

Infrared LED

L7560

High-speed, high output power LED with mini-lens



L7560 is a high-speed, high-power LED with a micro-ball lens bonded to the surface of the LED chip having an internal confined structure. The package is sealed by a metal cap with a mini-lens, making the output beam even narrower. This allows highly efficient input of the beam into an optical fiber, making L7560 well suited for optical fiber communications.

Features

- High-speed response: 100 MHz Typ. ($I_F=50$ mA)
- High radiant output power: 30 μ W Typ. ($I_F=50$ mA, GI 50)

Applications

- Optical fiber communication
- Range-finder

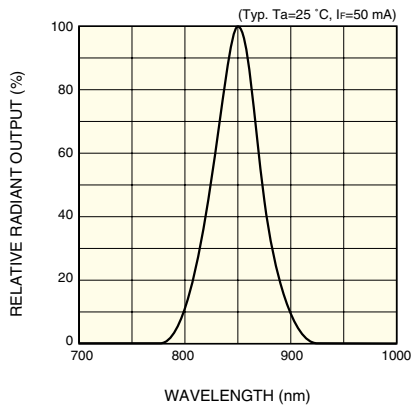
■ Absolute maximum ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Condition	Value	Unit
Forward current	I_F		70	mA
Reverse voltage	V_R		3	V
Pulse forward current	I_{FP}	Pulse width=10 μ s Duty ratio=1 %	0.25	A
Operating temperature	T_{opr}		-30 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +100	$^\circ\text{C}$

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

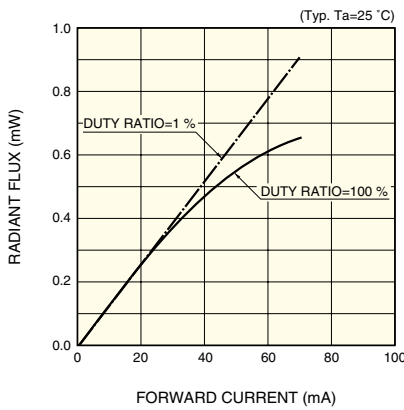
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ_p	$I_F=50$ mA	820	850	880	nm
Spectral half width	$\Delta\lambda$	$I_F=50$ mA	-	50	-	nm
Forward voltage	V_F	$I_F=50$ mA	-	1.8	2.0	V
Reverse current	I_R	$V_R=3$ V	-	-	20	μ A
Fiber end output	P_f	$I_F=50$ mA, GI 50	15	30	-	μ W
Cut-off frequency	f_c	$I_F=50$ mA + 1 mA p-p	70	100	-	MHz

■ Emission spectrum



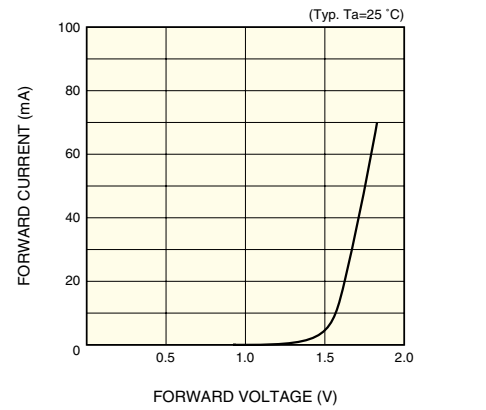
KLEDB0172EA

■ Radiant flux vs. forward current



KLEDB0173EA

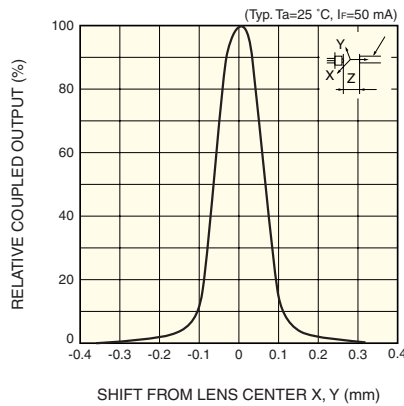
■ Forward current vs. forward voltage



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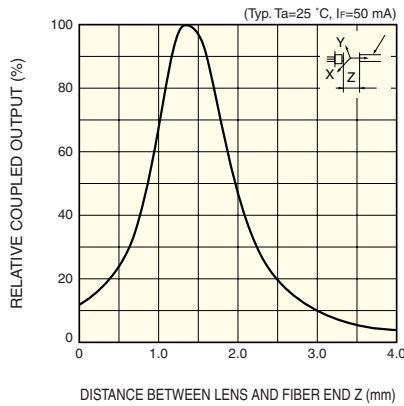
■ Fiber coupling characteristic (GI 50)

X, Y axes



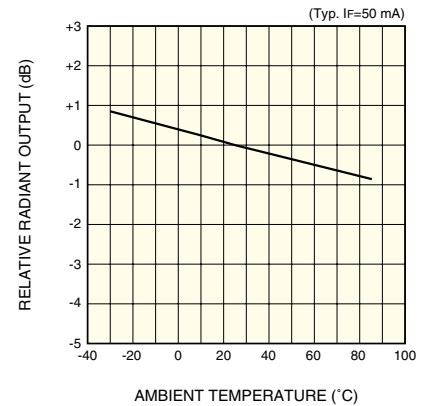
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Z axis



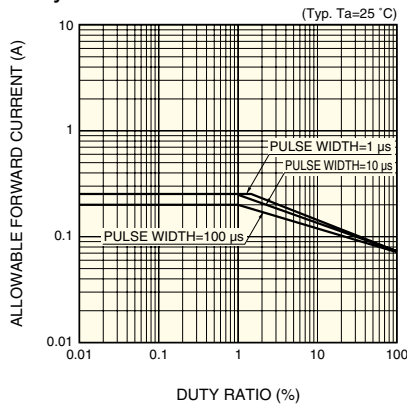
KLEDB0101EA

■ Radiant output vs. ambient temperature



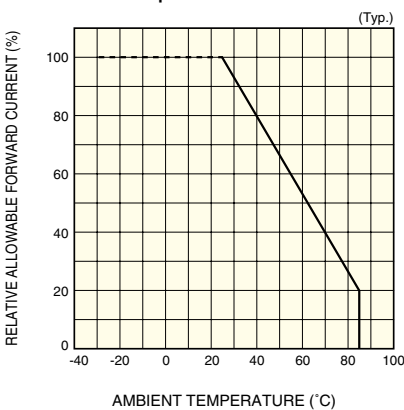
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■ Allowable forward current vs. duty ratio



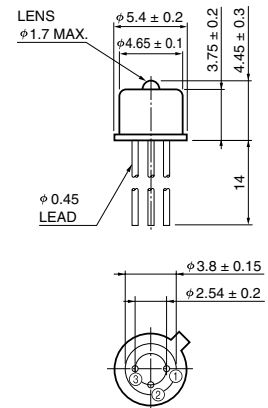
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■ Allowable forward current vs. ambient temperature



KLEDB0027EB

■ Dimensional outline (unit: mm)



COMMON TO CASE



KLEDA0029EB

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