

# 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  $\mu$ W Typ. ( $I_F=50$  mA, GI 50)

#### Applications

- Optical fiber communication
- Range-finder

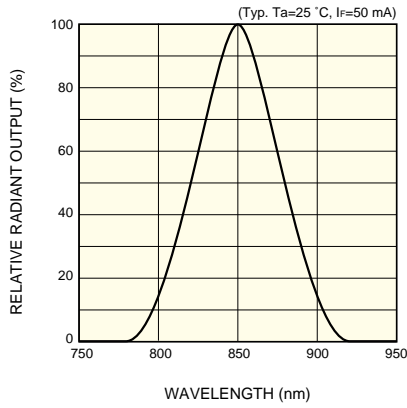
#### ■ Absolute maximum ratings ( $T_a=25$ °C)

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 $\mu$ s Duty ratio=1 %	0.25	A
Operating temperature	$T_{opr}$		-30 to +85	°C
Storage temperature	$T_{stg}$		-40 to +100	°C

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

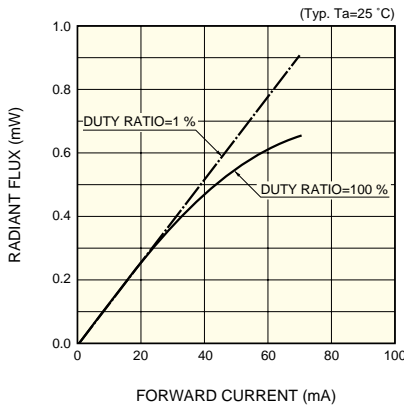
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	$\lambda_p$	$I_F=50$ mA	820	850	880	nm
Spectral half width	$\Delta\lambda$	$I_F=50$ mA	-	60	-	nm
Forward voltage	$V_F$	$I_F=50$ mA	-	1.8	2.0	V
Reverse current	$I_R$	$V_R=3$ V	-	-	20	$\mu$ A
Fiber end output	$P_f$	$I_F=50$ mA, GI 50	15	30	-	$\mu$ W
Cut-off frequency	$f_c$	$I_F=50$ mA + 1 mA p-p	70	100	-	MHz

## Emission spectrum



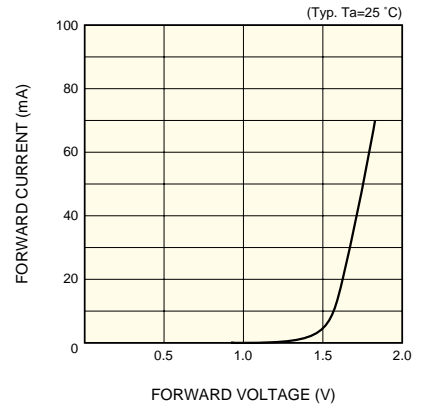
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## Radiant flux vs. forward current



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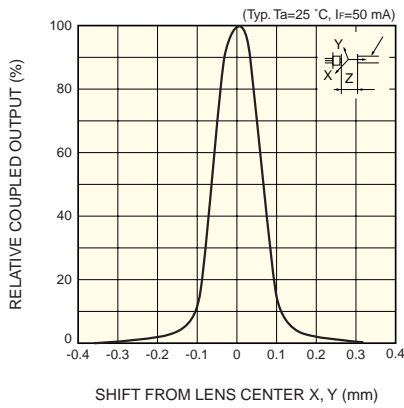
## Forward current vs. forward voltage



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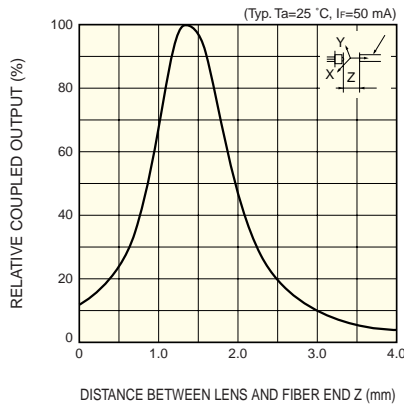
## Fiber coupling characteristic (GI 50)

### X, Y axes



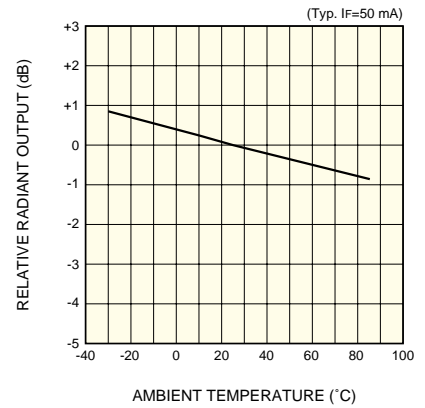
KLEDB0100EA

### Z axis



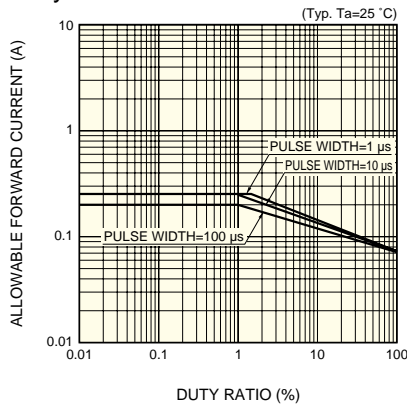
KLEDB0101EA

## Radiant output vs. ambient temperature



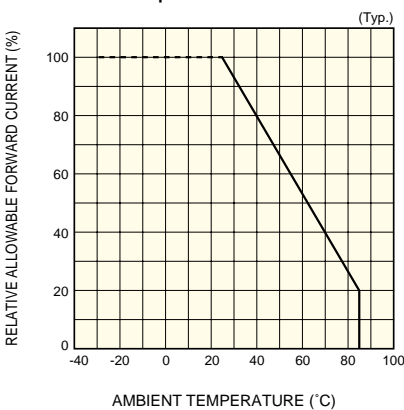
KLEDB0175EA

## Allowable forward current vs. duty ratio



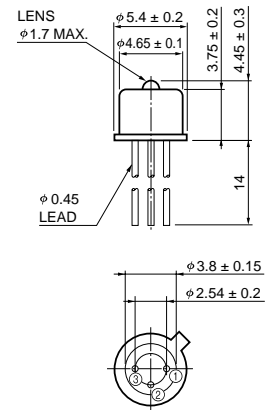
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## Allowable forward current vs. ambient temperature



KLEDB0027EB

## Dimensional outline (unit: mm)



COMMON TO CASE



KLEDA0029EB

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