

LN55

GaAs Infrared Light Emitting Diode

For optical control systems

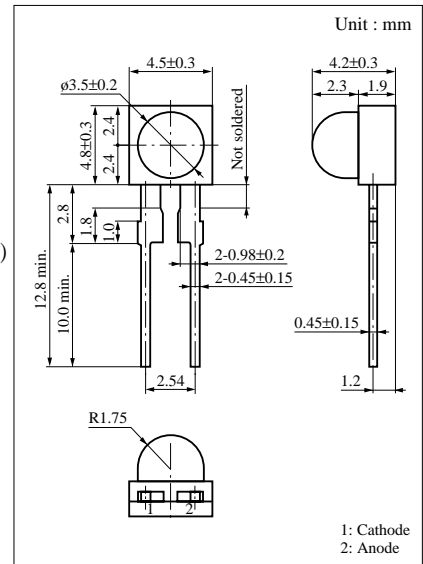
■ Features

- High-power output, high-efficiency : $P_O = 3.5 \text{ mW}$ (typ.)
- Suited for use with silicon photodetectors
- Infrared light emission close to monochromatic light : $\lambda_p = 950 \text{ nm}$ (typ.)
- High-speed modulation capability

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

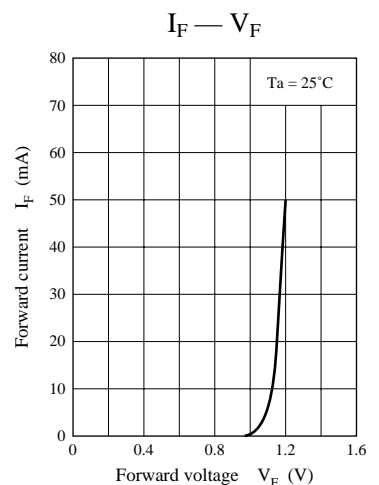
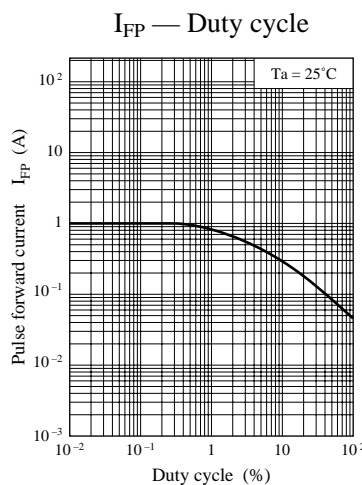
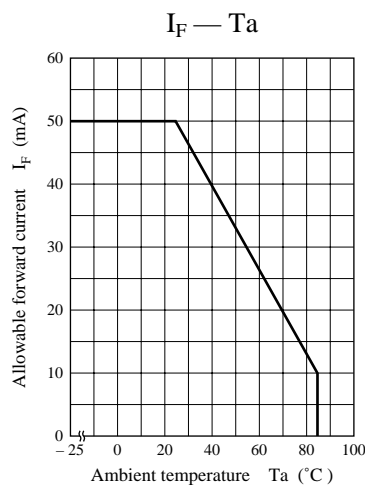
| Parameter | Symbol | Rated | Unit |
|-------------------------------|------------|-------------|------------------|
| Power dissipation | P_D | 75 | mW |
| Forward current (DC) | I_F | 50 | mA |
| Pulse forward current | I_{FP}^* | 1 | A |
| Reverse voltage (DC) | V_R | 3 | V |
| Operating ambient temperature | T_{opr} | -25 to +85 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -30 to +100 | $^\circ\text{C}$ |

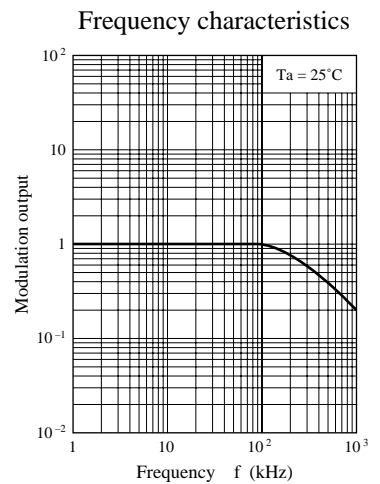
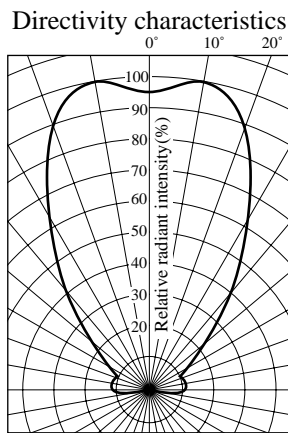
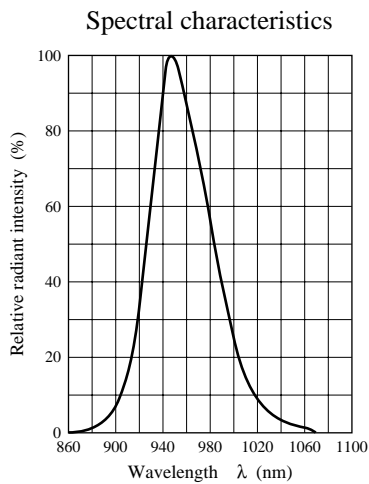
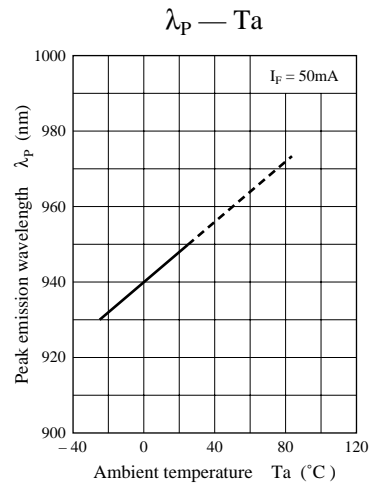
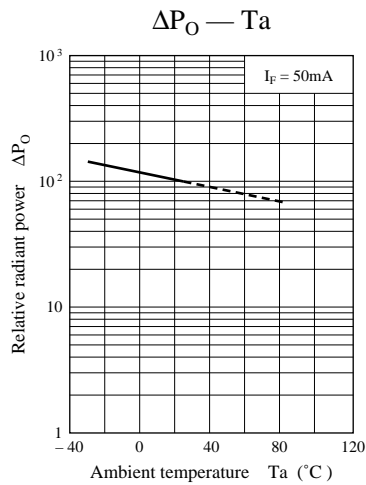
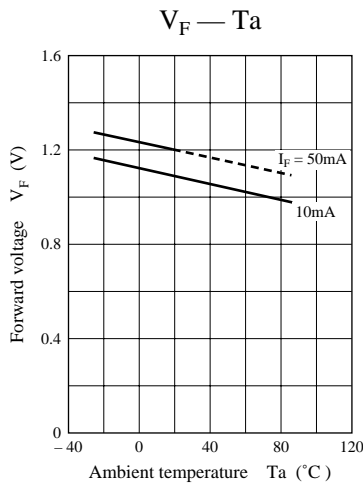
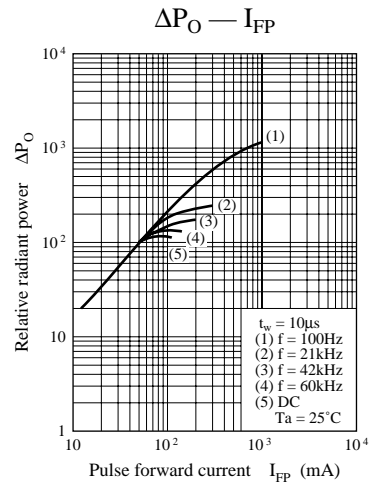
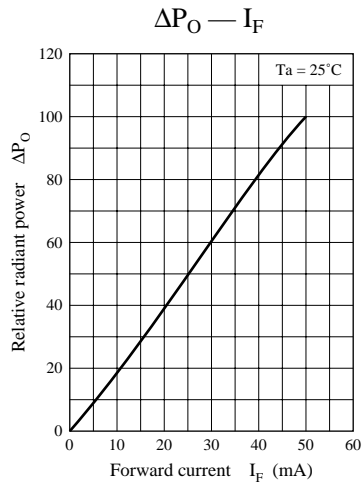
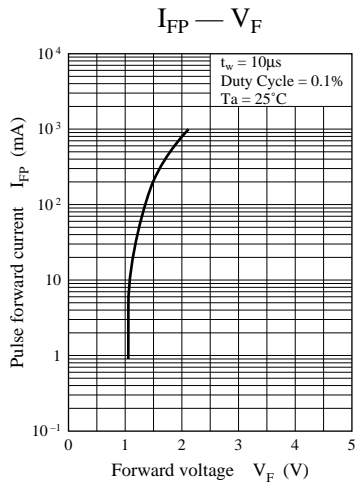
* $f = 100 \text{ Hz}$, Duty cycle = 0.1 %



■ Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|--------------------------|-----------------|---|-----|-----|-----|---------------|
| Radiant power | P_O | $I_F = 50 \text{ mA}$ | 1.8 | 3.5 | | mW |
| Peak emission wavelength | λ_p | $I_F = 50 \text{ mA}$ | | 950 | | nm |
| Spectral half band width | $\Delta\lambda$ | $I_F = 50 \text{ mA}$ | | 50 | | nm |
| Forward voltage (DC) | V_F | $I_F = 50 \text{ mA}$ | | | 1.5 | V |
| Reverse current (DC) | I_R | $V_R = 3 \text{ V}$ | | | 10 | μA |
| Capacitance between pins | C_t | $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$ | | 50 | | pF |
| Half-power angle | θ | The angle in which radiant intensity is 50% | | 35 | | deg. |





Caution for Safety

 **DANGER**

Gallium arsenide material (GaAs) is used in this product.

Therefore, do not burn, destroy, cut, crush, or chemically decompose the product, since gallium arsenide material in powder or vapor form is harmful to human health.

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