

LNA2902L (LN66A(L))

GaAs infrared light emitting diode

For optical control systems

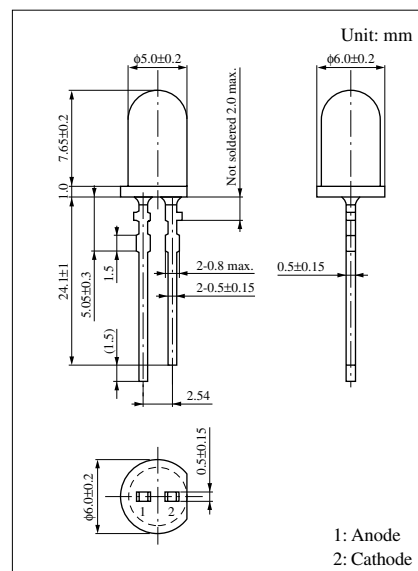
■ Features

- High-power output, high-efficiency: $I_e = 9 \text{ mW/sr (min.)}$
- Emitted light spectrum is suited for silicon photodetectors
- Good radiant power output linearity with respect to input current
- Wide directivity: $\theta = 20^\circ$ (typ.)
- Transparent epoxy resin package
- Long lead-wire type

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

Parameter	Symbol	Rating	Unit
Power dissipation	P_D	160	mW
Forward current (DC)	I_F	100	mA
Pulse forward current *	I_{FP}	1.5	A
Reverse voltage (DC)	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) *: Less than $f = 100 \text{ Hz}$, duty cycle = 0.1%



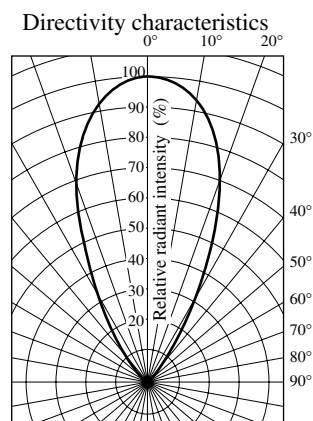
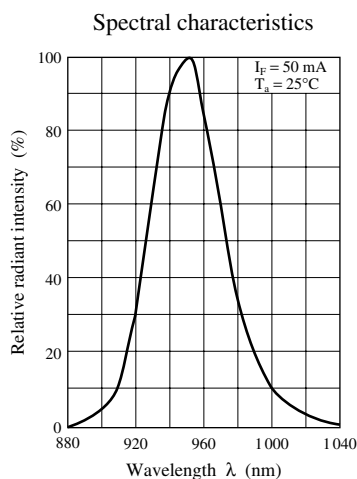
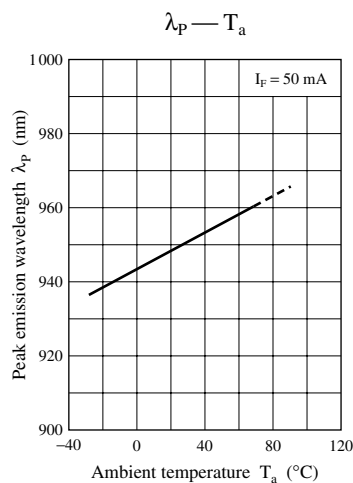
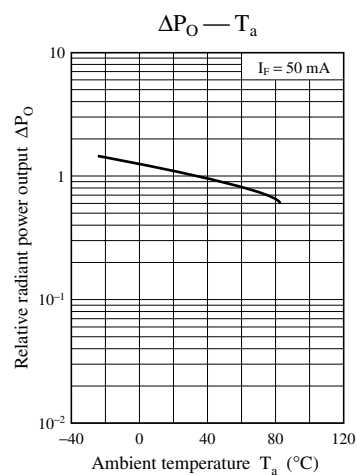
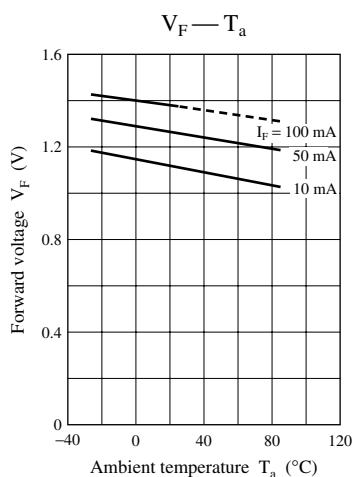
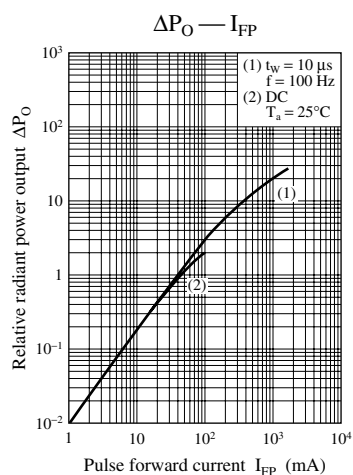
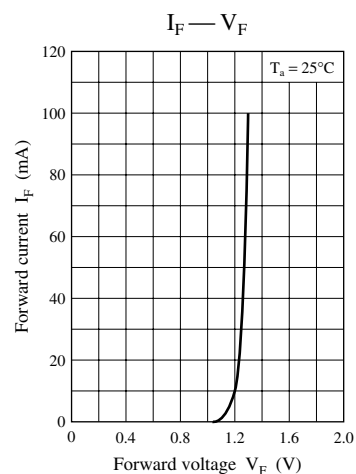
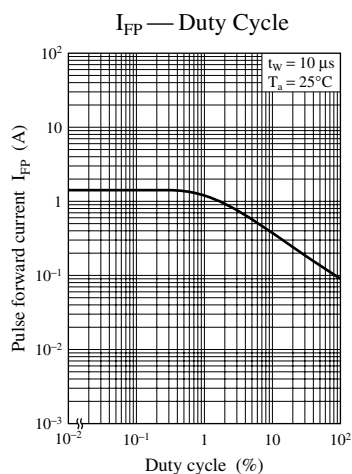
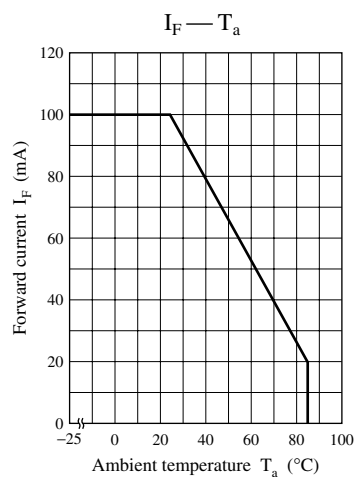
■ Electro-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

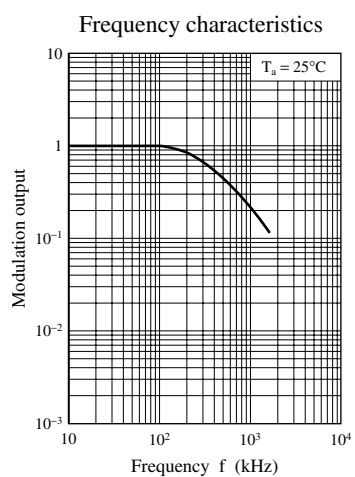
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Radiant intensity	I_e	$I_F = 50 \text{ mA}$	9.0			mW/sr
Total power output	P_O	$I_F = 50 \text{ mA}$		12.0		mW
Peak emission wavelength	λ_p	$I_F = 50 \text{ mA}$		950		nm
Spectral band width	$\Delta\lambda$	$I_F = 50 \text{ mA}$		50		nm
Forward voltage	V_F	$I_F = 100 \text{ mA}$		1.4	1.6	V
Pulse forward voltage *1	V_{FP}	$I_{FP} = 1.0 \text{ A}$			3.0	V
Reverse current	I_R	$V_R = 3 \text{ V}$			10	μA
Total capacitance between terminals	C_t	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$		35		pF
Beal angle at 50% axial intensity	θ	The angle when the beam intensity is halved.		20		$^\circ$
Cut-off frequency *2	f_C			1		MHz

Note) *1: Less than $f = 100 \text{ Hz}$, duty cycle = 0.1%

*2: Cut-off frequency $f_C: 10 \times \log \frac{P_O \text{ at } f = f_C}{P_O \text{ at } f = 50 \text{ kHz}} = -3$

Note) The part number in the parenthesis shows conventional part number.





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Gallium arsenide material (GaAs) is used in this product.

Therefore, do not burn, destroy, cut, crush, or chemically decompose the product, since gallium arsenide material in powder or vapor form is harmful to human health.

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