

# LNA4602L

## GaAlAs Infrared Light Emitting Diode

For optical control systems

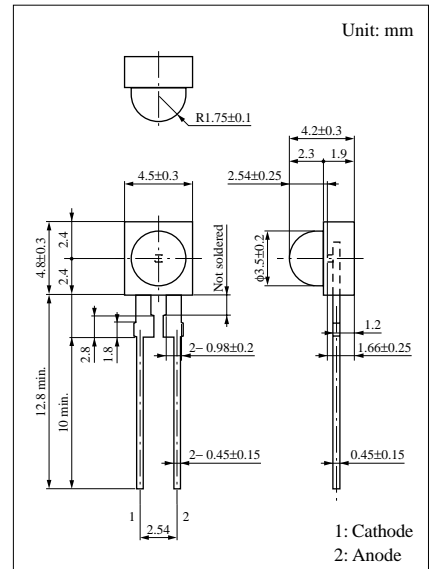
### ■ Features

- High-power output, high-efficiency
- Light-emitting pattern of almost point source
- Ultra-miniature, thin side-view type package

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

Parameter	Symbol	Ratings	Unit
Pulse forward current *	$I_{FP}$	1.2	A
Reverse voltage (DC)	$V_R$	3	V
Operating ambient temperature	$T_{opr}$	-20 to +60	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30 to +70	$^\circ\text{C}$

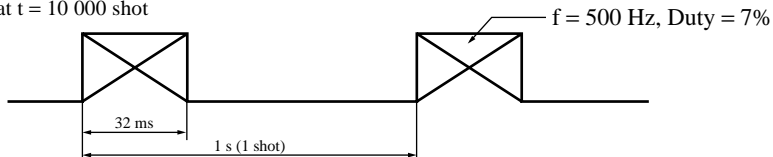
Note) \*:  $f = 100 \text{ Hz}$ , Duty Cycle = 0.1%



### ■ Electro-optical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	$P_O$	$I_F = 50 \text{ mA}$	3			mW
Peak emission wavelength	$\lambda_p$	$I_F = 50 \text{ mA}$		850		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50 \text{ mA}$		35		nm
Forward voltage (DC)	$V_F$	$I_F = 50 \text{ mA}$		1.5	1.9	V
Peak forward voltage	$V_{FP}$	$I_{FP} = 1 \text{ A}$ , $t_w = 0.14 \text{ ms}$		2.9	3.8	V
Reverse current (DC)	$I_R$	$V_R = 3 \text{ V}$			100	$\mu\text{A}$
Half-power angle	$\theta$	The angle in which radiant intensity is 50%		30		$^\circ$

Note) 1.  $\Delta P_O \leq 35\%$  at  $t = 10\,000$  shot



2. Frequency that the modulated total output power decreases by 3 dB from that of at 1 MHz.

$$\text{Cut-off Frequency: } 200 \text{ MHz} \quad f_C: 10 \log \frac{P_O(f_C \text{ MHz})}{P_O(1 \text{ MHz})} = -3$$