

# GL4100

## Side View and Thin Flat Type Infrared Emitting Diode

### ■ Features

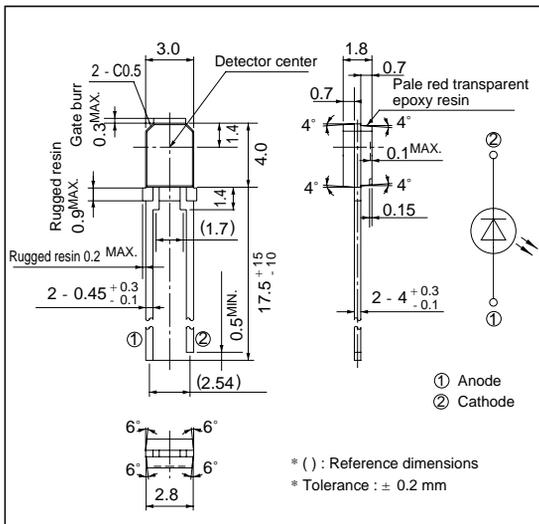
1. Compact flat package
2. Wide beam angle  
(Half intensity angle :  $\pm 90^\circ$  )

### ■ Applications

1. Mouses
2. Track balls

### ■ Outline Dimensions

(Unit : mm)



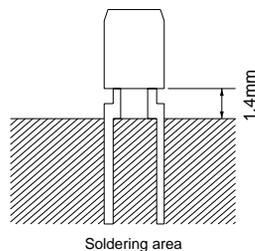
### ■ Absolute Maximum Ratings

(Ta=25°C)

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

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

\* 2 For 5 seconds at the position of 1.4 mm from the resin edge

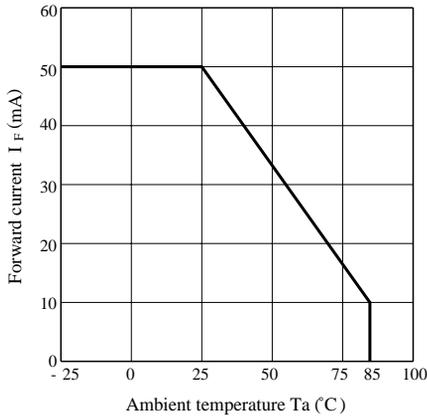


■ **Electro-optical Characteristics**

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

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	$\mu\text{A}$
Radiant flux	$\Phi_e$	$I_F = 20\text{mA}$	1.0	-	2.0	mW
Peak emission wavelength	$\lambda_p$	$I_F = 5\text{mA}$	-	950	-	nm
Half intensity wavelength	$\Delta\lambda$	$I_F = 5\text{mA}$	-	45	-	nm
Terminal capacitance	$C_t$	$V_R = 0, f = 1\text{MHz}$	-	50	-	pF
Response frequency	$f_c$	-	-	300	-	$\text{kHz}$
Half intensity angle	$\Delta\theta$	$I_F = 20\text{mA}$	-	$\pm 90$	-	$^\circ$

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



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

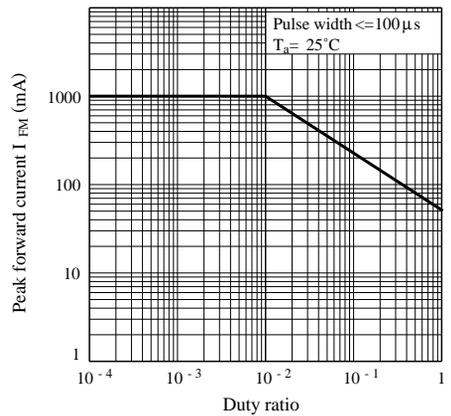


Fig. 3 Spectral Distribution

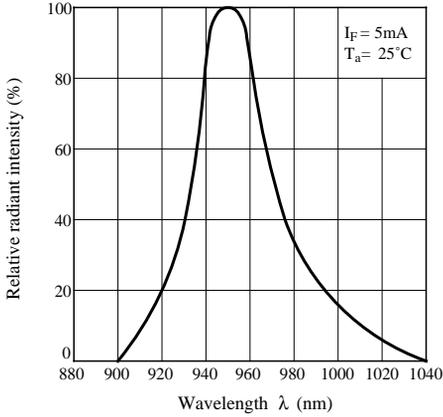


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

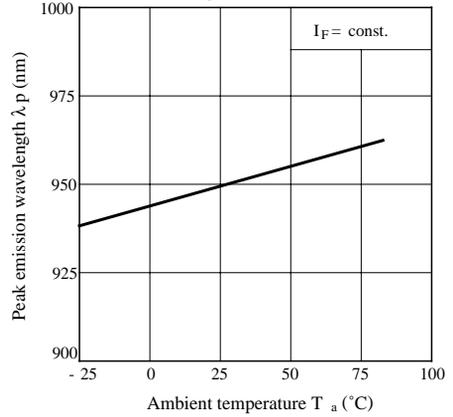


Fig. 5 Forward Current vs. Forward Voltage

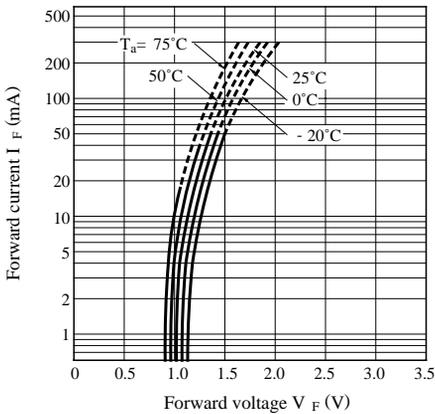


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

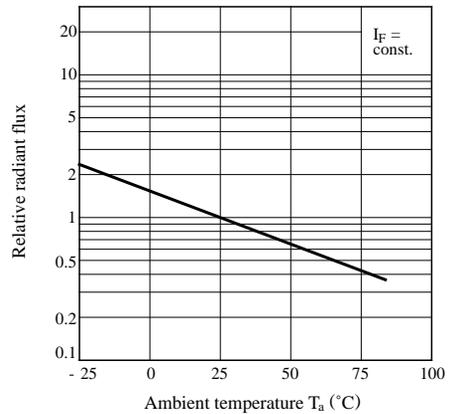


Fig. 7 Radiant Flux vs. Forward Current

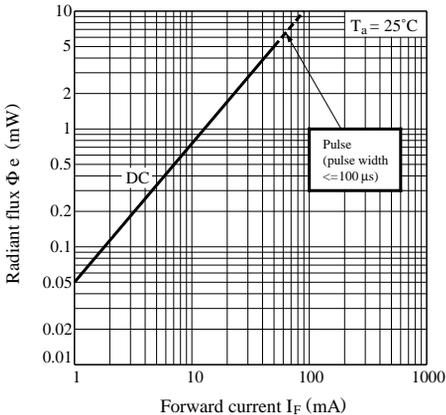
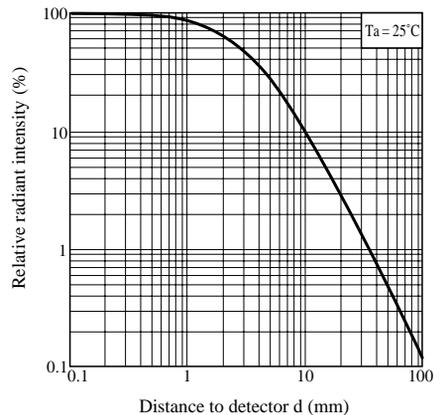
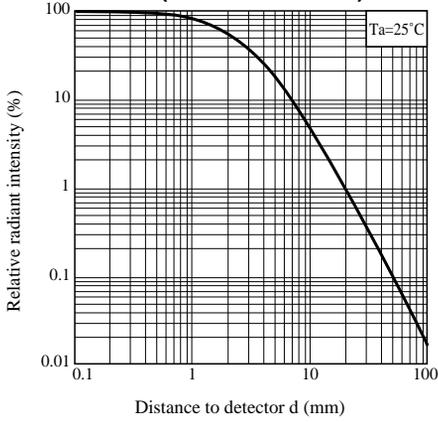


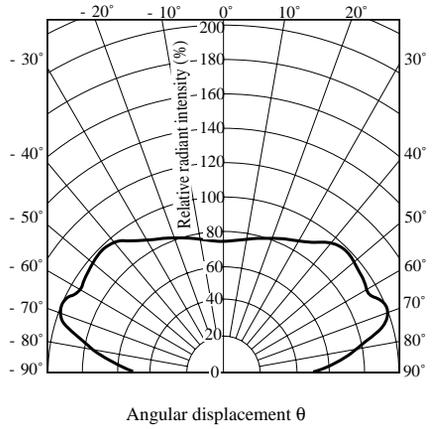
Fig. 8 Relative Radiant Intensity vs. Distance



**Fig. 9 Relative Radiant Intensity vs. Distance (Detector : PT4110)**



**Fig. 10 Radiation Diagram** ( $T_a = 25^\circ\text{C}$ )



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

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