

SHARP ELEK/ MELEC .DIV
Infrared Light Emitting Diode

15E D 8180798 0002642.7
GL360

GL360

φ3.2mm Resin Mold Type
Infrared Light Emitting Diode

T-41-11

Features

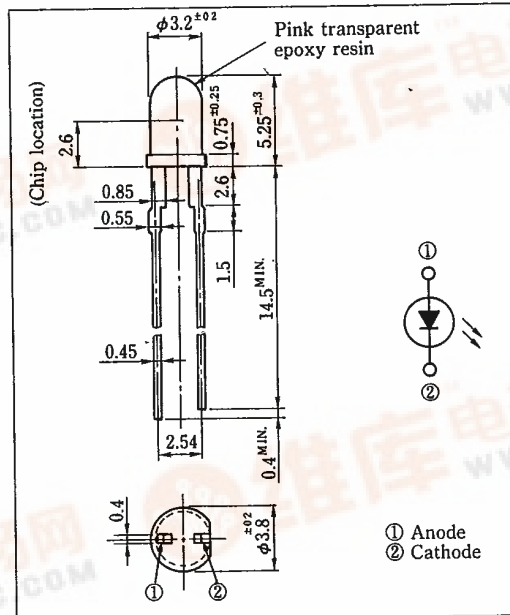
1. φ3.2mm epoxy resin package
2. Intermediate beam angle ($\Delta\theta$: TYP. $\pm 20^\circ$)
3. High output (Φ_e : MIN.1.5mW at $I_F=40\text{mA}$)

Applications

1. Floppy disk drives
2. Optoelectronic switches
3. Infrared applied systems

Outline Dimensions

(Unit : mm)



Absolute Maximum Ratings

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

Parameter	Symbol	Rating	Unit
Power dissipation	P	90	mW
Forward current	I_F	60	mA
*1 Peak forward current	I_{FM}	1	A
Reverse voltage	V_R	3	V
Operating temperature	T_{opr}	$-25 \sim +85$	$^\circ\text{C}$
Storage temperature	T_{stg}	$-40 \sim +85$	$^\circ\text{C}$
*2 Soldering temperature	T_{sol}	260	$^\circ\text{C}$

*1 Pulse width $\leq 100\mu\text{s}$, Duty ratio = 0.01

*2 For 3 seconds at the position of 2.6mm from the bottom face of resin package.

Electro-optical Characteristics

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

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	$I_F = 40\text{mA}$	—	1.3	1.5	V
Peak forward voltage	V_{FM}	$I_{FM} = 0.5\text{A}$	—	2.2	3.5	V
Reverse current	I_R	$V_R = 3\text{V}$	—	—	10	μA
Terminal capacitance	C_t	$V = 0, f = 1\text{MHz}$	—	70	—	pF
*3 Radiant intensity	I_E	$I_F = 40\text{mA}$	2.5	5.0	10.0	mW/sr
Radiant flux	Φ_e	$I_F = 40\text{mA}$	1.5	2.4	—	mW
Peak emission wavelength	λ_p	$I_F = 40\text{mA}$	—	950	—	nm
Half intensity wavelength	$\Delta\lambda$	$I_F = 40\text{mA}$	—	45	—	nm

*3 I_E : Value obtained by converting the value in power of radiant fluxes emitted at the solid angle of 0.01 sr (steradian) in the direction of mechanical axis of the lense portion into 1 sr of all those emitted from the light emitting diode.

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Fig. 1 Forward Current vs. Ambient Temperature

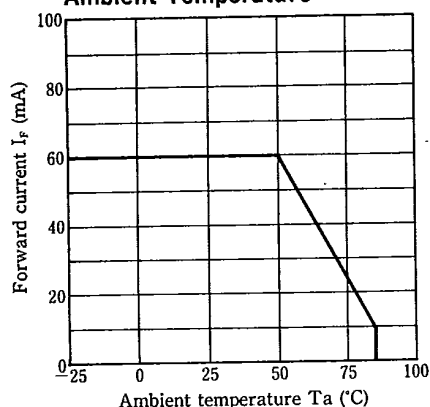


Fig. 2 Peak Forward Current vs. Duty Ratio

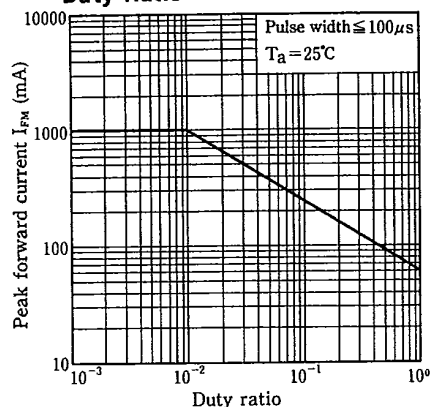


Fig. 3 Spectral Distribution

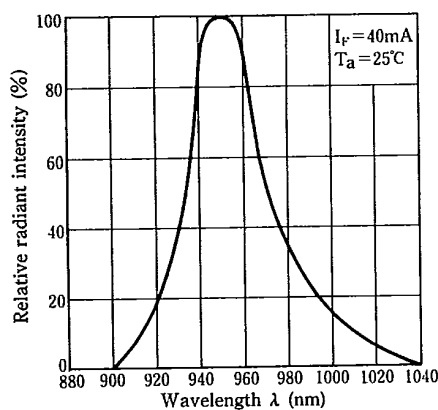


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

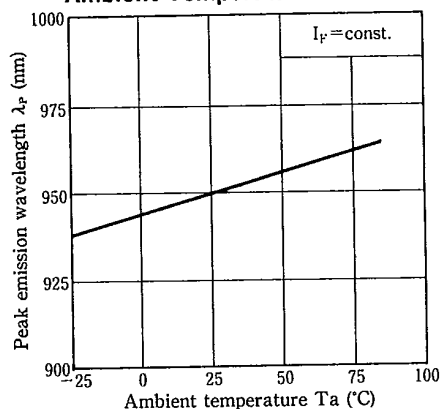


Fig. 5 Forward Current vs. Forward Voltage

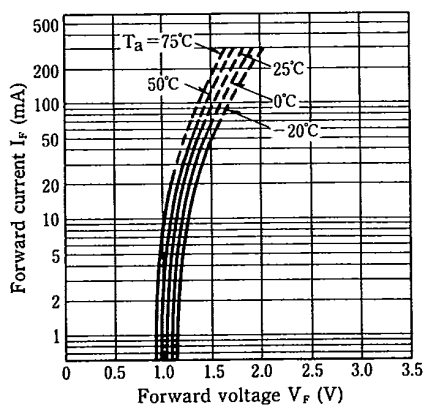


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

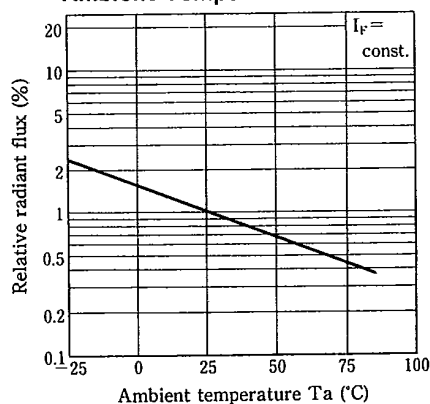


Fig. 7 Radiant Flux vs. Forward Current

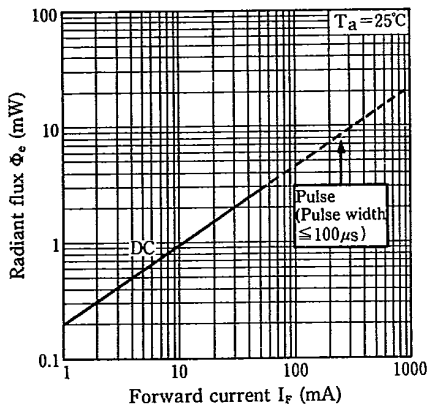


Fig. 8 Relative Collector Current vs. Distance (Detector: PT360)

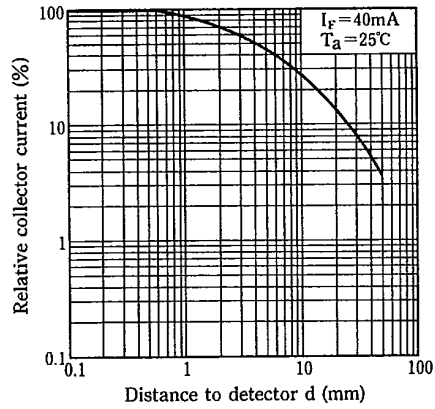


Fig. 9 Radiation Diagram ($T_a = 25^\circ C$)

