

LN58

GaAs Infrared Light Emitting Diode

For optical control systems

■ Features

- High-power output, high-efficiency: $P_O = 3.5$ mW (typ.)
- Emitted light spectrum suited for silicon photodetectors
- Infrared light emission close to monochromatic light: $\lambda_p = 950$ nm (typ.)
- Small size, thin side-view type package

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

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

Note) *: $f = 100$ Hz, Duty cycle = 0.1%

■ Electro-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

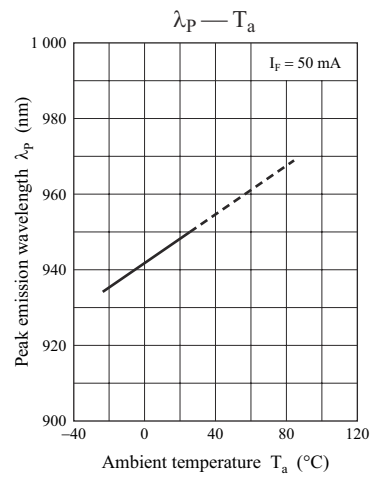
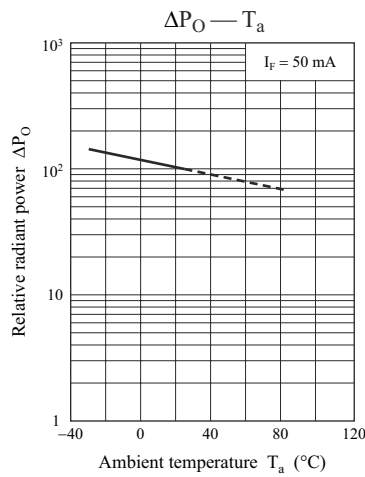
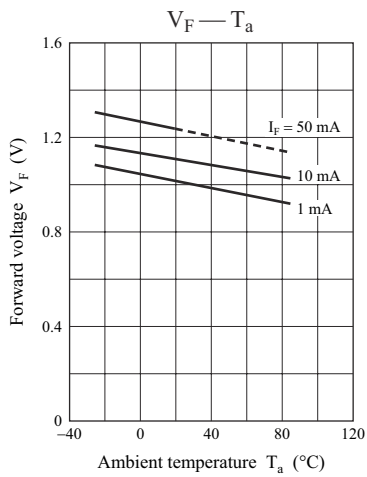
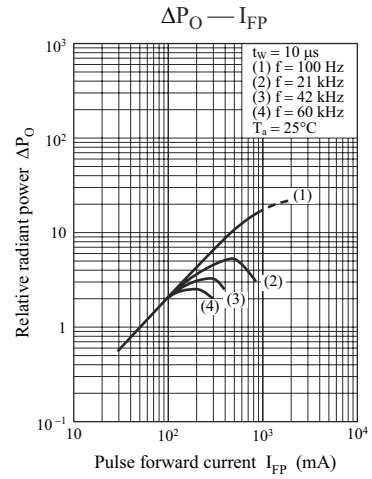
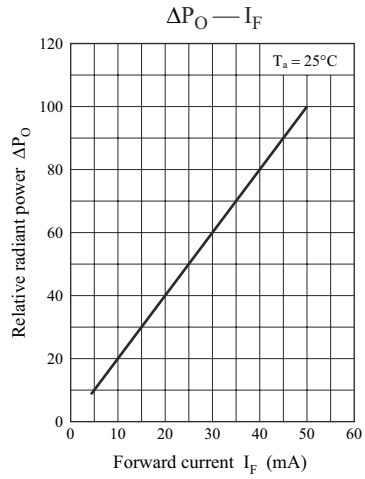
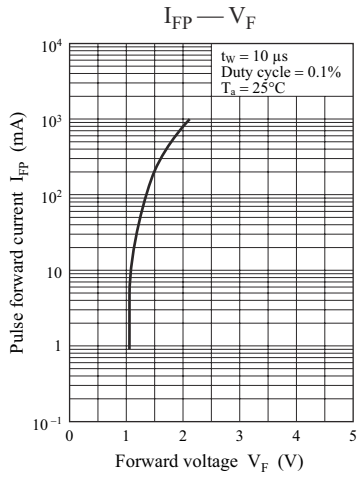
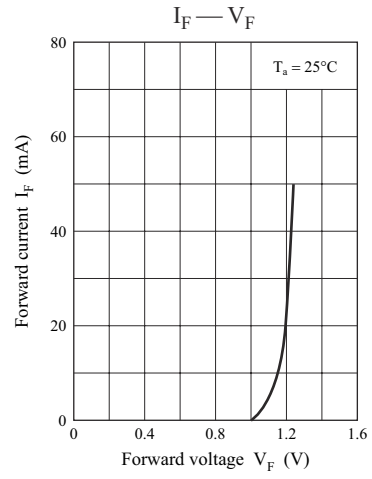
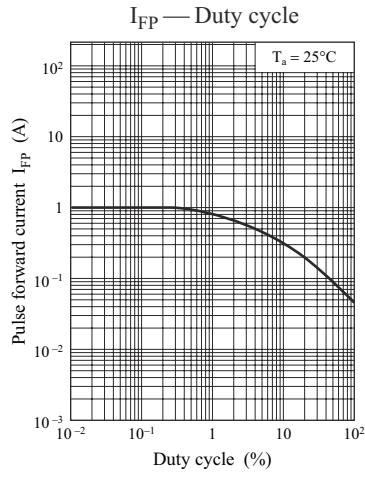
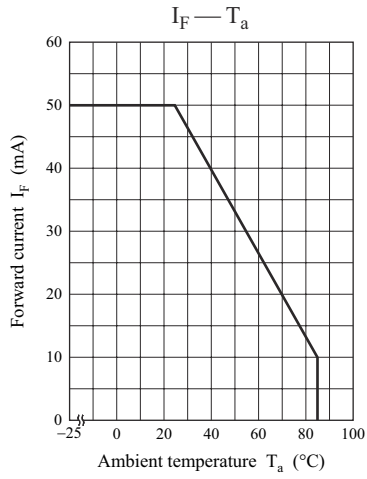
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--------------------------|-----------------|---|-----|-----|-----|---------------|
| Radiant power * | P_O | $I_F = 50$ mA | 1.8 | 3.5 | | mW |
| Reverse current | I_R | $V_R = 3$ V | | | 10 | μA |
| Forward voltage | V_F | $I_F = 50$ mA | | | 1.5 | V |
| Terminal capacitance | C_t | $V_R = 0$ V, $f = 1$ MHz | | 35 | | pF |
| Peak emission wavelength | λ_p | $I_F = 50$ mA | | 950 | | nm |
| Spectral half band width | $\Delta\lambda$ | $I_F = 50$ mA | | 50 | | nm |
| Half-power angle | θ | The angle when the radiant power is halved. | | 35 | | $^\circ$ |

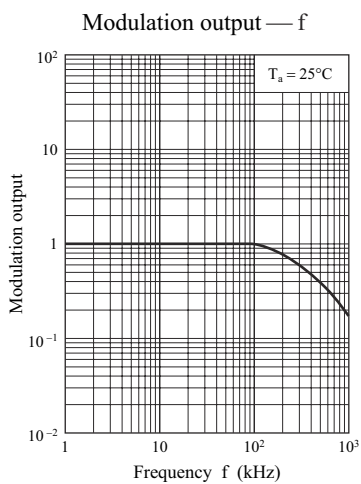
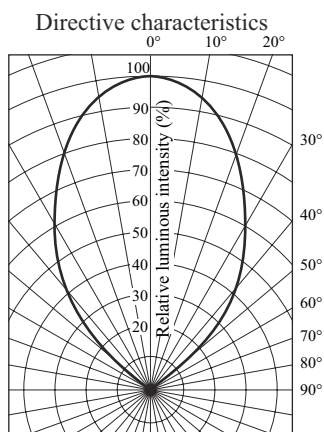
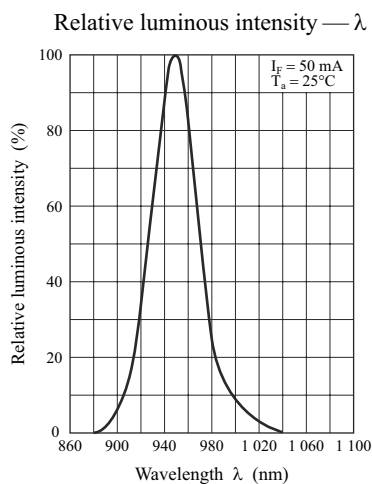
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Cutoff frequency: 1 MHz

$$f_c : 10 \times \log \frac{P_O \text{ at } f = f_c}{P_O \text{ at } f = 50 \text{ kHz}} = -3$$

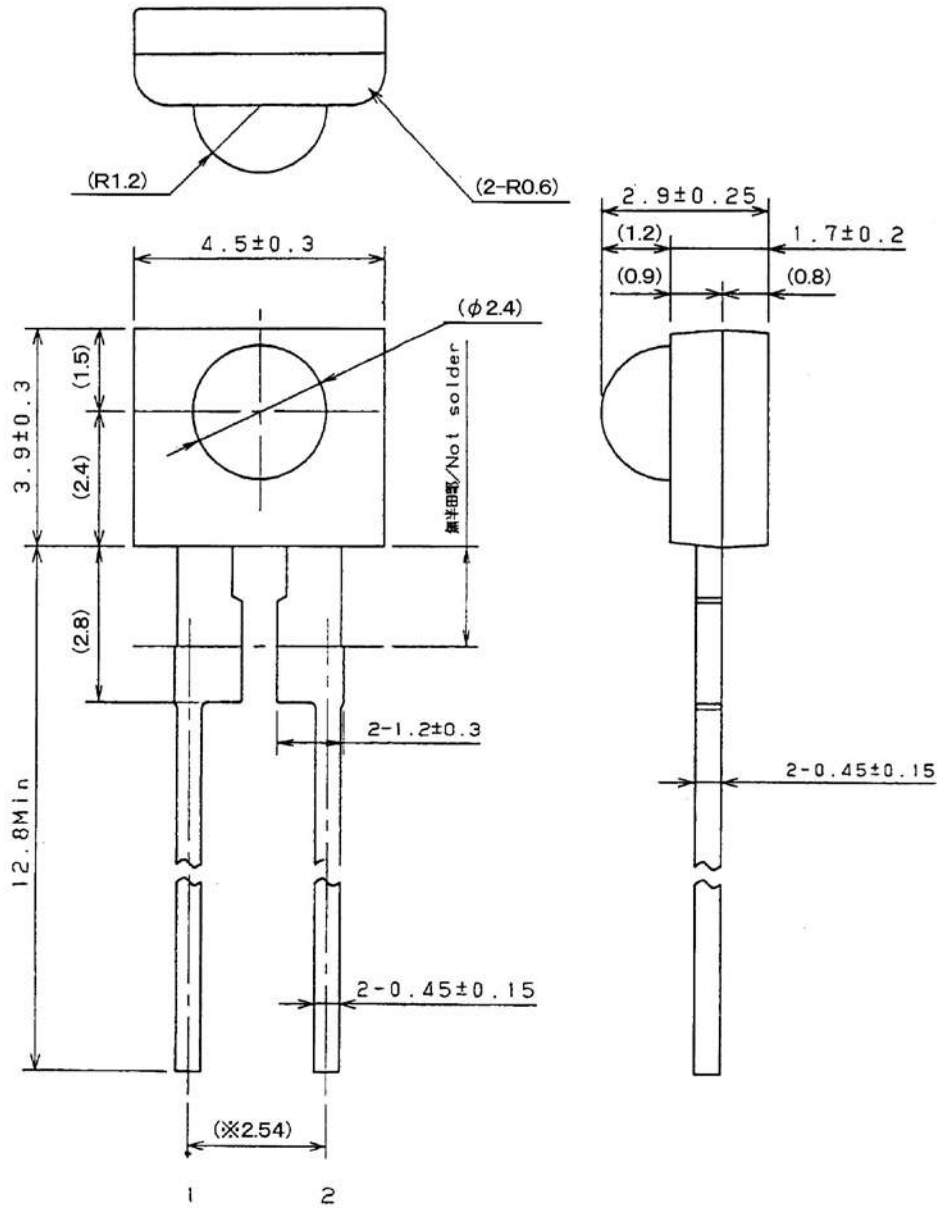
3. *: A light detection element uses a silicon diode have proofread a load with a standard device.





■ Package (Unit: mm)

LETLSN2S0003



- Pin name
- 1: Cathode
- 2: Anode

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