

LNA2902L (LN66A(L))

GaAs infrared light emitting diode

For optical control systems

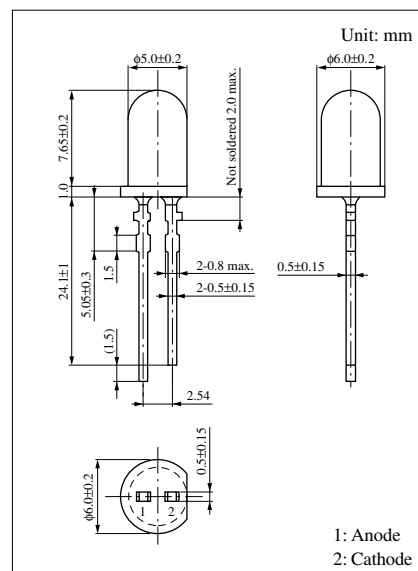
■ Features

- 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%



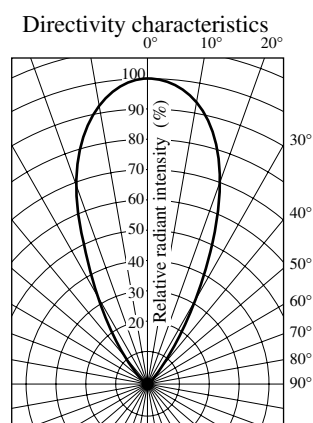
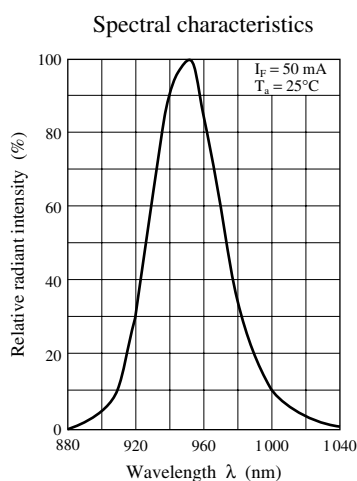
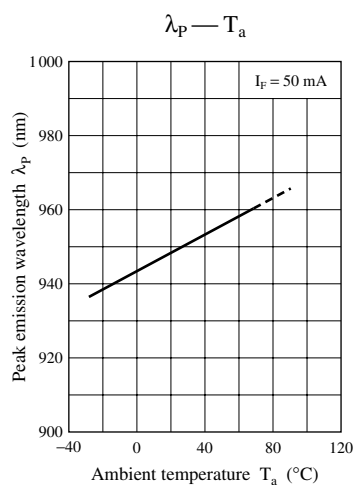
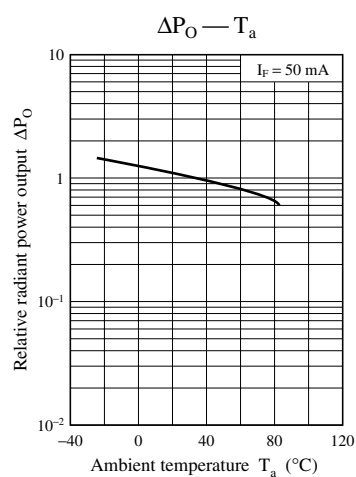
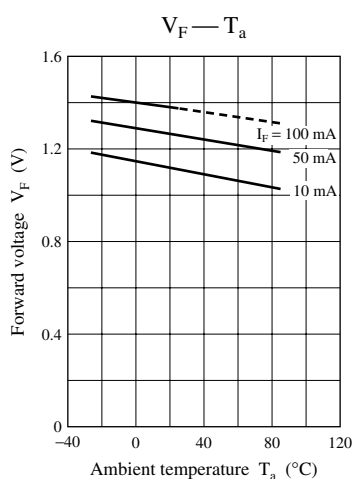
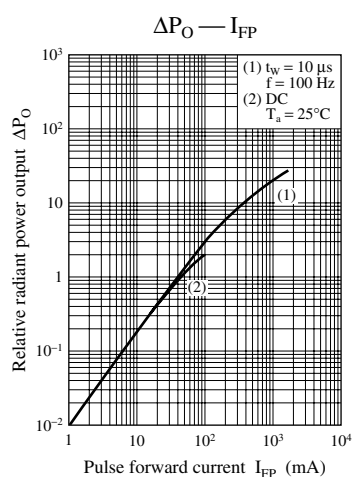
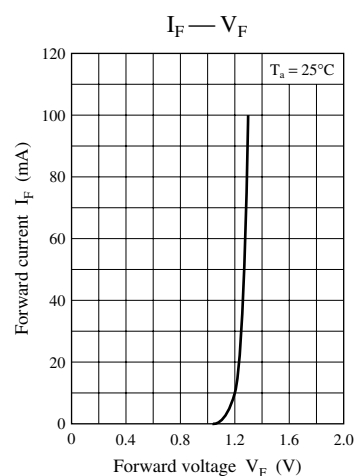
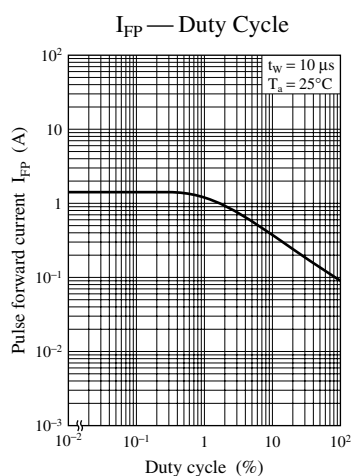
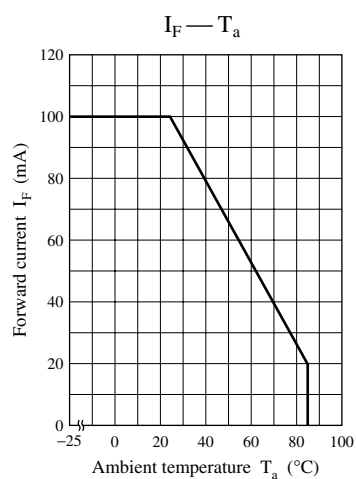
■ Electro-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

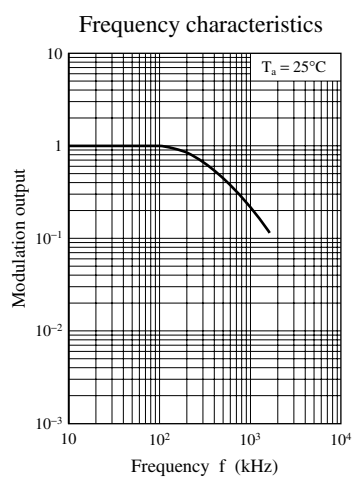
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Radiant intensity	I_e	$I_F = 50 \text{ mA}$	9.0			mW/sr
Total power output	P_O	$I_F = 50 \text{ mA}$		12.0		mW
Peak emission wavelength	λ_p	$I_F = 50 \text{ mA}$		950		nm
Spectral band width	$\Delta\lambda$	$I_F = 50 \text{ mA}$		50		nm
Forward voltage	V_F	$I_F = 100 \text{ mA}$		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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