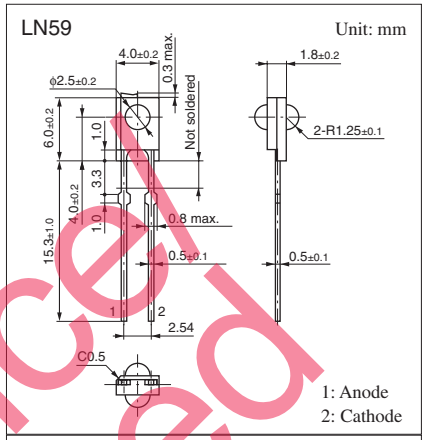
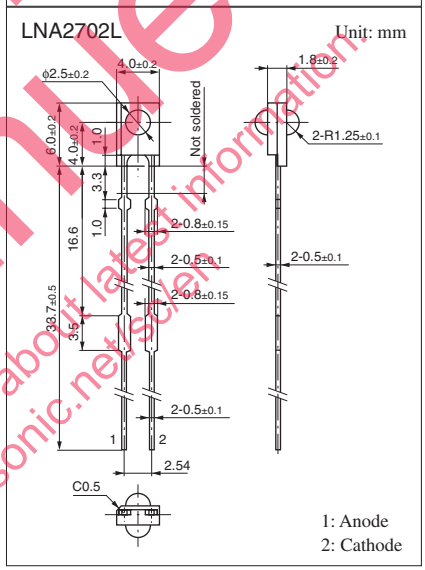
LN59, LNA2702L (LN59L)

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 mW (min.)
- Small resin package
- Long lifetime, high reliability
- Long lead wire type: LNA2702L (LN59L)

■ Absolute Maximum Ratings T_a = 25°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	°C
Storage temperature	T_{stg}	−40 to +100	°C

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

■ Electrical-Optical Characteristics T_a = 25°C ± 3°C

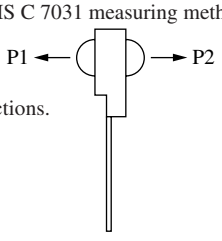
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 50 mA		1.3	1.5	V
Reverse current	I_R	V_R = 3 V			10	μA
Radiant power *	P_O	I_F = 50 mA	1.8			mW
Peak emission wavelength	λ_P	I_F = 20 mA		940		nm
Spectral half band width	$\Delta\lambda$	I_F = 20 mA		50		nm
Terminal capacitance	C_t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

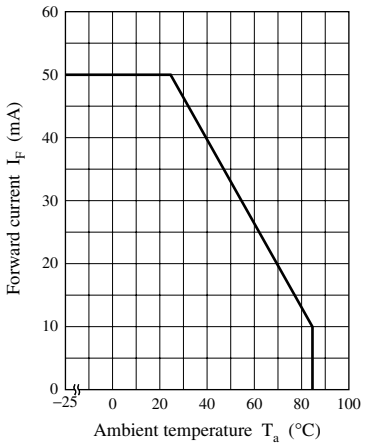
$$f_C: 10 \times \log \frac{P_O \text{ at } f = f_C}{P_O \text{ at } f = 50 \text{ kHz}} = -3$$

3. *: Radiant power P_O shows each value of radiant flux P1 and P2 in two directions.

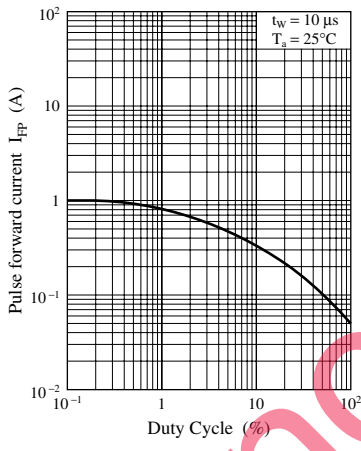


Note) The part numbers in the parenthesis show conventional part number.

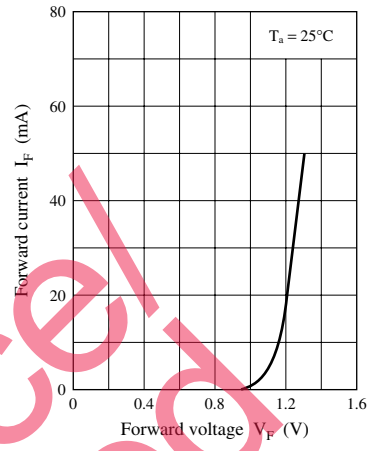
I_F — T_a



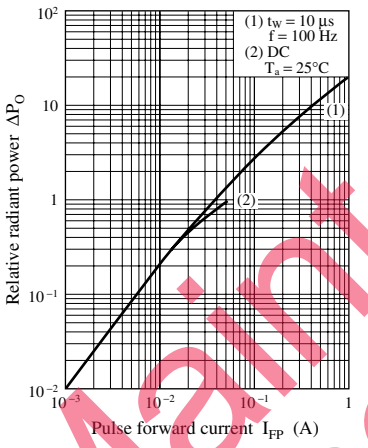
I_{FP} — Duty Cycle



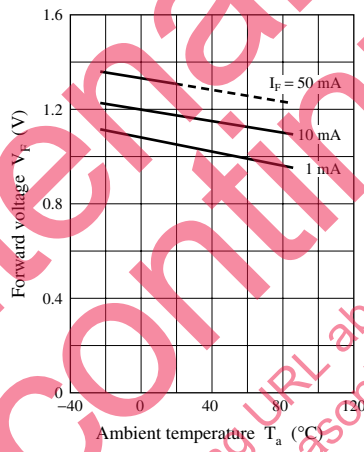
I_F — V_F



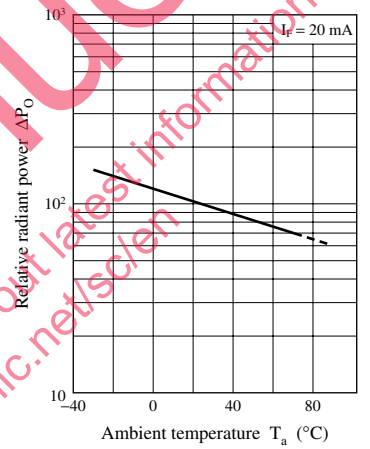
ΔP_O — I_{FP}



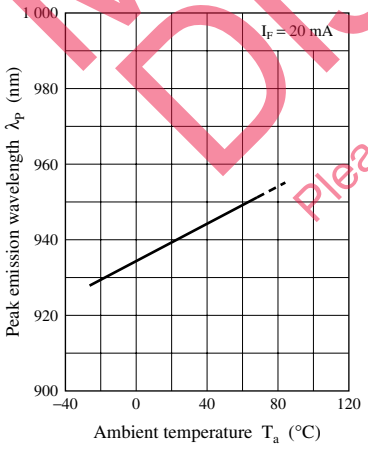
V_F — T_a



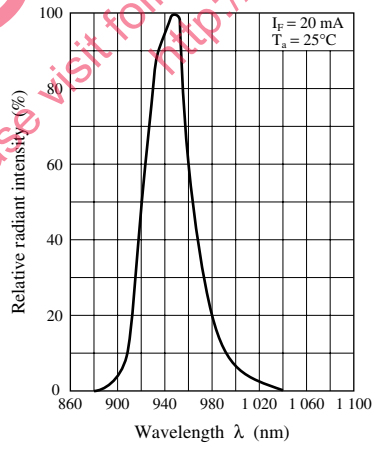
ΔP_O — T_a



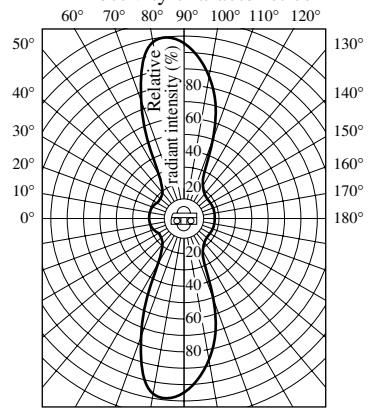
λ_P — T_a



Spectral characteristics



Directivity characteristics



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⚠DANGER

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