

NJL1120F

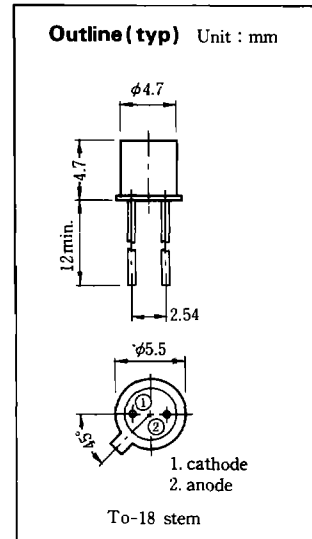
■ Features

- High-output high-speed infrared emitting device using GaAlAs(Si)
- High response speed equivalent to about 2 times that of conventional products
- High reliability with a metal package
- With NJL611B, NJL612B, NJL721B, NJL722B, NJL7260B and NJL811B combined, this device is the most suitable for card readers and other information units, fardistance photoelectric switches, tachometers, smoke sensor, and etc.

■ Absolute Maximum Ratings (Ta=25°C)

| | | |
|------------------------------|-----------|-----------------|
| Forward Current (Continuous) | I_F | 100mA |
| Pulse Forward Current | I_{FP} | 1A (note) |
| Reverse Voltage (Continuous) | V_R | 6V |
| Power Dissipation | P_D | 170mW |
| Operating Temperature | T_{opr} | -40°C to +100°C |
| Storage Temperature | T_{stg} | -55°C to +125°C |

(note) Pulse Width: 100 μ s, Duty Ratio: 0.01



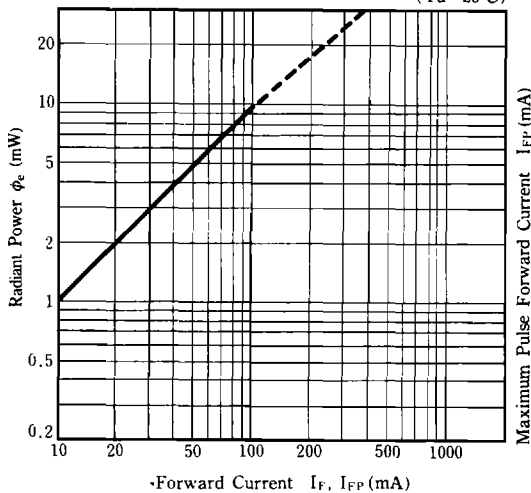
■ Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|-------------------------|-----------------|------------------|------|------|------|---------|
| Radiant Power | ϕ_e | $I_F=50mA$ | — | 4.9 | — | mW |
| Spectral Line Halfwidth | $\Delta\lambda$ | $I_F=50mA$ | — | 75 | — | nm |
| Forward Voltage | V_F | $I_F=50mA$ | — | 1.28 | — | V |
| Reverse Current | I_R | $V_R=6V$ | — | — | 1 | μ A |
| Capacitance | C_t | $V_R=0V, f=1MHz$ | — | 25 | — | pF |
| Fall Time | t_f | $I_F=50mA$ | — | 500 | — | ns |
| Rise Time | t_r | $I_F=50mA$ | — | 500 | — | ns |
| Peak Wavelength | λ_p | $I_F=50mA$ | — | 900 | — | nm |

■ Typical Characteristics

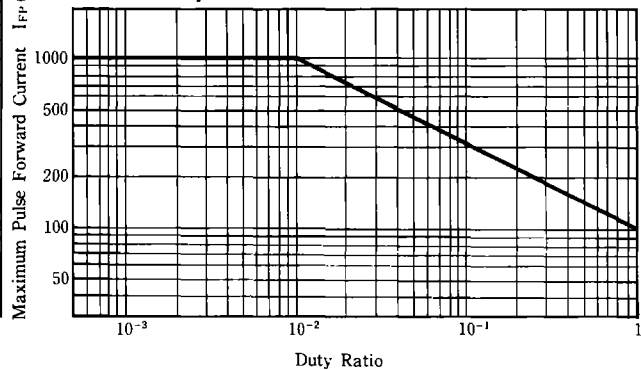
Radiant Power v.s. Forward Current

(Ta=25°C)

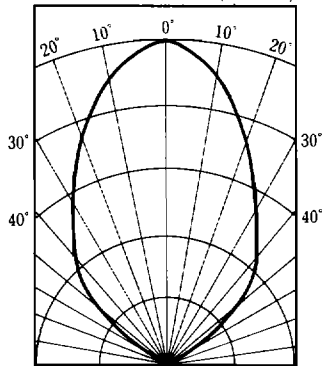


Maximum Pulse Forward Current v.s. Duty Ratio

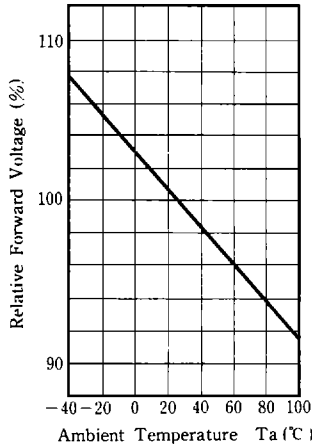
(Ta=25°C, tw=100 μ s max.)



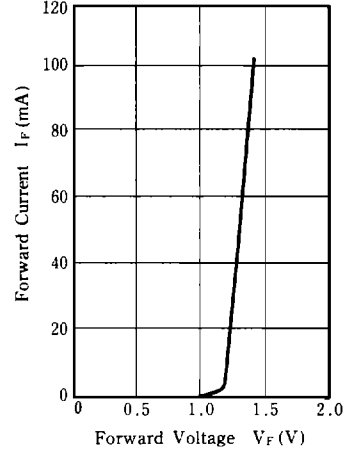
Typical Radiation Pattern
($T_a = 25^\circ$)



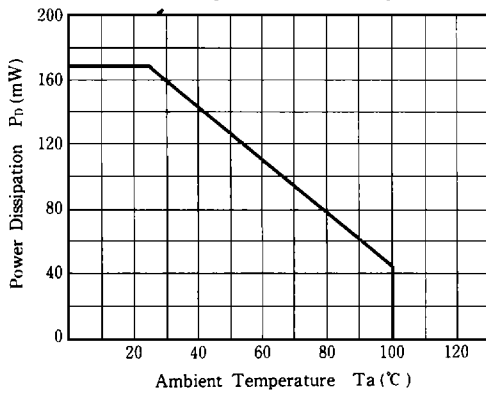
Forward Voltage v.s. Temperature



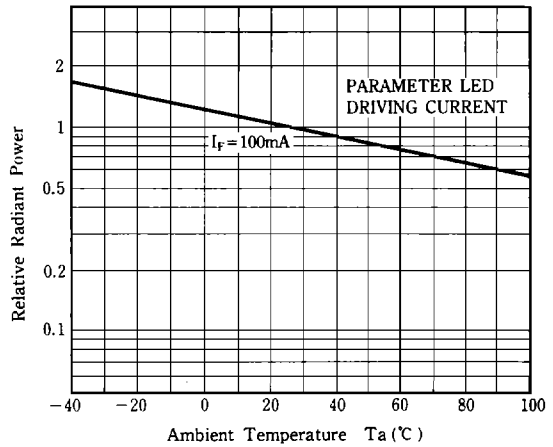
Forward Current v.s. Forward Voltage ($T_a = 25^\circ\text{C}$)



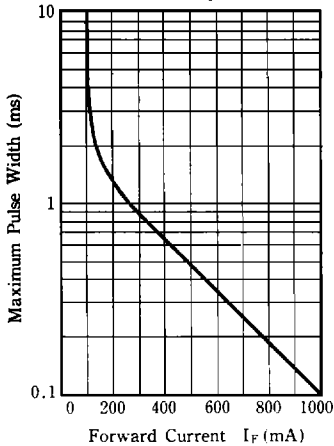
Power Dissipation v.s. Temperature



Relative Radiant Power v.s. Temperature



Maximum Pulse Width v.s. Forward Current ($T_a = 25^\circ\text{C}$, Duty Ratio 0.01 max.)



Relative Intensity v.s. Wavelength

