

GL4100

Side View and Thin Flat Type Infrared Emitting Diode

■ Features

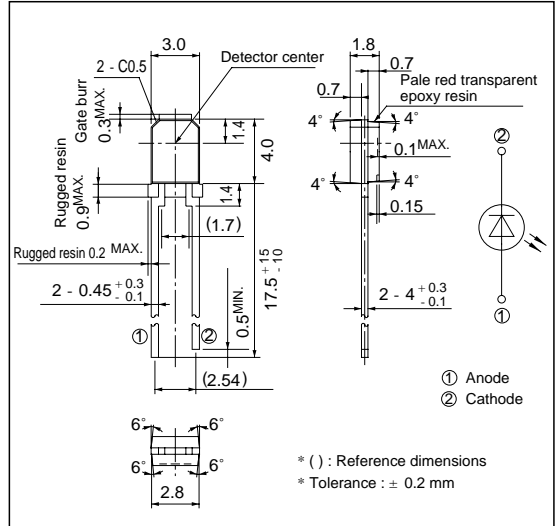
1. Compact flat package
2. Wide beam angle
(Half intensity angle : $\pm 90^\circ$)

■ Applications

1. Mouses
2. Track balls

■ Outline Dimensions

(Unit : mm)



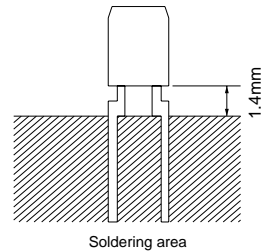
■ Absolute Maximum Ratings

(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

(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 | μA |
| Radiant flux | Φ_e | $I_F = 20\text{mA}$ | 1.0 | - | 2.0 | 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 |
| Terminal capacitance | C_t | $V_R = 0, f = 1\text{MHz}$ | - | 50 | - | pF |
| Response frequency | f_c | - | - | 300 | - | kHz |
| Half intensity angle | $\Delta\theta$ | $I_F = 20\text{mA}$ | - | ± 90 | - | $^\circ$ |

Fig. 1 Forward Current vs. Ambient Temperature

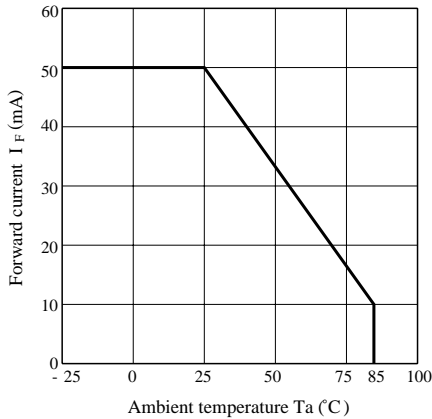


Fig. 2 Peak Forward Current vs. Duty Ratio

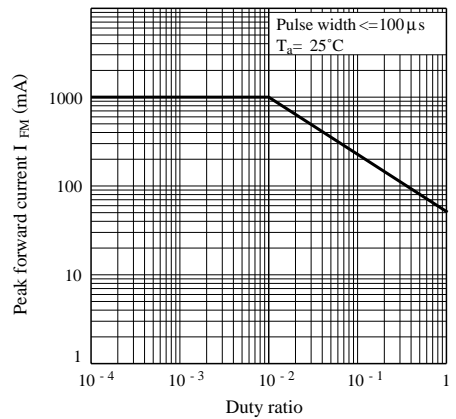


Fig. 3 Spectral Distribution

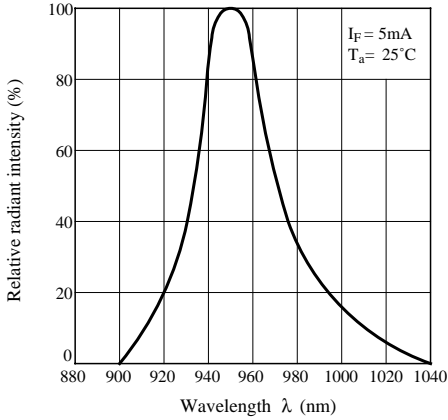


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

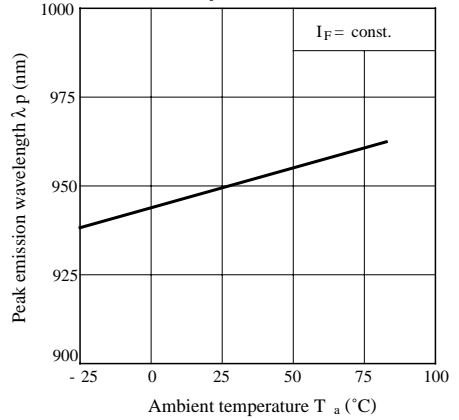


Fig. 5 Forward Current vs. Forward Voltage

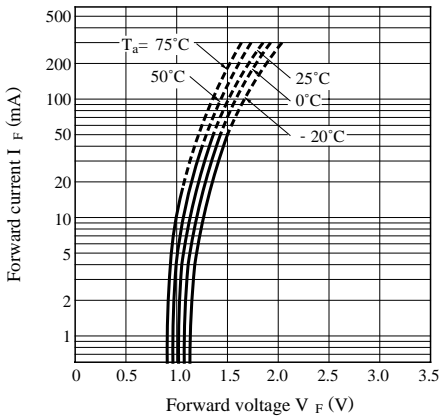


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

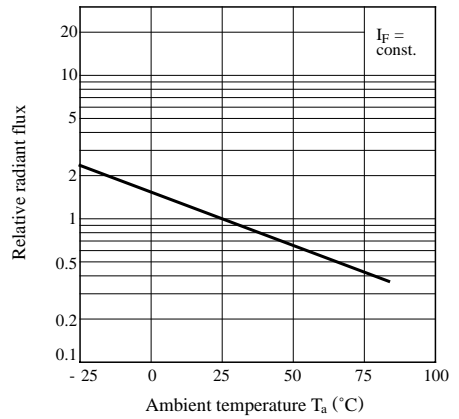


Fig. 7 Radiant Flux vs. Forward Current

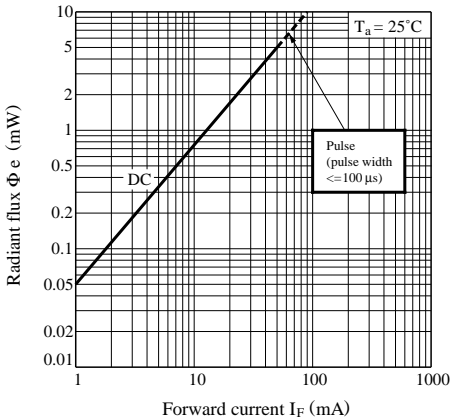


Fig. 8 Relative Radiant Intensity vs. Distance

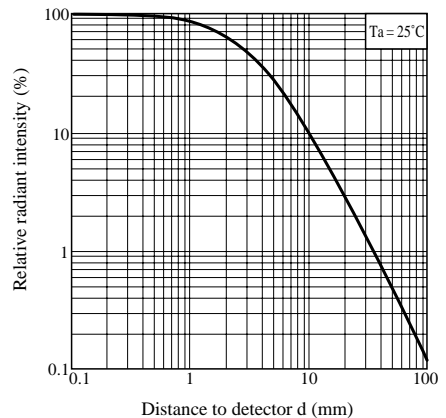


Fig. 9 Relative Radiant Intensity vs. Distance (Detector : PT4110)

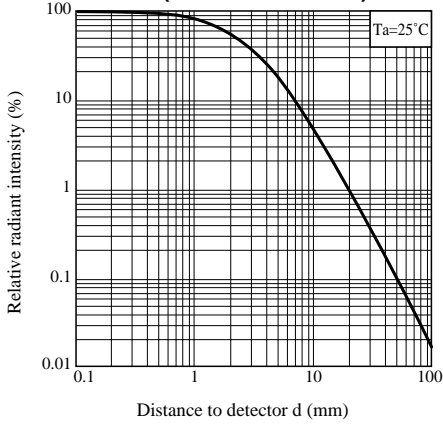
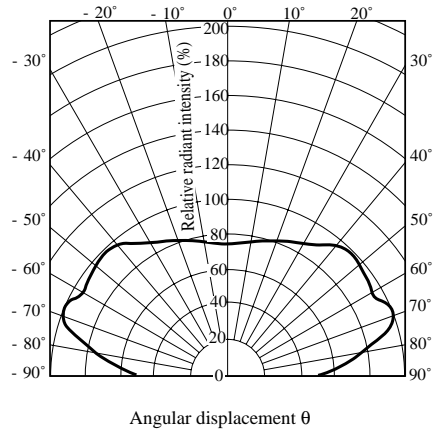


Fig. 10 Radiation Diagram ($T_a = 25^\circ\text{C}$)





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

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