

LNA2701L (LN159)

GaAs Infrared Light Emitting Diode

VTR tape and sensor

■ Features

- Two-way directivity
- High-power output, high-efficiency: $I_e = 1.2 \text{ mW/sr}$
- Small resin package
- Long lifetime, high reliability
- Thin type package modified from LN59

■ 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 +65	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +85	$^\circ\text{C}$

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

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

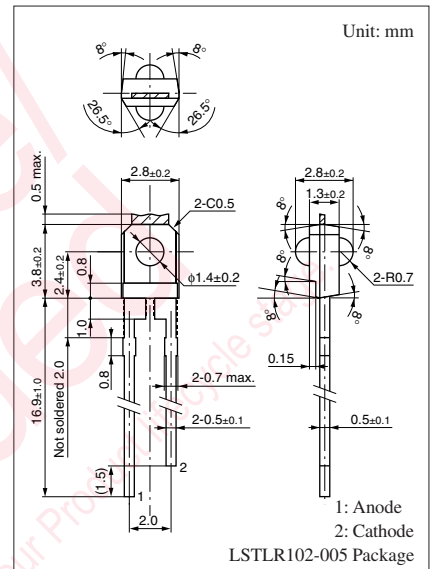
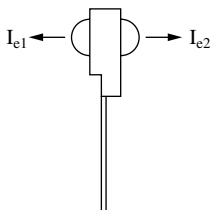
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 50 \text{ mA}$		1.3	1.5	V
Reverse current	I_R	$V_R = 3 \text{ V}$			10	μA
Center radiant intensity *	I_e	$I_F = 50 \text{ mA}$	1.2			mW/sr
Peak emission wavelength	λ_p	$I_F = 20 \text{ mA}$		940		nm
Spectral half band width	$\Delta\lambda$	$I_F = 20 \text{ mA}$		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.

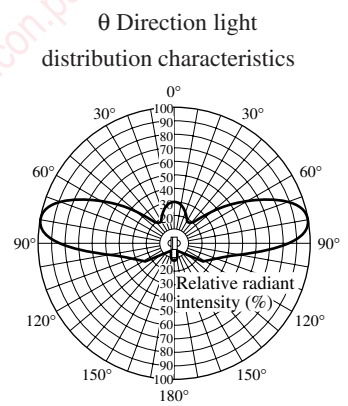
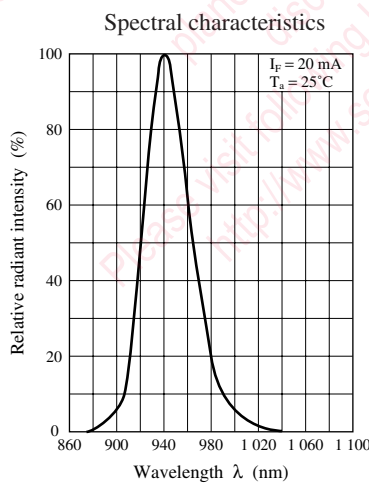
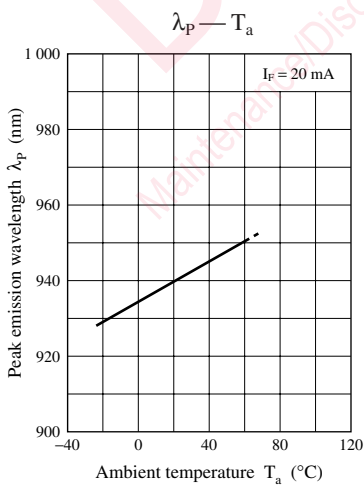
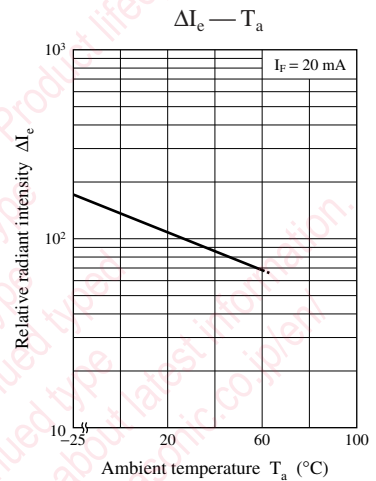
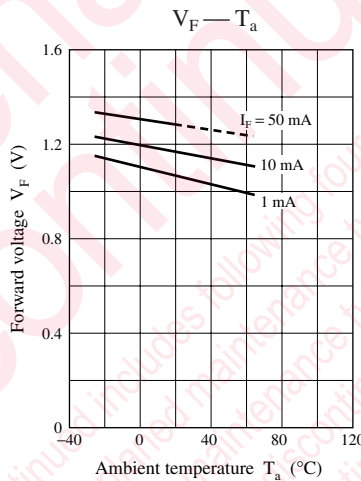
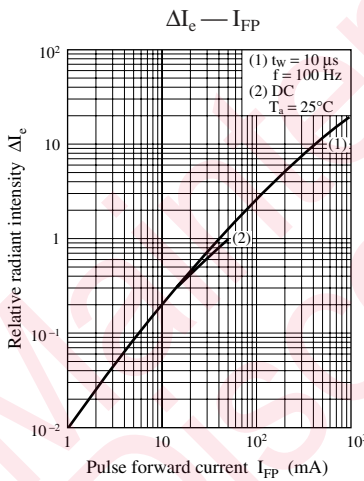
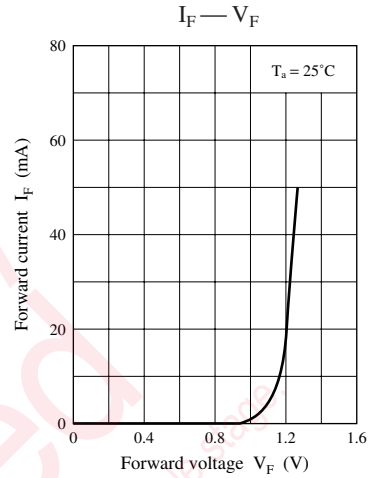
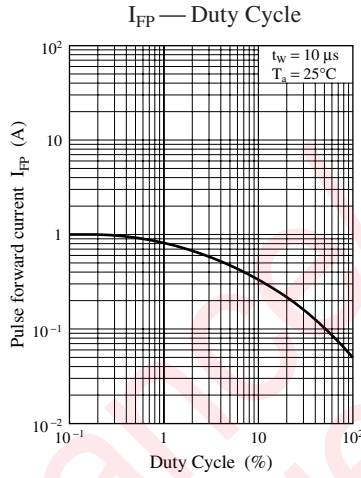
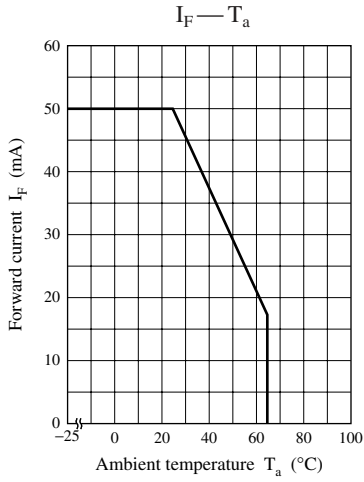
2. Cutoff frequency: 1 MHz

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

3. *: Radiant intensity I_e shows each value of intensity I_{e1} and I_{e2} in two directions.



Note) The part number in the parenthesis shows 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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