

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 $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

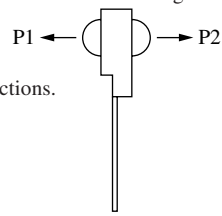
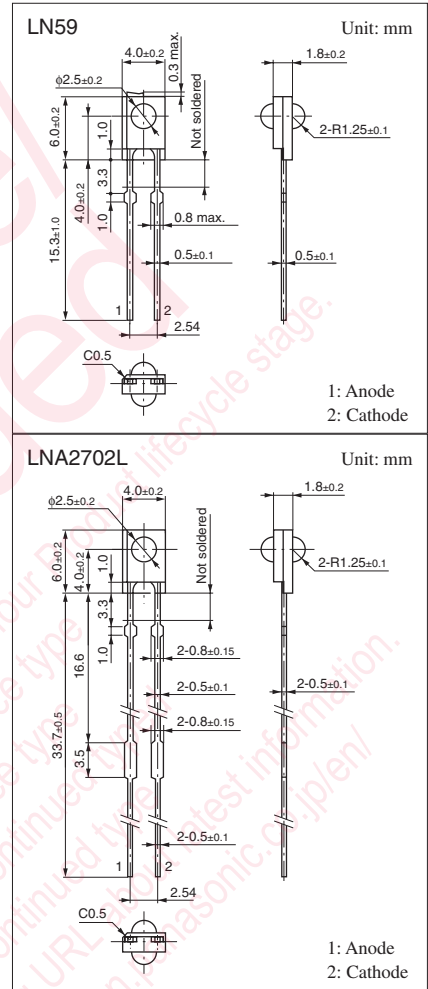
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 50 \text{ mA}$		1.3	1.5	V
Reverse current	I_R	$V_R = 3 \text{ V}$			10	μA
Radiant power *	P_O	$I_F = 50 \text{ mA}$	1.8			mW
Peak emission wavelength	λ_P	$I_F = 20 \text{ mA}$		940		nm
Spectral half band width	$\Delta\lambda$	$I_F = 20 \text{ mA}$		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.

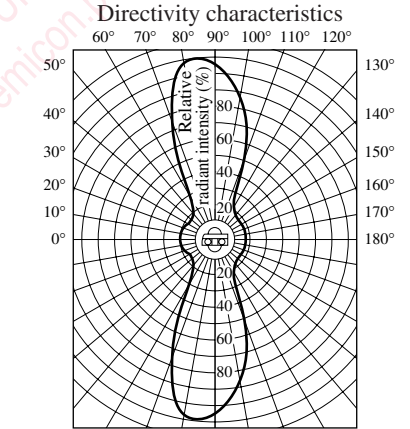
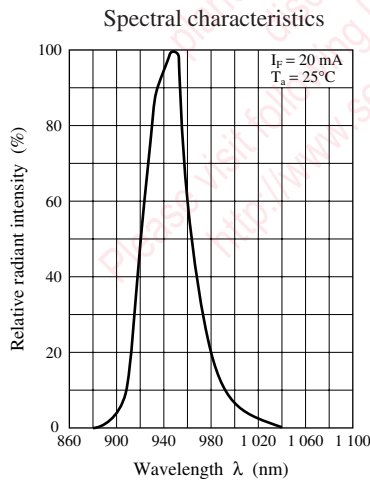
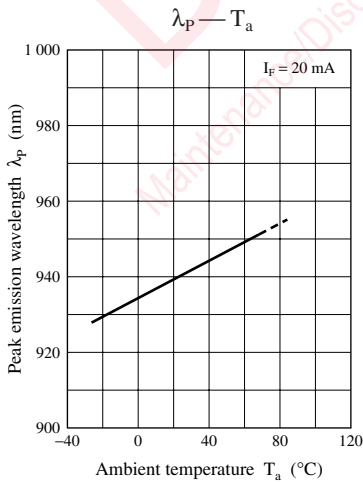
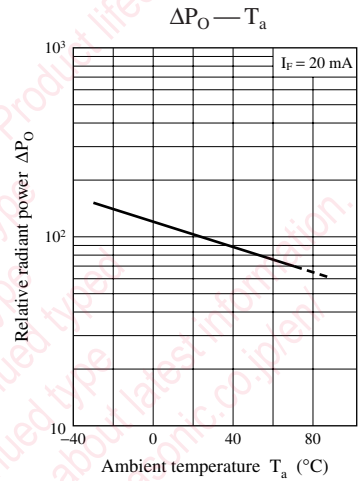
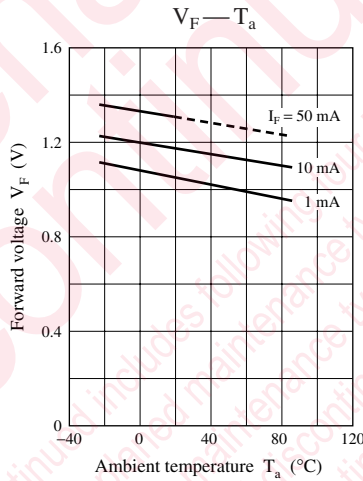
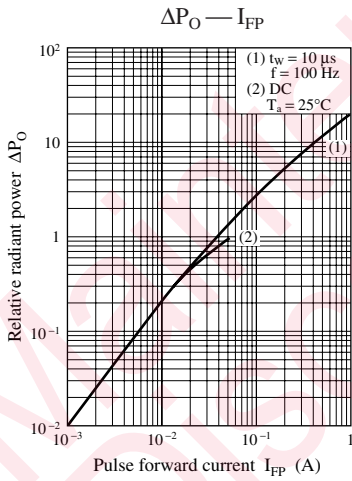
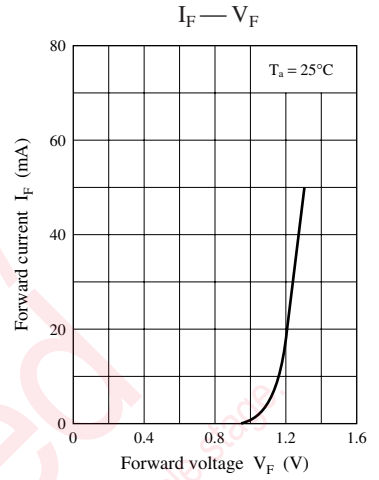
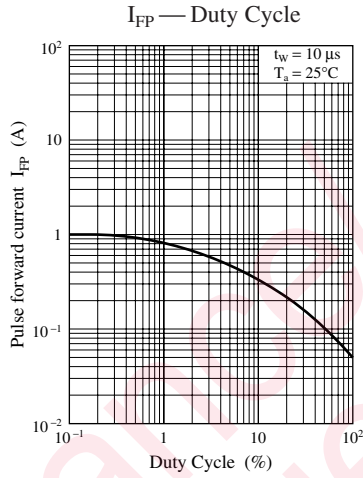
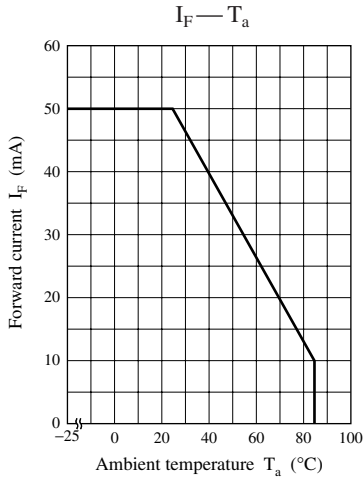
2. Cutoff frequency: 1 MHz

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

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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