

# LN59, LNA2702L (LN59L)

## GaAs Infrared Light Emitting Diodes

For light source of VCR (VHS System)

### ■ Features

- Two-way directivity
- High-power output, high-efficiency:  $P_O = 1.8 \text{ mW}$  (min.)
- Small resin package
- Long lifetime, high reliability
- Long lead wire type: LNA2702L (LN59L)

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

Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	3	V
Forward current	$I_F$	50	mA
Pulse forward current *	$I_{FP}$	1	A
Power dissipation	$P_D$	75	mW
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%

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

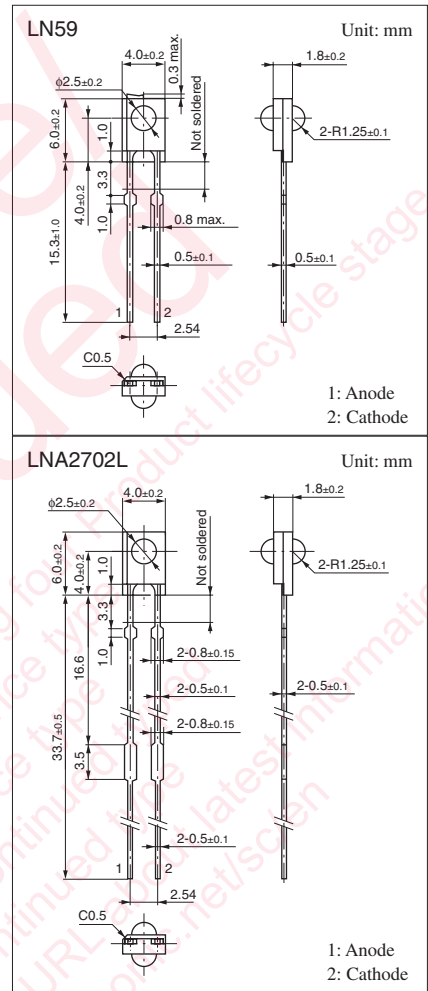
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 50 \text{ mA}$		1.3	1.5	V
Reverse current	$I_R$	$V_R = 3 \text{ V}$			10	$\mu\text{A}$
Radiant power *	$P_O$	$I_F = 50 \text{ mA}$	1.8			mW
Peak emission wavelength	$\lambda_P$	$I_F = 20 \text{ mA}$		940		nm
Spectral half band width	$\Delta\lambda$	$I_F = 20 \text{ mA}$		50		nm
Terminal capacitance	$C_t$	$V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$		35		pF

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

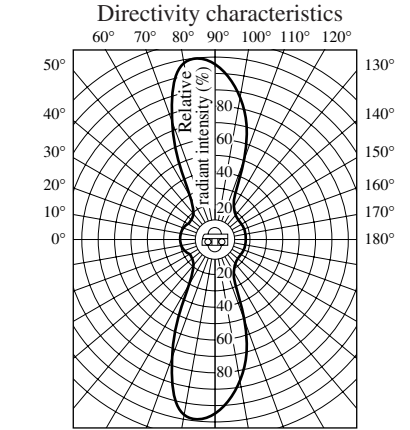
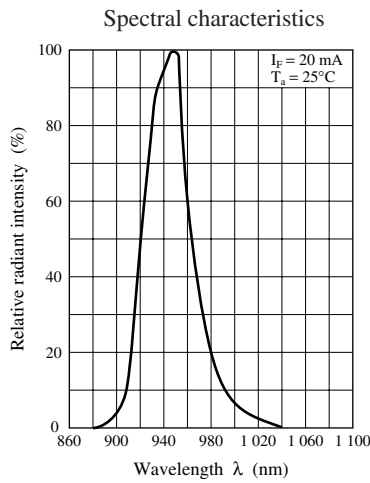
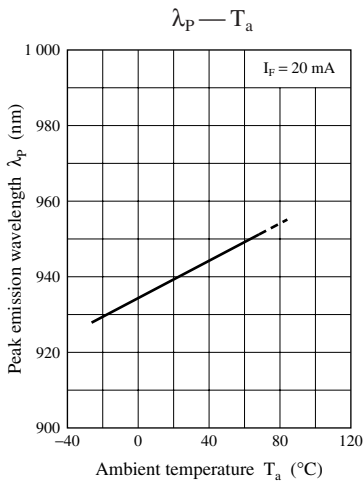
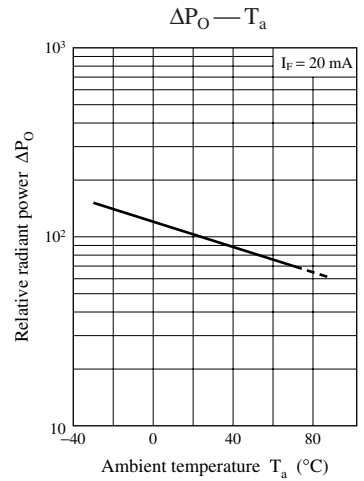
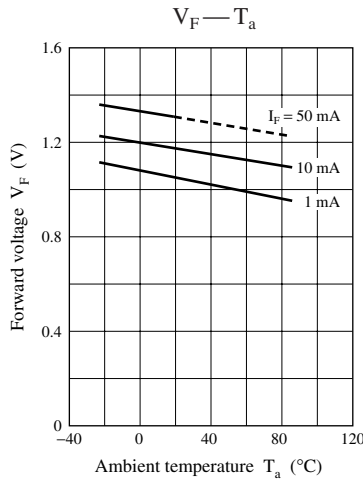
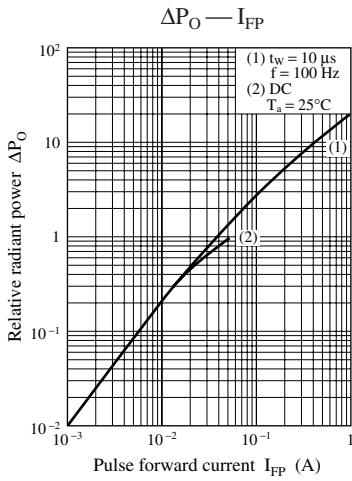
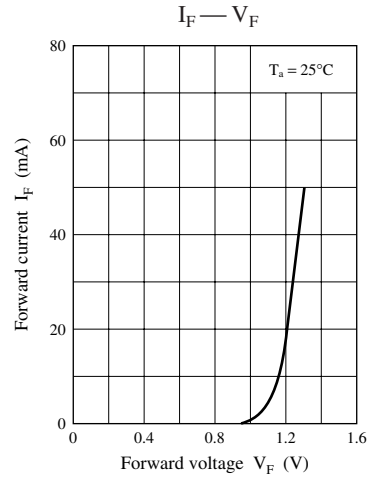
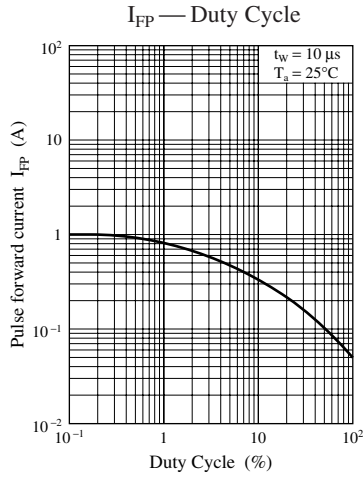
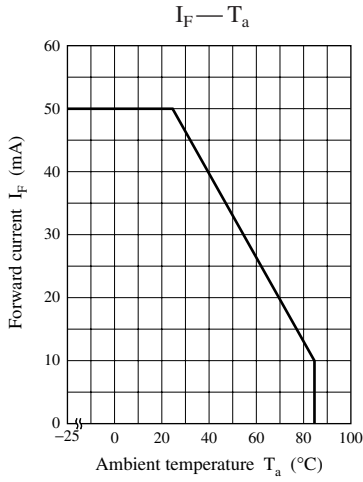
2. Cutoff frequency: 1 MHz

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

3. \*: Radiant power  $P_O$  shows each value of radiant flux  $P_1$  and  $P_2$  in two directions.



Note) The part numbers in the parenthesis show conventional part number.



# Caution for Safety

 **DANGER**

## ■ This product contains Gallium Arsenide (GaAs).

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

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