

# LN55

## GaAs Infrared Light Emitting Diode

For optical control systems

### ■ Features

- High-power output, high-efficiency :  $P_O = 3.5 \text{ mW}$  (typ.)
- Suited for use with silicon photodetectors
- Infrared light emission close to monochromatic light :  $\lambda_p = 950 \text{ nm}$  (typ.)
- High-speed modulation capability

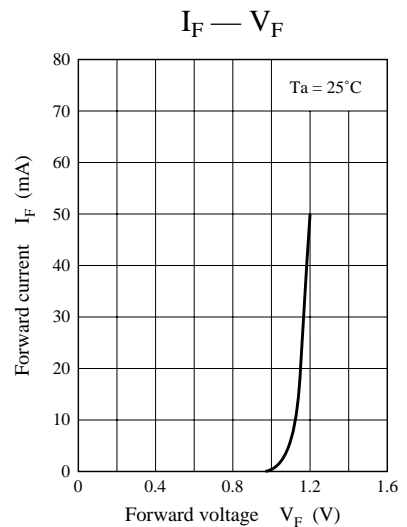
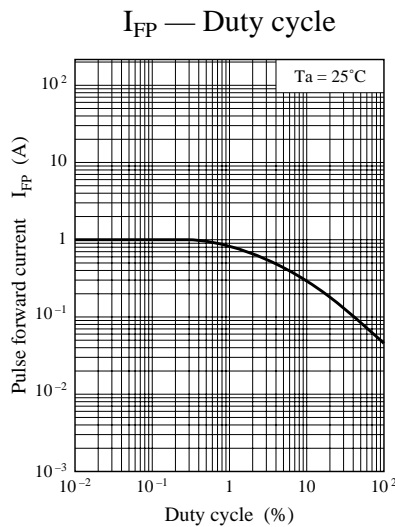
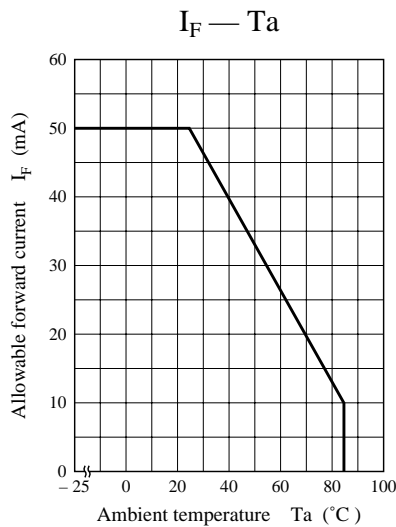
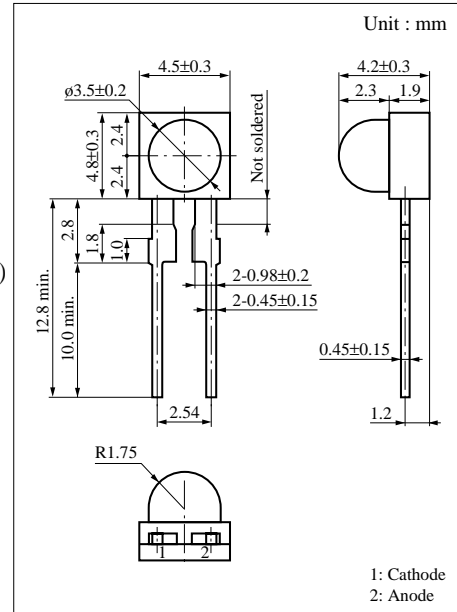
### ■ Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

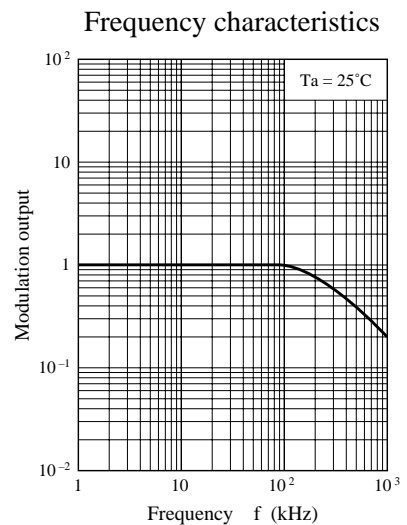
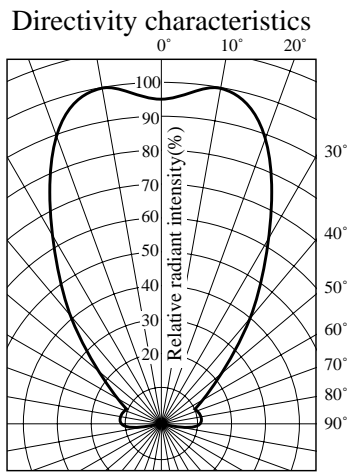
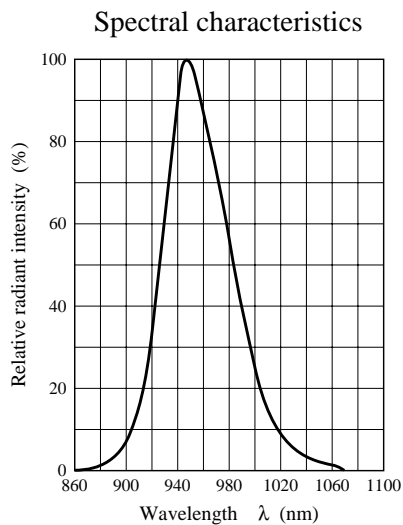
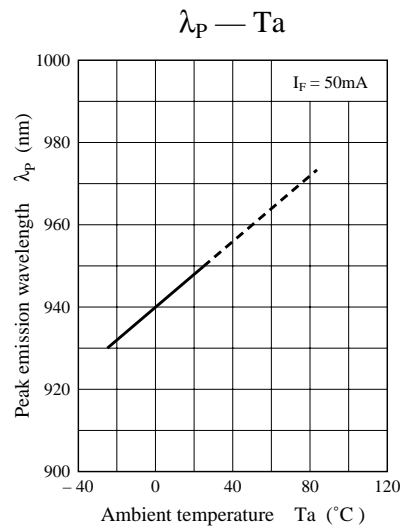
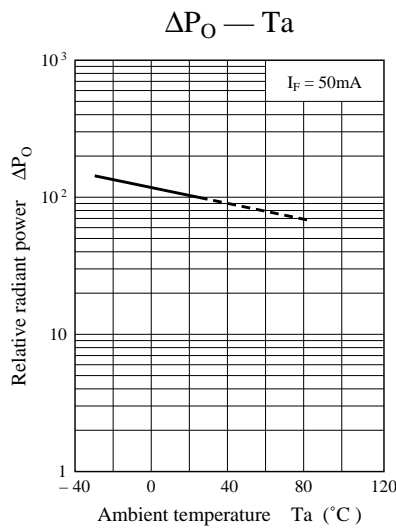
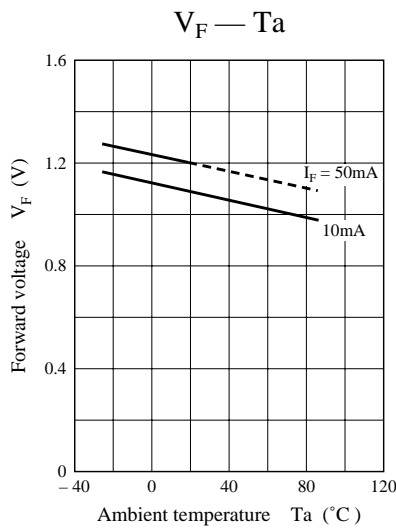
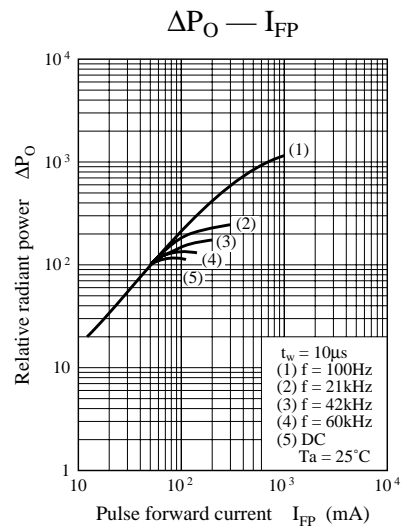
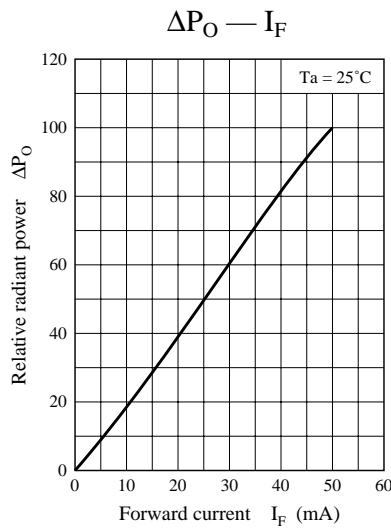
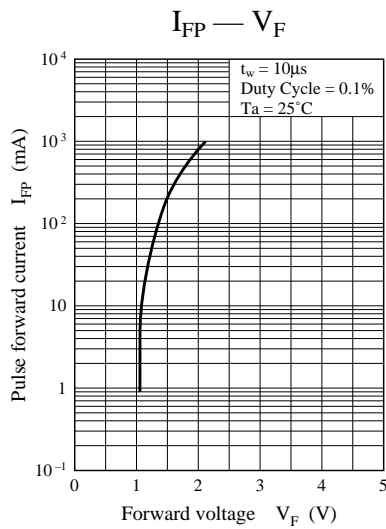
Parameter	Symbol	Rated	Unit
Power dissipation	$P_D$	75	mW
Forward current (DC)	$I_F$	50	mA
Pulse forward current	$I_{FP}^*$	1	A
Reverse voltage (DC)	$V_R$	3	V
Operating ambient temperature	$T_{opr}$	-25 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30 to +100	$^\circ\text{C}$

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

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

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	$P_O$	$I_F = 50\text{mA}$	1.8	3.5		mW
Peak emission wavelength	$\lambda_p$	$I_F = 50\text{mA}$		950		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50\text{mA}$		50		nm
Forward voltage (DC)	$V_F$	$I_F = 50\text{mA}$			1.5	V
Reverse current (DC)	$I_R$	$V_R = 3\text{V}$			10	$\mu\text{A}$
Capacitance between pins	$C_t$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		50		pF
Half-power angle	$\theta$	The angle in which radiant intensity is 50%		35		deg.





# 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.

Observe the relevant laws and regulations when disposing of the products. Do not mix them with ordinary industrial waste or household refuse when disposing of GaAs-containing products.

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