

LNA2403F, LNA2402L

(LN151F, LN151L)

GaAs Infrared Light Emitting Diodes

For optical control systems

Features

- High-power output, high-efficiency : $P_O = 7.5 \text{ mW}$ (typ.)
- Fast response and high-speed modulation capability :
 $t_r, t_f = 1 \mu\text{s}$ (typ.)
- Infrared light emission close to monochromatic light :
 $\lambda_p = 950 \text{ nm}$ (typ.)
- Narrow directivity, suitable for effective use of radiant power (LNA2402L (LN151L))
- Wide directivity, matched for external optical systems (LNA2403F (LN151F))
- TO-18 standard type package

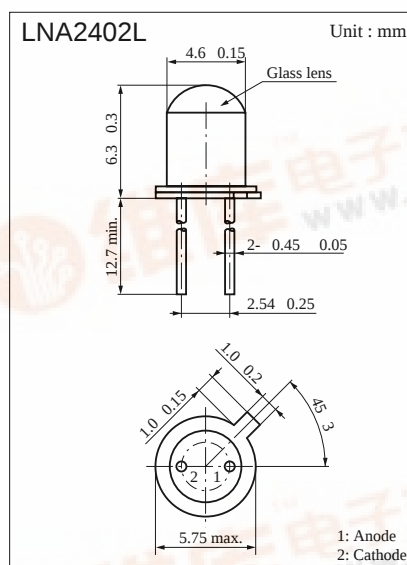
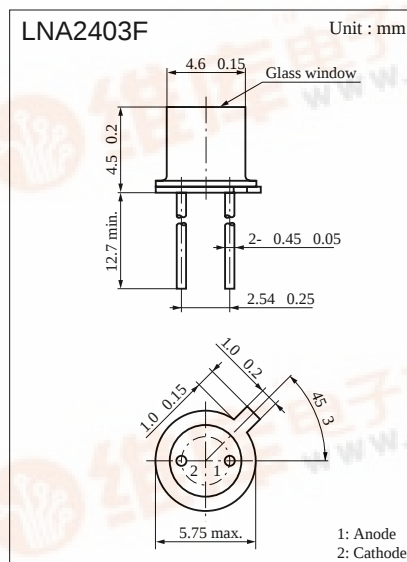
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Ratings	Unit
Power dissipation	P_D	160	mW
Forward current (DC)	I_F	100	mA
Pulse forward current	I_{FP}^*	2	A
Reverse voltage (DC)	V_R	3	V
Operating ambient temperature	T_{opr}	-25 to +100	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

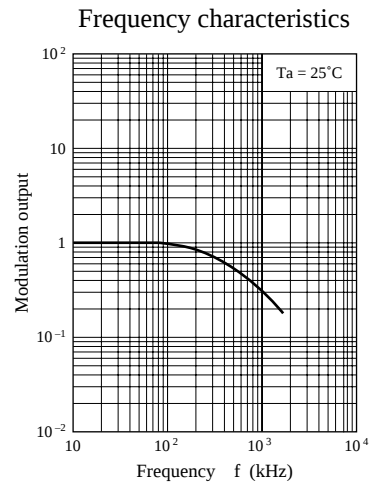
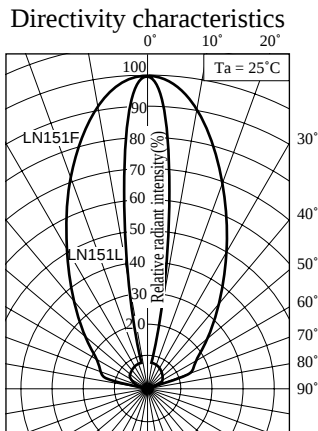
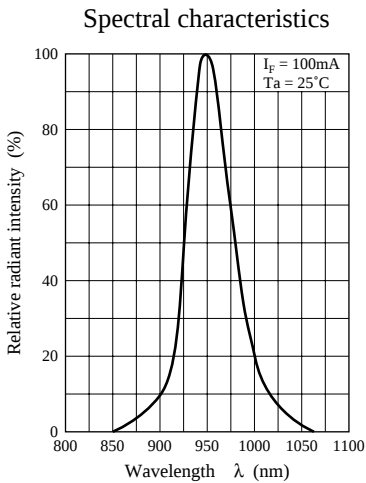
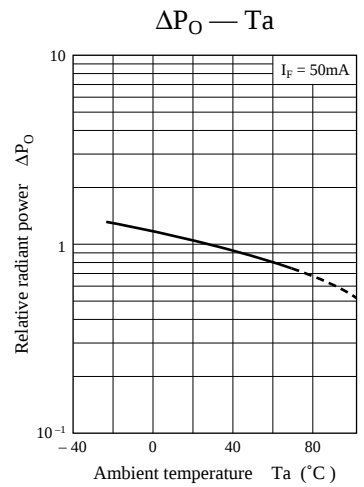
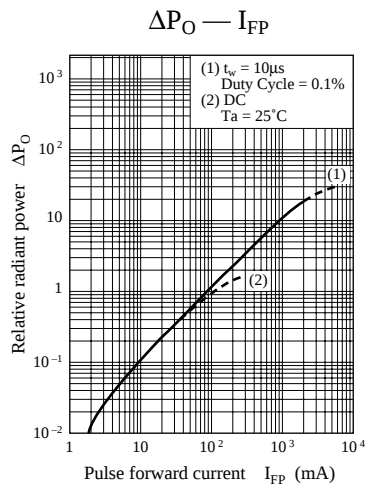
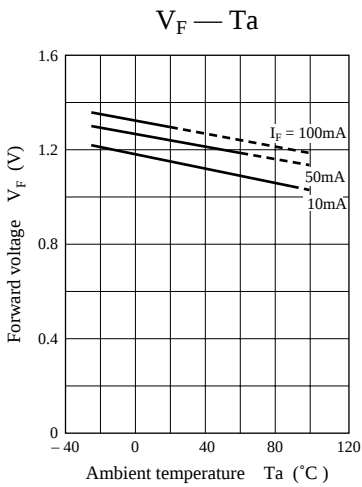
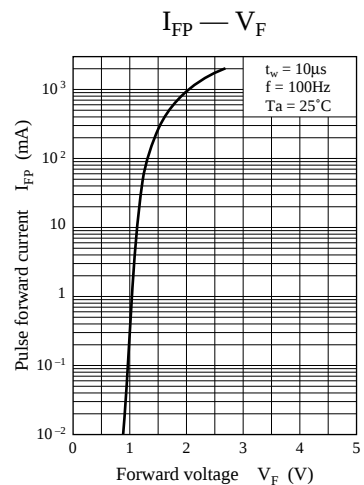
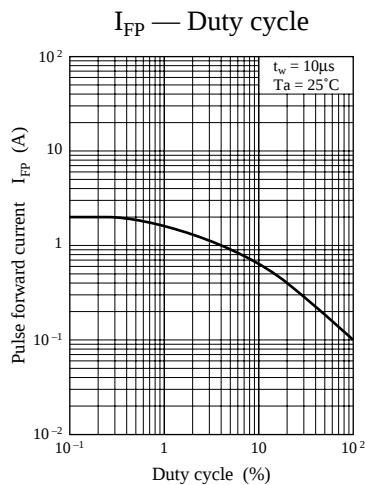
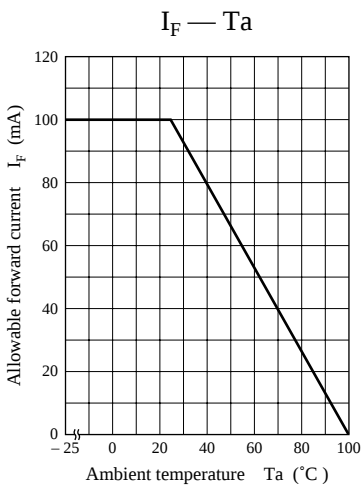
* $f = 100 \text{ Hz}$, Duty cycle = 0.1 %

Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	P_O	$I_F = 100\text{mA}$	5	7.5		mW
Peak emission wavelength	λ_p	$I_F = 100\text{mA}$		950		nm
Spectral half band width	$\Delta\lambda$	$I_F = 100\text{mA}$		50		nm
Forward voltage (DC)	V_F	$I_F = 100\text{mA}$		1.3	1.6	V
Reverse current (DC)	I_R	$V_R = 3\text{V}$			10	μA
Capacitance between pins	C_t	$V_R = 0\text{V}$, $f = 1\text{MHz}$		60		pF
Rise time	t_r	$I_{FP} = 100\text{mA}$		1		μs
Fall time	t_f			1		μs
Half-power angle	LNA2403F	θ	The angle in which radiant intensity is 50%	32		deg.
	LNA2402L			8		deg.



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



Caution for Safety

 **DANGER**

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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