Panasonic

LNA2402L (LN151L), LNA2403F (LN151F)

GaAs Infrared Light Emitting Diodes

For optical control systems

Features

- High-power output, high-efficiency: $P_0 = 5.0 \text{ mW} \text{ (min.)}$
- Fast response and high-speed modulation capability: $t_r, t_f = 1 \ \mu s \ (typ.)$
- 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°C

Parameter	Symbol	Rating	Unit	
Reverse voltage	V _R	3	V	
Forward current	I_F	100	mA	
Pulse forward current *	I_{FP}	2	А	
Power dissipation	P _D	160	mW	
Operating ambient temperature	T _{opr}	-25 to +100	°C	
Storage temperature	T _{stg}	-30 to +100	°C	

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

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





Parame	eter	Symbol	Conditions	Min	Тур	Max	Unit
Forward voltage		V _F	$I_F = 100 \text{ mA}$		1.3	1.6	V
Reverse current		I _R	$V_R = 3 V$			10	μΑ
Radiant power *		Po	$I_F = 100 \text{ mA}$	5.0			mW
Peak emission wave	elength	$\lambda_{\rm P}$	$I_F = 100 \text{ mA}$		950		nm
Spectral half band w	vidth	Δλ	$I_F = 100 \text{ mA}$		50		nm
Terminal capacitanc	e	Ct	$V_R = 0 V, f = 1 MHz$		60		pF
Rise time		t _r	$I_{FP} = 100 \text{ mA}$		1		μs
Fall time		t _f			1		μs
Half-power angle	LNA2402L	θ	The Angle when the radiant		8		0
	LNA2403F	1	power is halved		32		0

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Cutoff frequency: 1 MHz

$$P_{\rm C}$$
: 10 × log $\frac{P_{\rm O}$ at f = f_{\rm C}}{P_{\rm O} at f = 50 kHz = -3

3. *: A light detection element uses a silicon diode have proofread a load with a standard device.

f

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

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▲ 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 form general industrial waste or household garbage.

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