

# GL4800

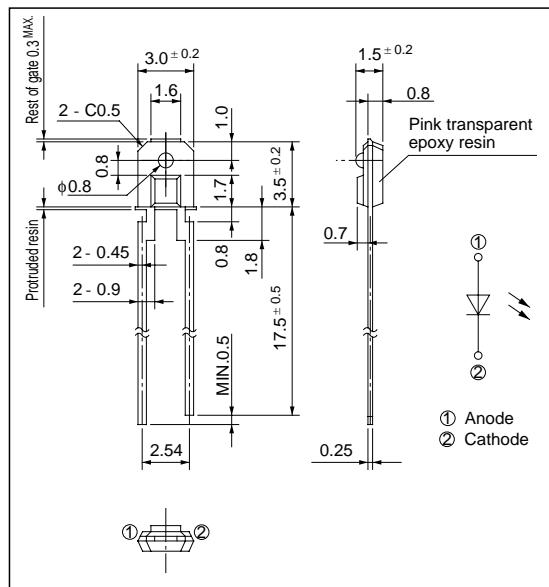
## Thin Type Infrared Emitting Diode

### ■ Features

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

### ■ Outline Dimensions

(Unit : mm)



### ■ Applications

1. Floppy disk drives
2. Optoelectronic switches

### ■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	Rating	Unit
Power dissipation	P	75	mW
Forward current	$I_F$	50	mA
*1Peak 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
*2Soldering temperature	$T_{sol}$	260	°C

\*1 Pulse width&lt;=100μ s, Duty ratio= 0.01

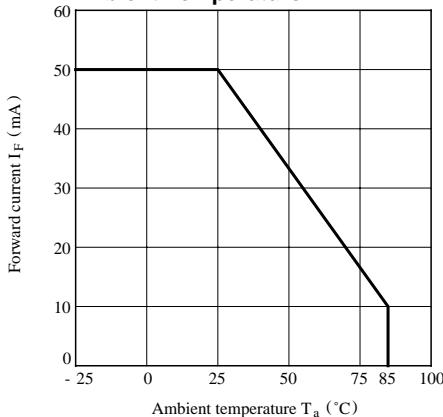
\*2 For 3 seconds at the position of 1.8mm from the surface of resin edge.

### ■ Electro-optical Characteristics

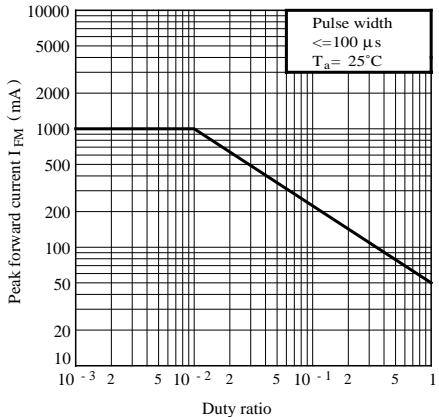
(Ta = 25°C)

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

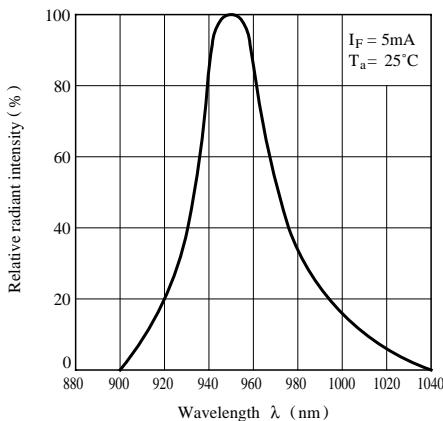
**Fig. 1 Forward Current vs.  
Ambient Temperature**



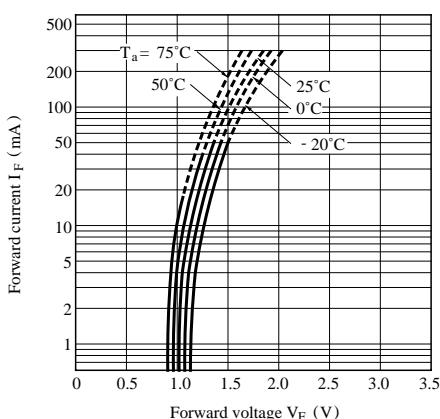
**Fig. 2 Peak Forward Current vs. Duty Ratio**



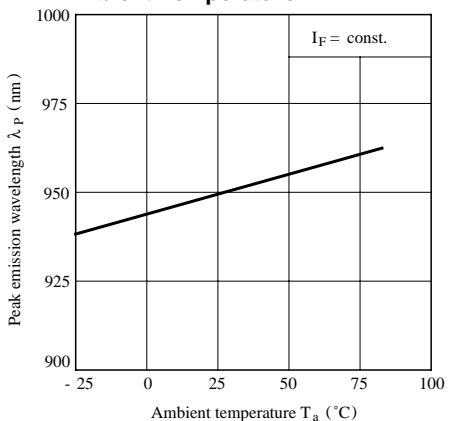
**Fig. 3 Spectral Distribution**



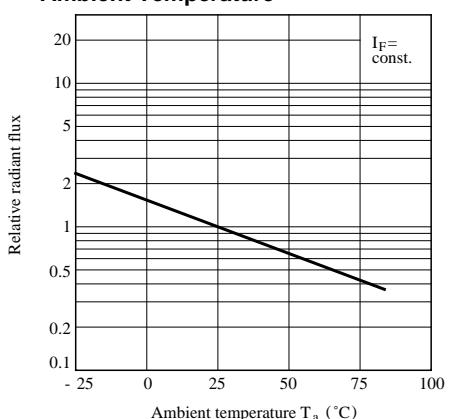
**Fig. 5 Forward Current vs. Forward Voltage**

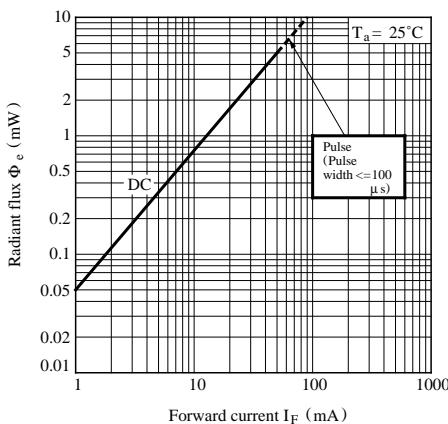
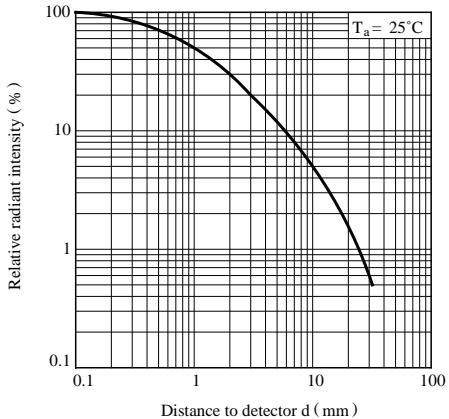
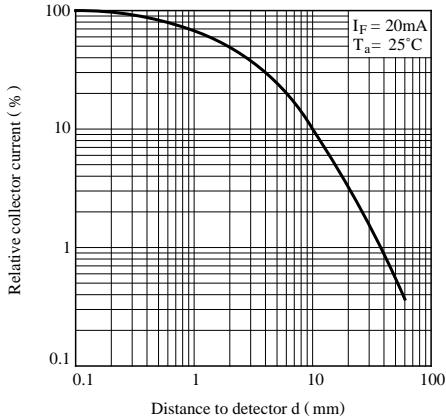
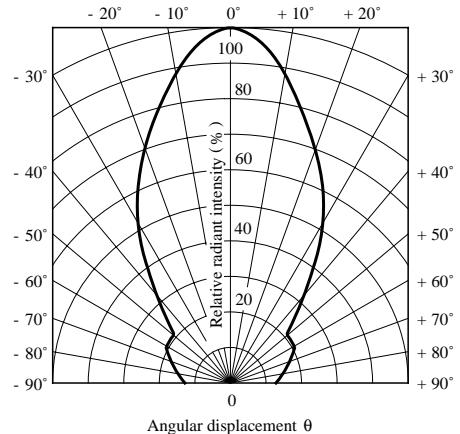


**Fig. 4 Peak Emission Wavelength vs.  
Ambient Temperature**



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

- Please refer to the chapter “Precautions for Use.”