

LNA4801L

GaAlAs Infrared Light Emitting Diode

For optical control systems

■ Features

- Fast response and high-speed modulation capability: $f_c = 20$ MHz (typ.)
- Wide directivity: $\theta = 22^\circ$ (typ.)
- Transparent epoxy resin package

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

| Parameter | Symbol | Rating | Unit |
|-------------------------------|-----------|-------------|------------------|
| Power dissipation | P_D | 190 | mW |
| Forward current | I_F | 100 | 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%

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

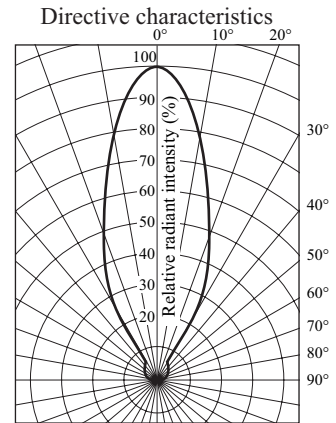
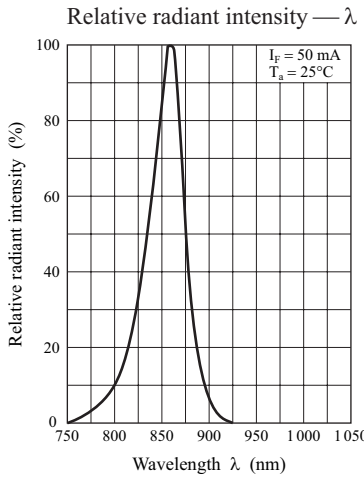
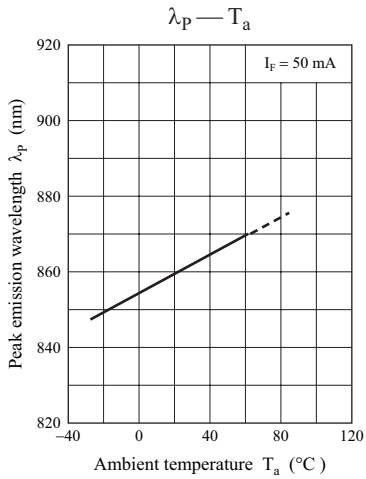
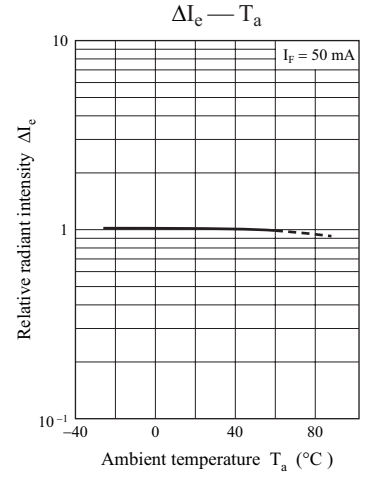
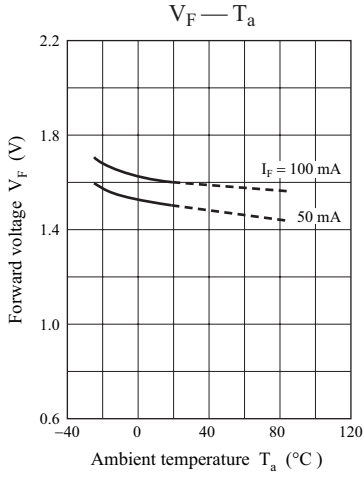
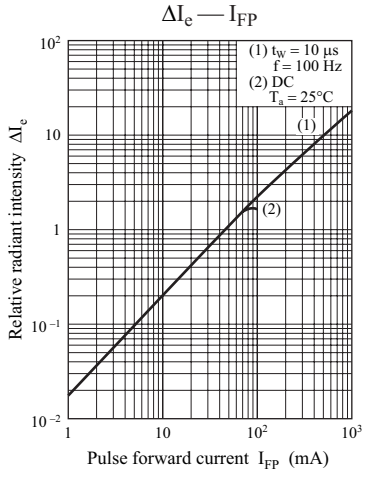
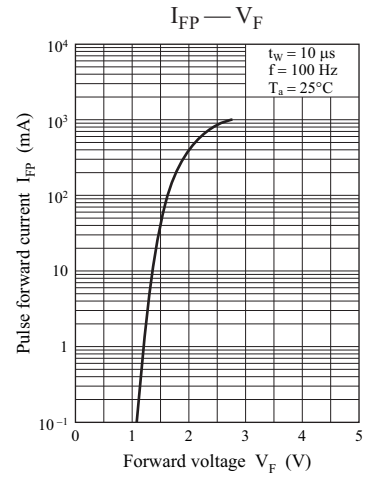
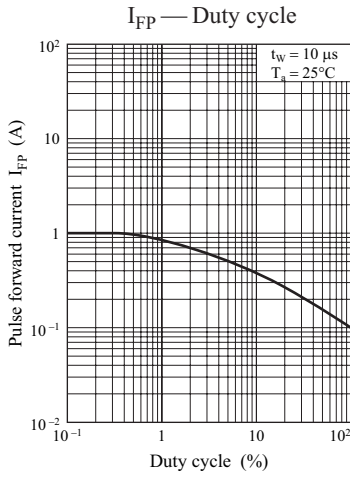
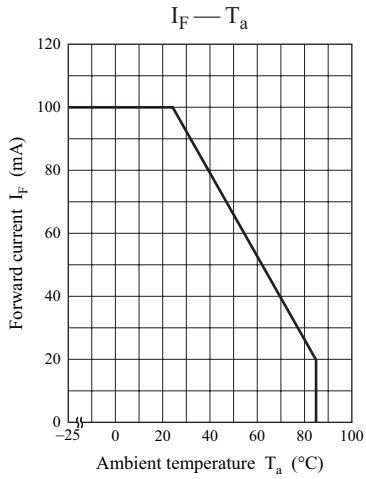
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|----------------------------|-----------------|---|-----|-----|-----|---------------|
| Reverse current | I_R | $V_R = 3$ V | | | 10 | μA |
| Forward voltage | V_F | $I_F = 100$ mA | | 1.6 | 1.9 | V |
| Center radiant intensity | I_e | $I_F = 50$ mA | 12 | | 48 | mW/sr |
| Peak emission wavelength * | λ_p | $I_F = 50$ mA | | 860 | | nm |
| Spectral half band width * | $\Delta\lambda$ | $I_F = 50$ mA | | 40 | | nm |
| Half-power angle | θ | The angle when the radiant power is halved. | | 22 | | $^\circ$ |

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

2. Cutoff frequency: 20 MHz

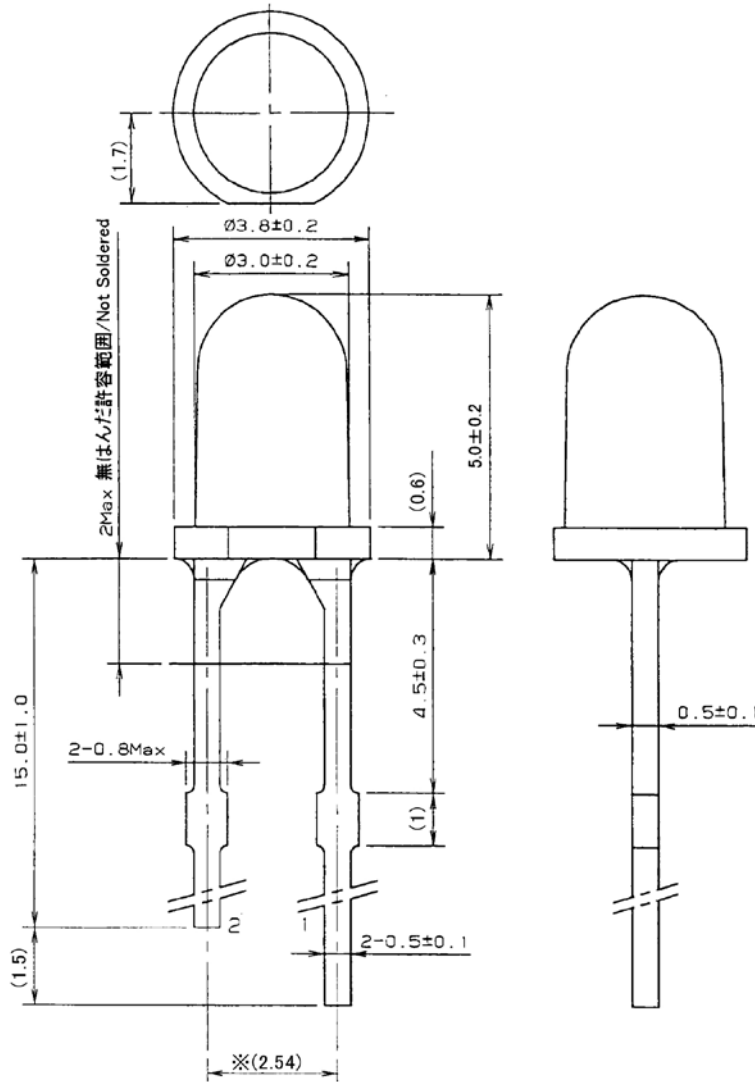
$$f_c: 10 \times \log \frac{P_O \text{ at } f = f_c}{P_O \text{ at } f = 1 \text{ MHz}} = -3$$

3. *: LED might radiate red light under large current drive.



■ Package (Unit: mm)

LEXLTN2S0003



- Pin name
- 1: Anode
- 2: Cathode

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