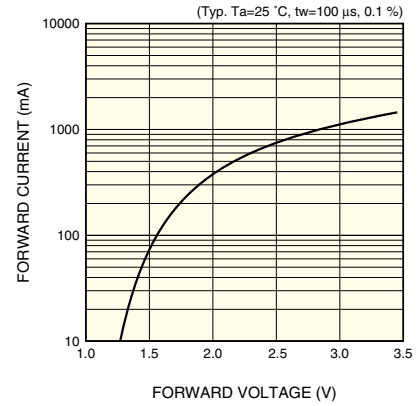
KLEDB0163EA

Radiant flux vs. forward current



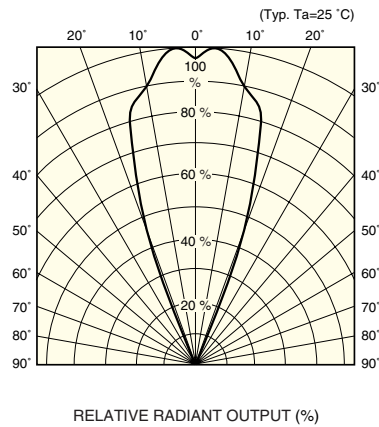
KLEDB0164EA

Forward current vs. forward voltage



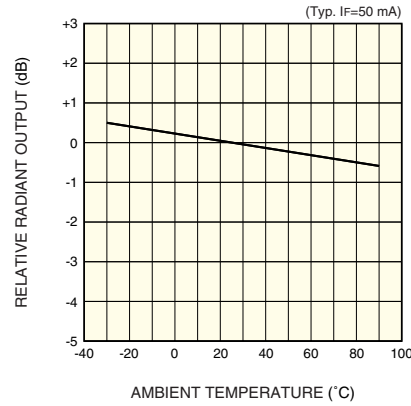
KLEDB0165EA

Directivity



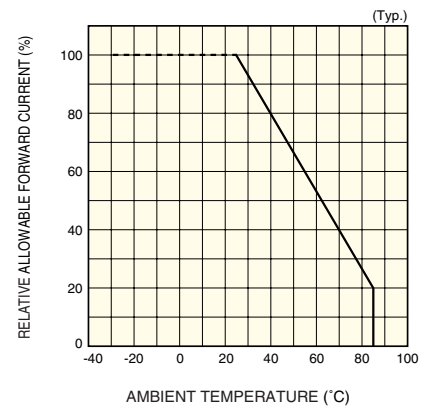
KLEDB0166EA

Radiant output vs. ambient temperature



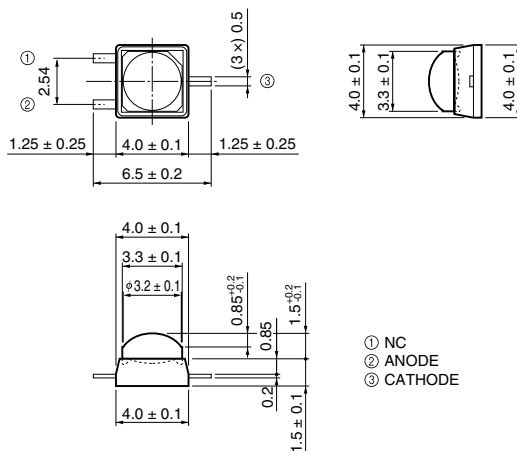
KLEDB0167EA

Allowable forward current vs. ambient temperature



KLEDB0027EB

Dimensional outline (unit: mm)



KLEDA0061EA

HAMAMATSU

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