



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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LN77L

GaAlAs Infrared Light Emitting Diode

For optical control systems

■ Features

- High-power output, high-efficiency: $P_O = 18$ mW (typ.)
- Fast response and high-speed modulation capability: $f_C = 20$ MHz (typ.)
- Wide directivity: $\theta = 20^\circ$ (typ.)
- Transparent epoxy resin package

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

Parameter	Symbol	Rating	Unit
Power dissipation	P_D	190	mW
Forward current	I_F	100	mA
Pulse forward current *	I_{FP}	1	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	$I_F = 50$ mA	10	18		mW
Reverse current	I_R	$V_R = 3$ V			10	μA
Forward voltage	V_F	$I_F = 100$ mA		1.6	1.9	V
Peak emission wavelength	λ_P	$I_F = 50$ mA		860		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50$ mA		40		nm
Half-power angle	θ	The angle when the radiant power is halved.		20		$^\circ$

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

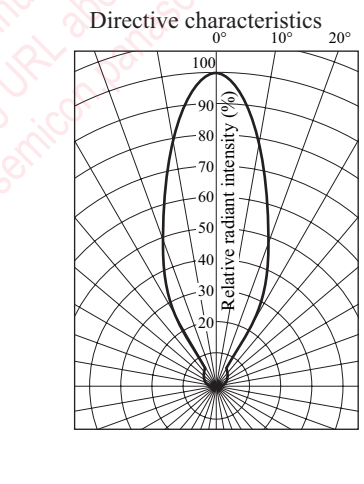
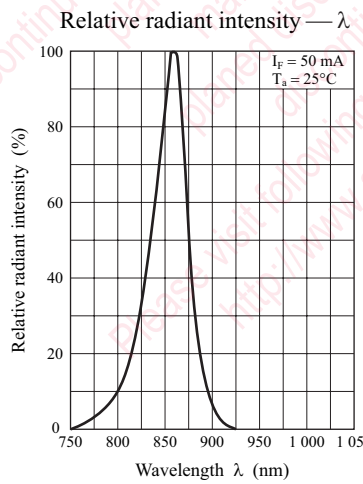
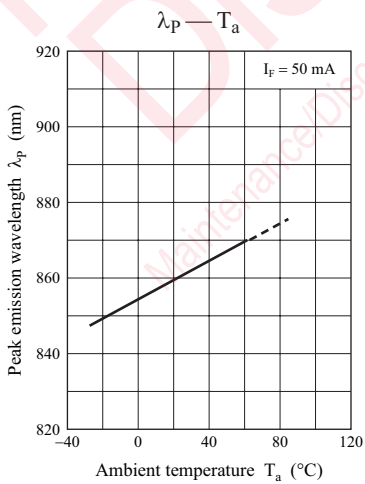
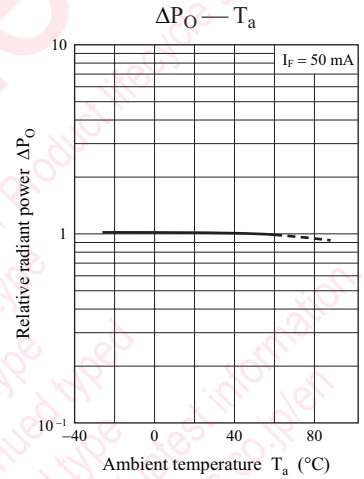
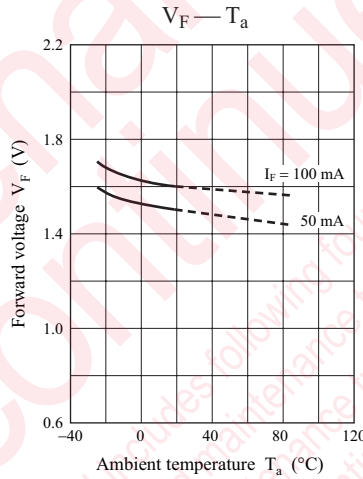
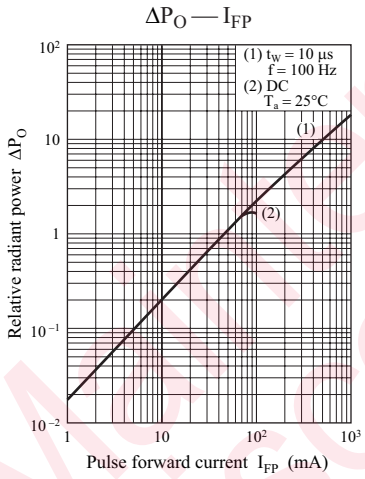
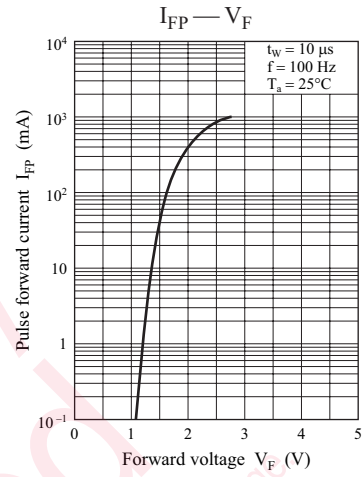
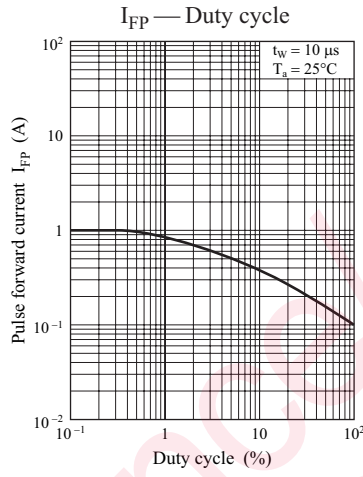
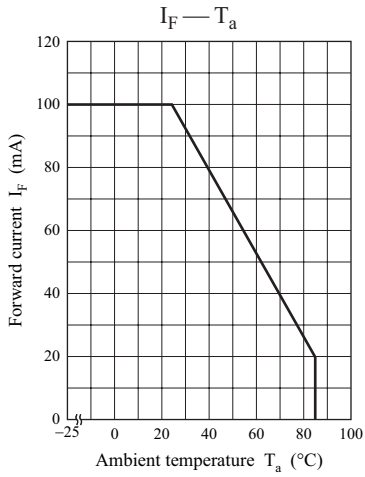
2. Modulation total power output 3 dB frequency to fall from 1 MHz.

Cutoff frequency: 20 MHz

$$f_C : 10 \times \log \frac{P_O \text{ at } f = f_C}{P_O \text{ at } f = 1 \text{ MHz}} = -3$$

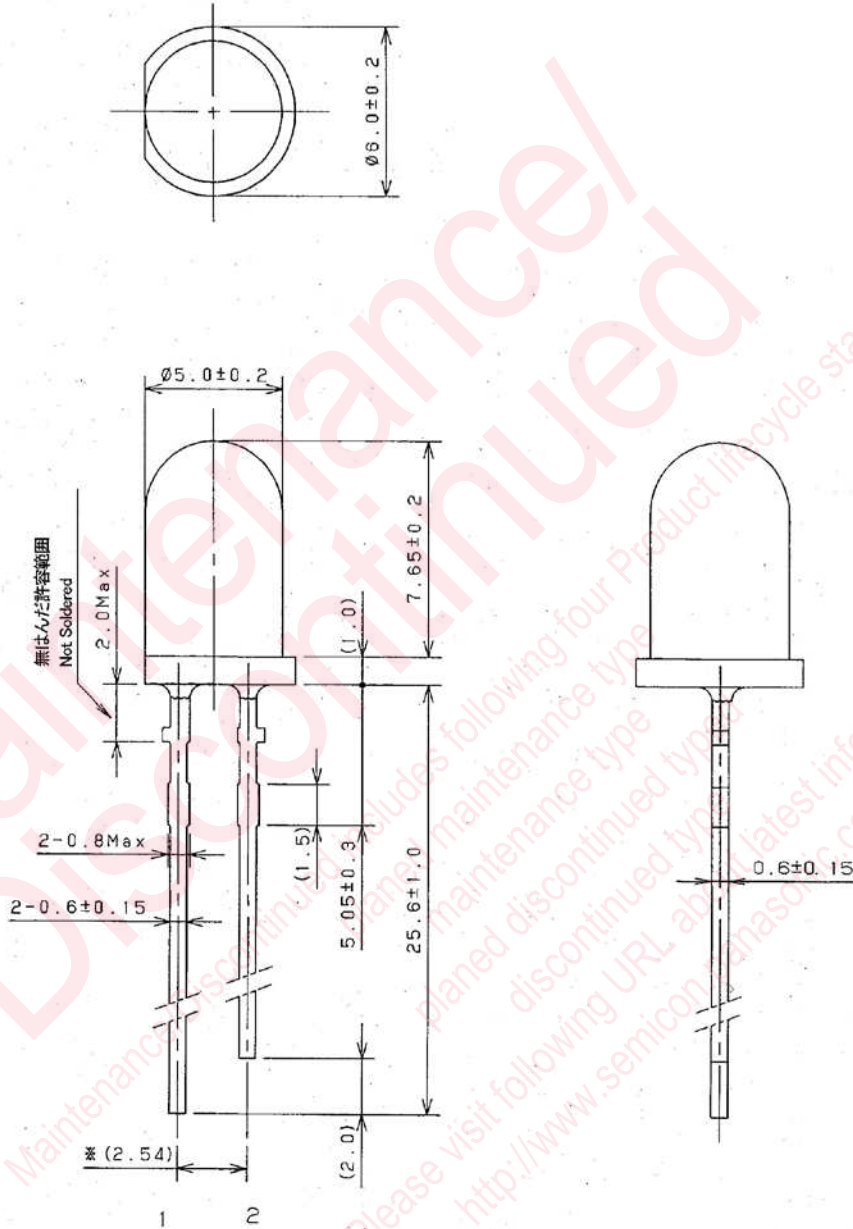
3. LED might radiate red light under large current drive.

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



■ Package (Unit: mm)

LEXLTN2S0002



- Pin name
- 1: Anode
- 2: Cathode

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