

LN152

GaAs Infrared Light Emitting Diode

For optical control systems

■ Features

- High-power output, high-efficiency: $P_O = 10$ mW (typ.)
- Wide directivity, matched for external optical systems: $\theta = 90^\circ$
- Infrared light emission close to monochromatic light: $\lambda_p = 950$ nm (typ.)
- Optimum for measuring instruments and control equipments in combination with silicon photodetectors
- High-speed modulation

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

Parameter	Symbol	Rating	Unit
Power dissipation	P_D	160	mW
Forward current	I_F	100	mA
Pulse forward current *	I_{FP}	1.5	A
Reverse voltage	V_R	3	V
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

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

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

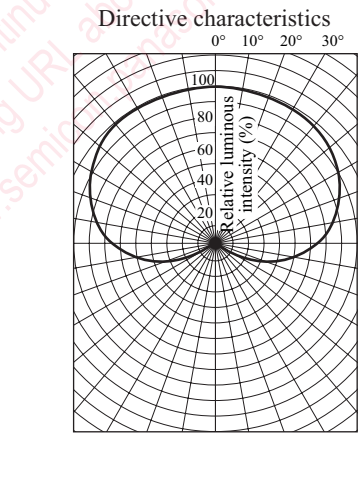
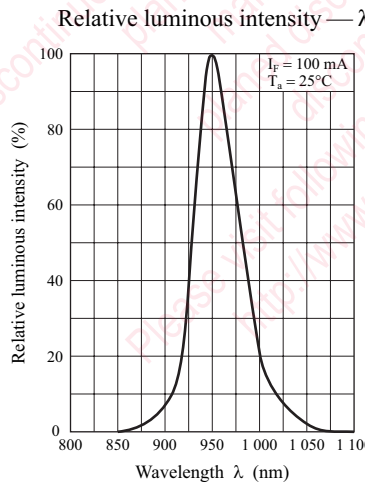
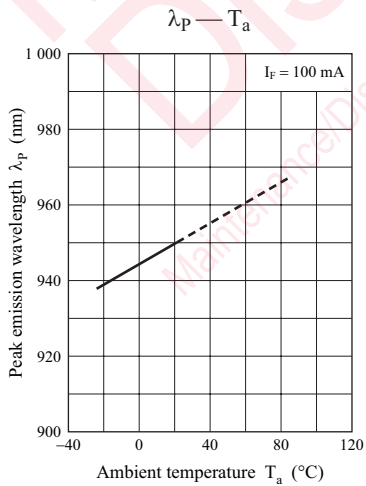
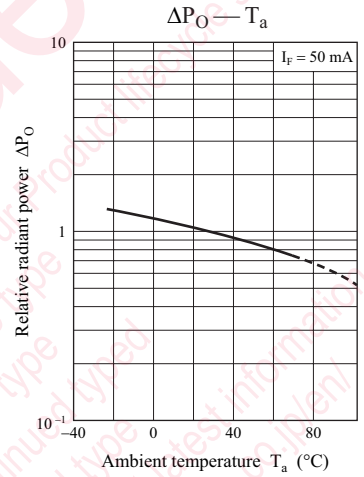
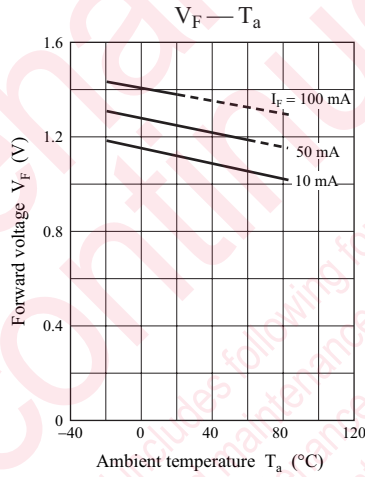
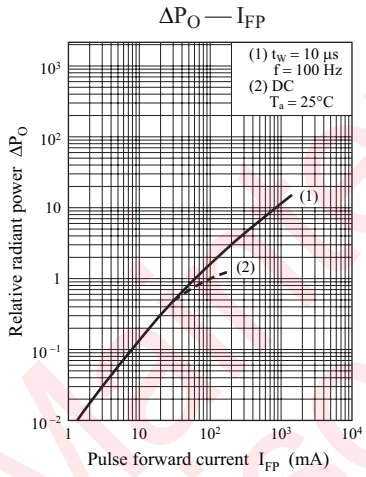
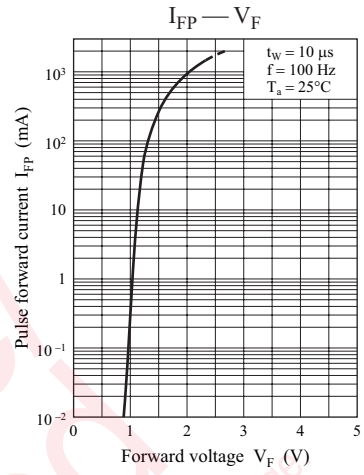
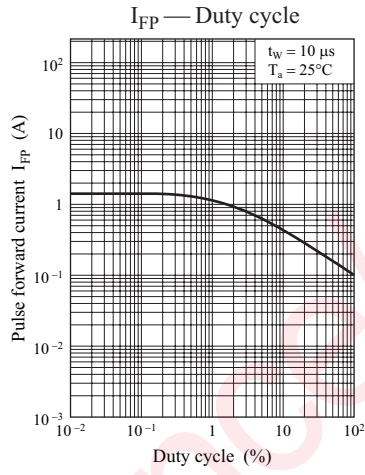
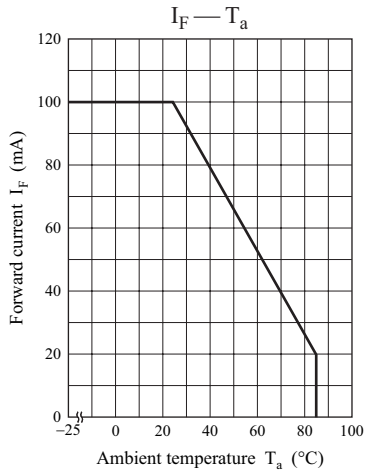
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Radiant power *	P_O	$I_F = 100$ mA	5	10		mW
Reverse current	I_R	$V_R = 3$ V			10	μA
Forward voltage	V_F	$I_F = 100$ mA		1.3	1.6	V
Terminal capacitance	C_t	$V_R = 0$ V, $f = 1$ MHz		60		pF
Peak emission wavelength	λ_p	$I_F = 100$ mA		950		nm
Spectral half band width	$\Delta\lambda$	$I_F = 100$ mA		50		nm
Rise time	t_r	$I_{FP} = 100$ mA		1		μs
Fall time	t_f	$I_{FP} = 100$ mA		1		μs
Half-power angle	θ	The angle when the radiant power is halved.		90		$^\circ$

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

2. Cutoff frequency: 1 MHz

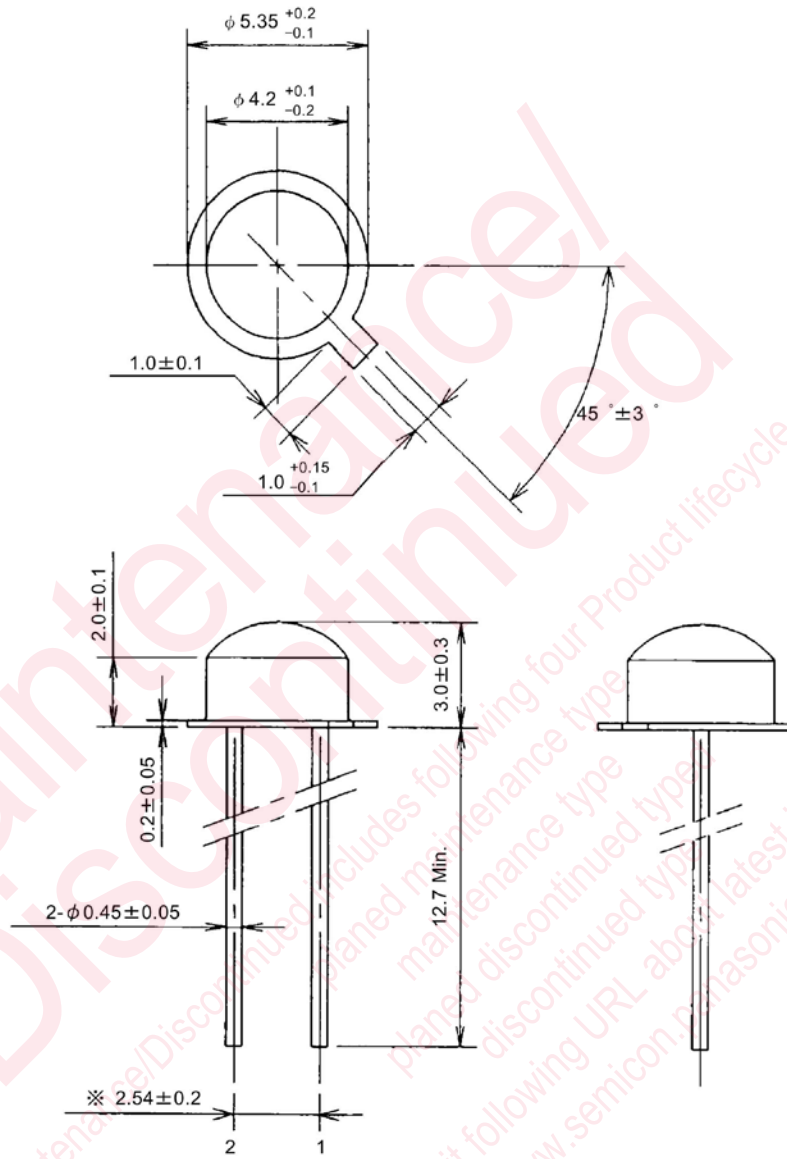
$$f_c : 10 \times \log \frac{P_O \text{ at } f = f_c}{P_O \text{ at } f = 50 \text{ kHz}} = -3$$

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



■ Package (Unit: mm)

MEDLTN2S0001



- Pin name
- 1: Anode
- 2: Cathode

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