

GL4800

Thin Type Infrared Emitting Diode

Features

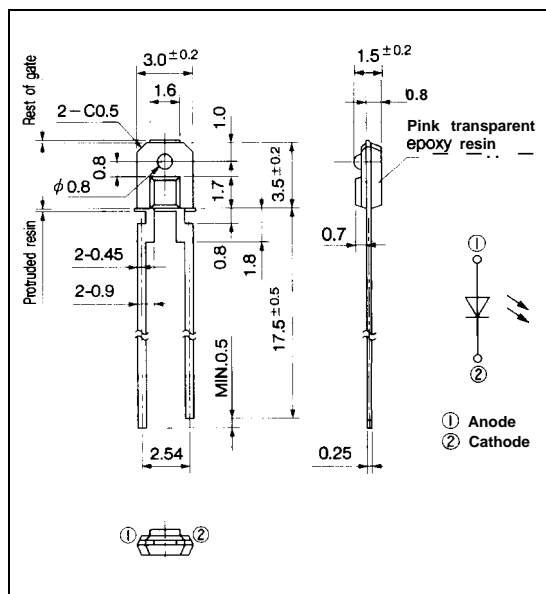
1. Thin type (Thickness :1.5mm)
2. Beam angle ($\Delta\theta$: TYP. $\pm 30^\circ$)
3. Radiant flux
(Φ_e : MIN. 0.7mW at $I_F=20\text{mA}$)
4. Epoxy resin package

Applications

1. Floppy disk drives
2. Optoelectronic switches

Outline Dimensions

(Unit . mm)



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Infrared Emitting Diodes

Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	Rating	Unit
power dissipation	P	75	mW
Forward current	I_F	50	mA
*1 Peak forward current	I_{FM}	1	A
Reverse voltage	V_R	6	v
Operating temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C
*Soldering temperature	T_{sol}	260	°C

*1 Pulse width= 100 μ s, Duty ratio= 0.01

*2 For 3 seconds at the position of 1.8mm from the surface of resin edge.

Electro-optical Characteristics

(Ta = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	$I_F=20\text{mA}$	—	1.2	1.4	v
Peak forward voltage	V_{FM}	$I_{FM}=0.5\text{A}$	—	3.0	4.0	v
Reverse current	I_R	$V_R=3\text{V}$	—	—	10	μ A
Terminal capacitance	C_t	$V_R=0, f=1\text{MHz}$	—	70	—	pF
Frequency response	f_c	—	—	300	—	kHz
Radiant flux	Φ_e	$I_F=20\text{mA}$	0.7	1.6	3.0	mW
Peak emission wavelength	λ_p	$I_F=5\text{mA}$	—	950	—	nm
Half intensity wavelength	$\Delta\lambda$	$I_F=5\text{mA}$	—	45	—	nm

Fig. 1 Forward Current vs. Ambient Temperature

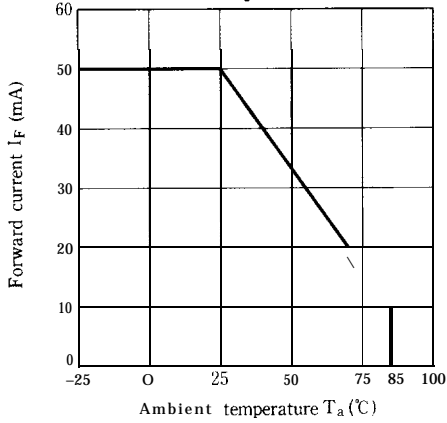


Fig. 2 Peak Forward Current vs. Duty Ratio

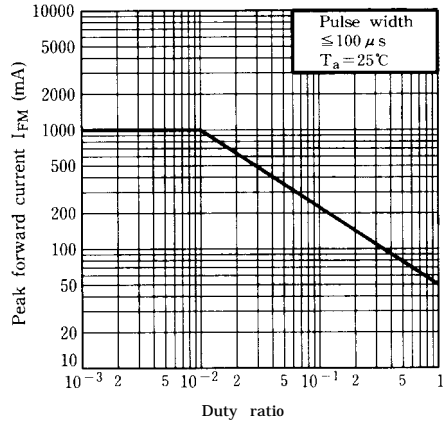


Fig. 3 Spectral Distribution

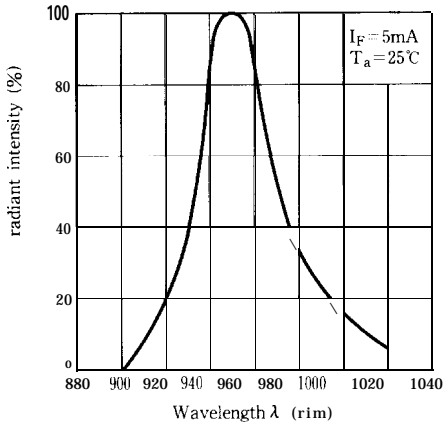


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

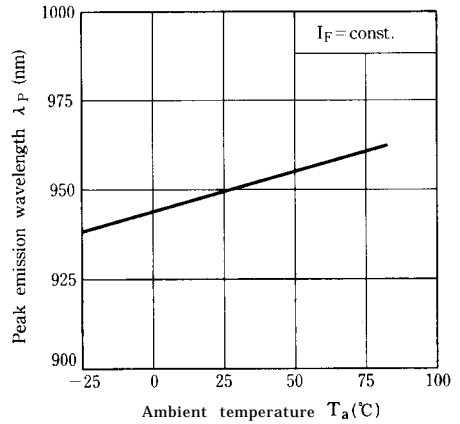


Fig. 5 Forward Current vs. Forward Voltage

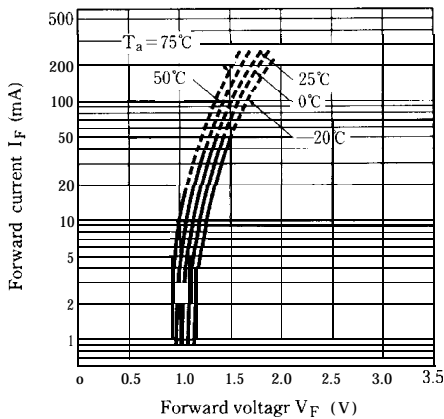


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

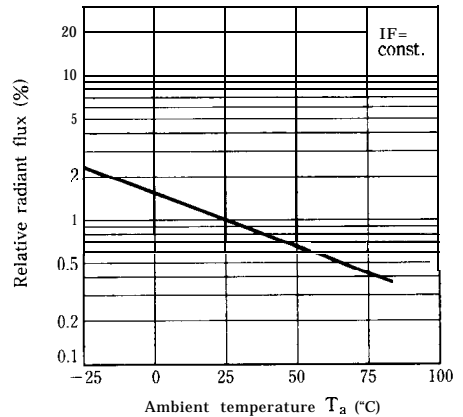


Fig. 7 Radiant Flux vs. Forward Current

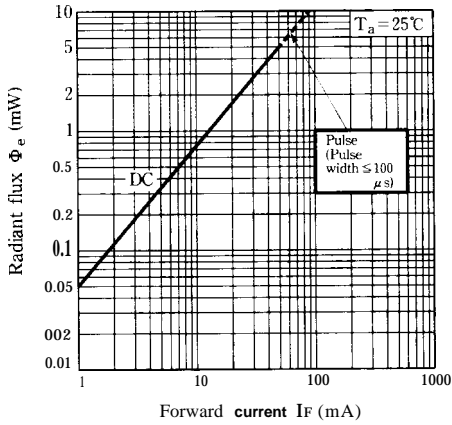


Fig. 8 Relative Radiant Intensity vs. Distance

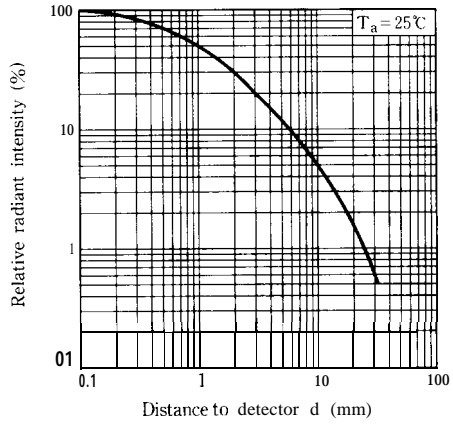


Fig. 9 Relative Collector Current vs. Distance (Detector : PT4800)

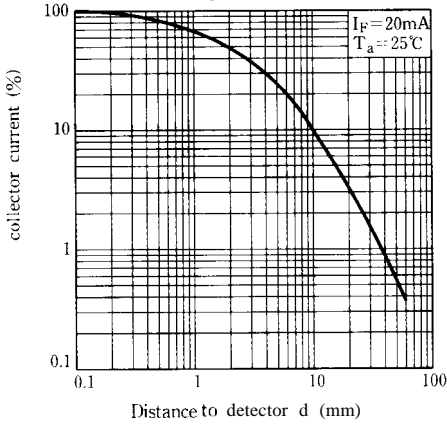
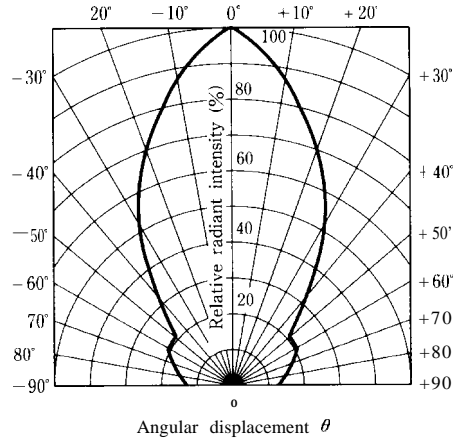


Fig.10 Radiation Diagram ($T_a = 25^\circ C$)



● Please refer to the chapter “Precautions for Use.” (Page 78 to 93)