

# LNA2801L

## GaAlAs on GaAs Infrared Light Emitting Diode

For optical control systems

### ■ Features

- High-power output, high-efficiency:  $I_e = 6 \text{ mW/sr (min.)}$
- Emitted light spectrum suited for silicon photodetectors
- Good radiant power output linearity with respect to input current
- $\phi 3$  plastic 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	$T_{stg}$	-40 to +100	$^\circ\text{C}$

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

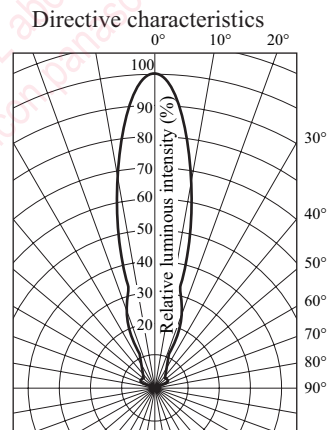
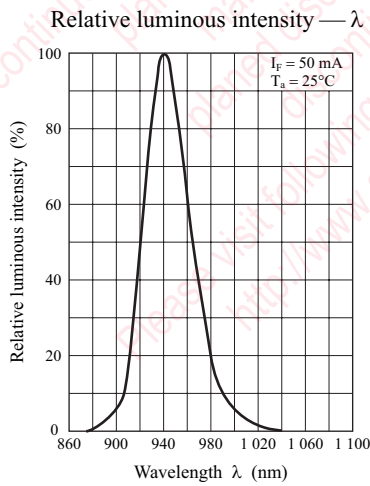
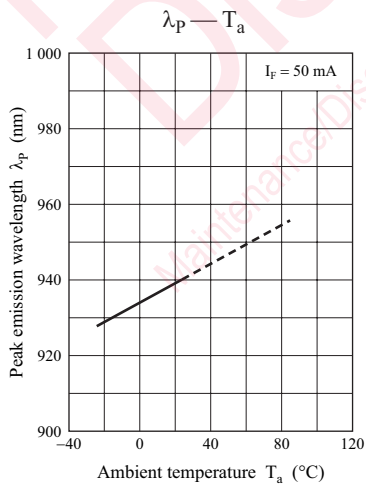
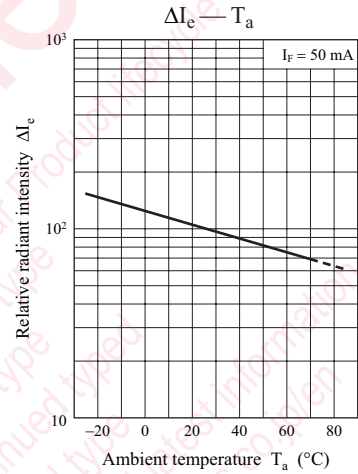
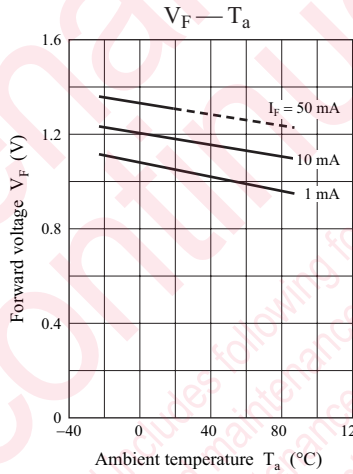
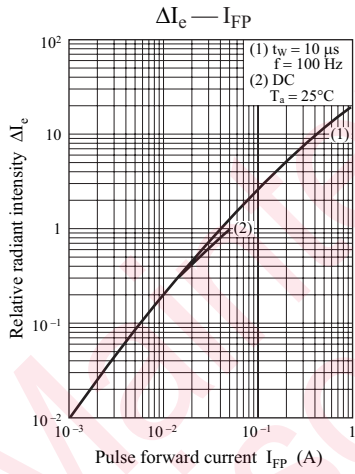
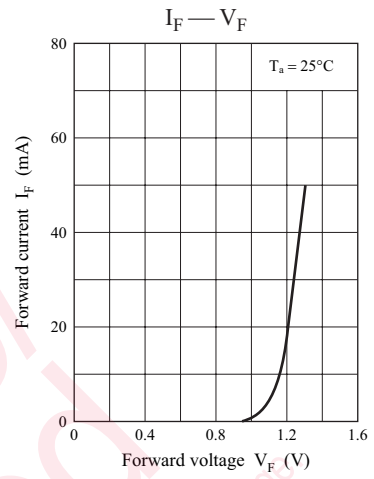
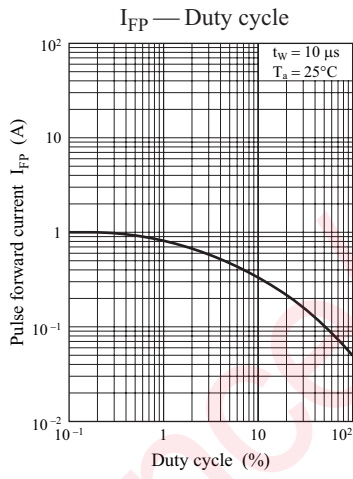
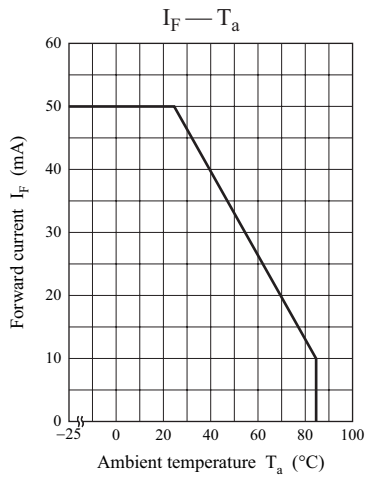
### ■ Electro-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Center radiant intensity	$I_e$	$I_F = 20 \text{ mA}$	6.0			mW/sr
Reverse current	$I_R$	$V_R = 3 \text{ V}$			10	$\mu\text{A}$
Forward voltage	$V_F$	$I_F = 50 \text{ mA}$		1.3	1.5	V
Terminal capacitance	$C_t$	$V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$		35		pF
Peak emission wavelength	$\lambda_p$	$I_F = 50 \text{ mA}$		940		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50 \text{ mA}$		50		nm
Half-power angle	$\theta$	The angle when the center radiant intensity is halved.		15		$^\circ$

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

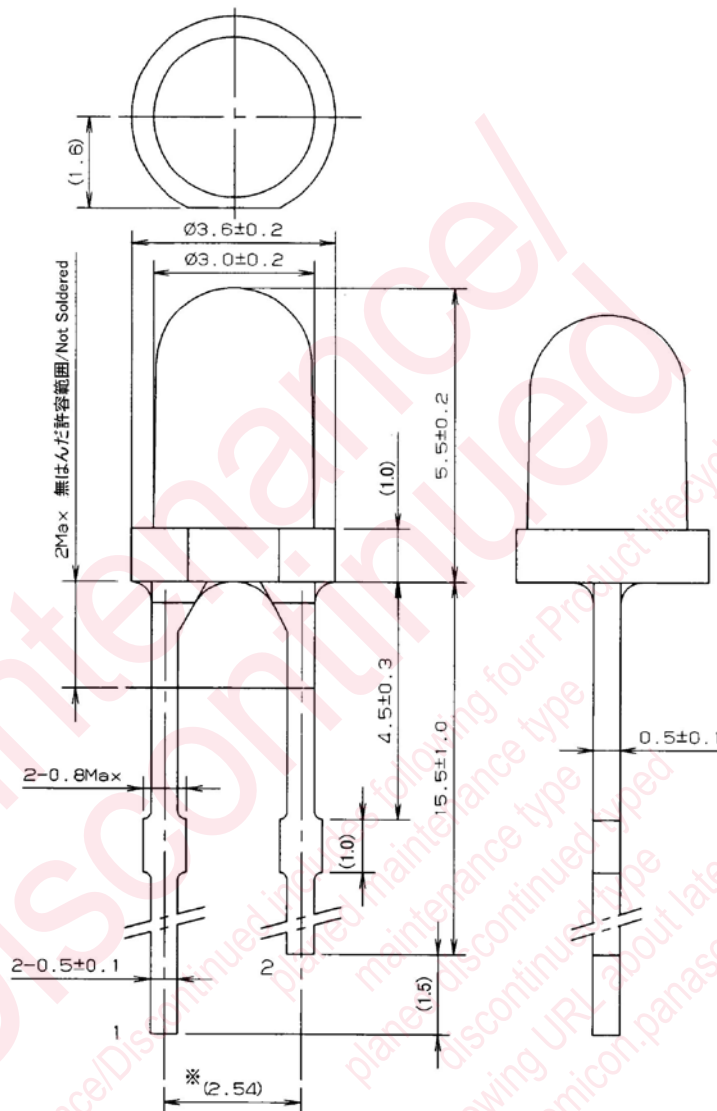
2. Cutoff frequency: 1 MHz

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



■ Package (Unit: mm)

LEXLTN2S0006



- Pin name
- 1: Anode
- 2: Cathode

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