

LN54

GaAs Infrared Light Emitting Diode

For optical control systems

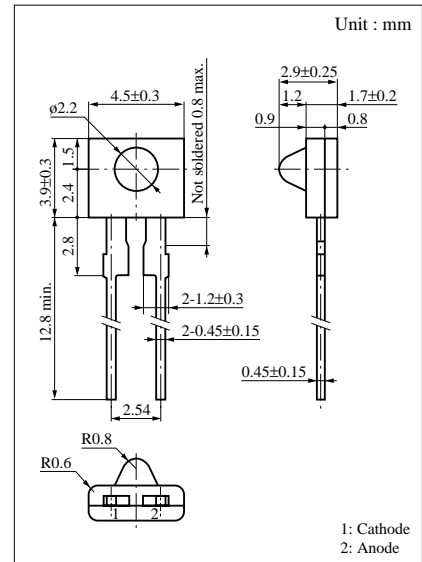
■ Features

- High-power output, high-efficiency : $P_O = 4.6 \text{ mW}$ (typ.)
- Emitted light spectrum suited for silicon photodetectors
- Infrared light emission close to monochromatic light :
 $\lambda_p = 950 \text{ nm}$ (typ.)
- Small size, thin side-view type package

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

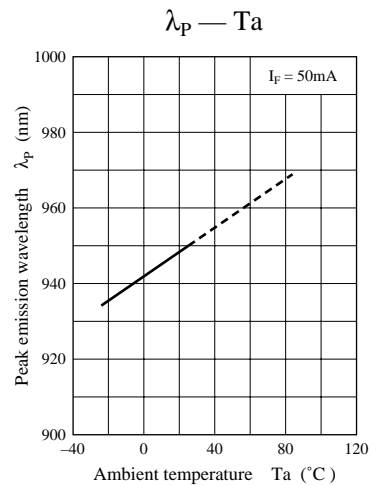
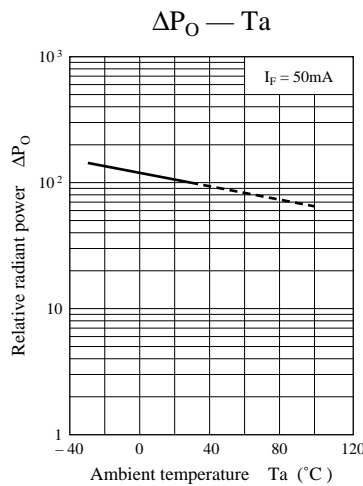
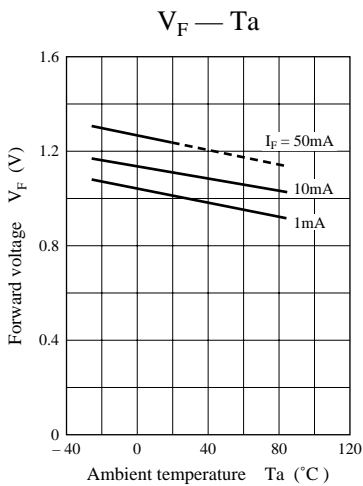
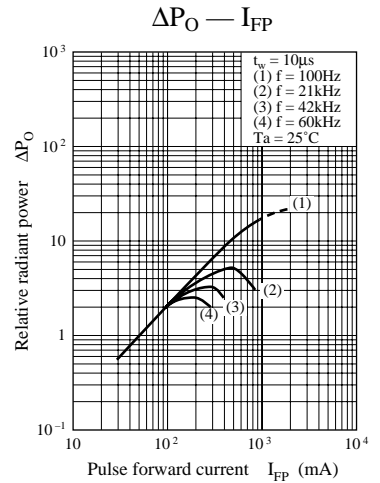
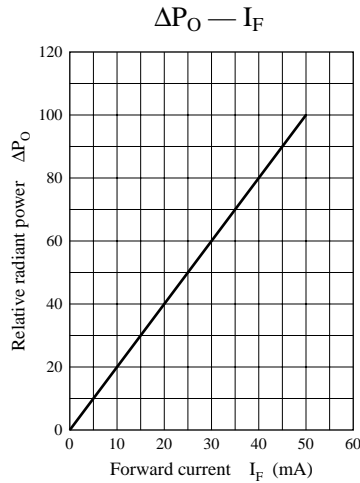
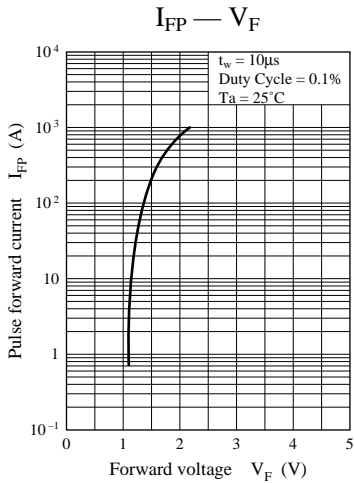
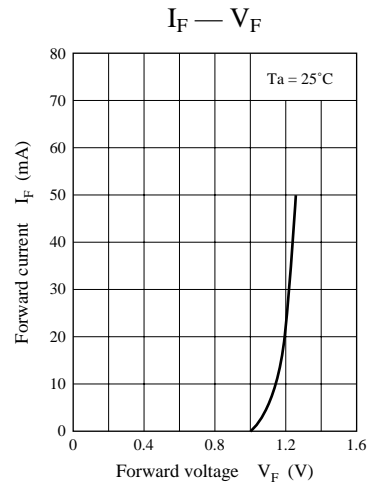
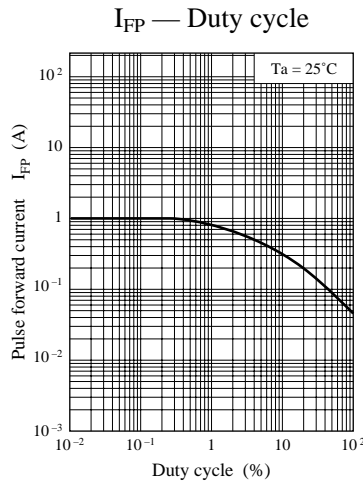
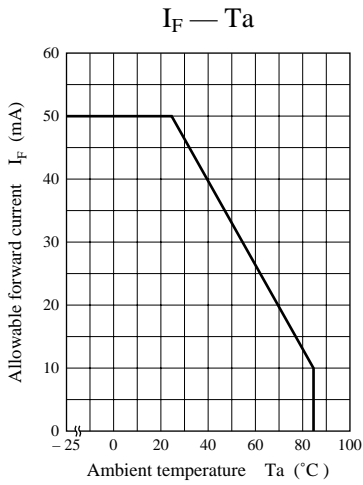
Parameter	Symbol	Ratings	Unit
Power dissipation	P_D	75	mW
Forward current (DC)	I_F	50	mA
Pulse forward current	I_{FP}^*	1	A
Reverse voltage (DC)	V_R	3	V
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

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

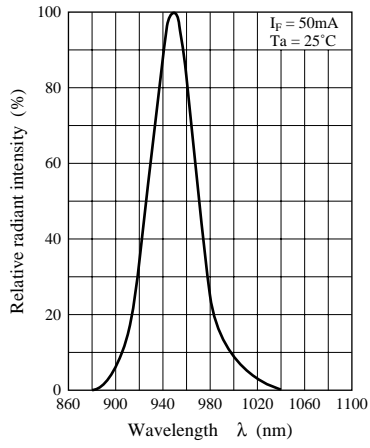


■ Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)

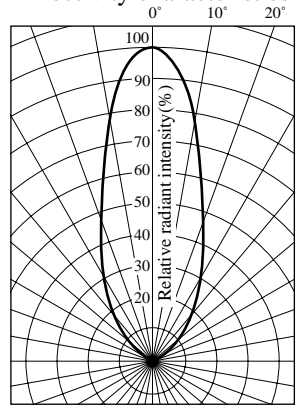
Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	P_O	$I_F = 50\text{mA}$	2.5	4.6		mW
Peak emission wavelength	λ_p	$I_F = 50\text{mA}$		950		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50\text{mA}$		50		nm
Forward voltage (DC)	V_F	$I_F = 50\text{mA}$			1.5	V
Reverse current (DC)	I_R	$V_R = 3\text{V}$			10	μA
Capacitance between pins	C_t	$V_R = 0\text{V}$, $f = 1\text{MHz}$		35		pF
Half-power angle	θ	The angle in which radiant intensity is 50%		17		deg.



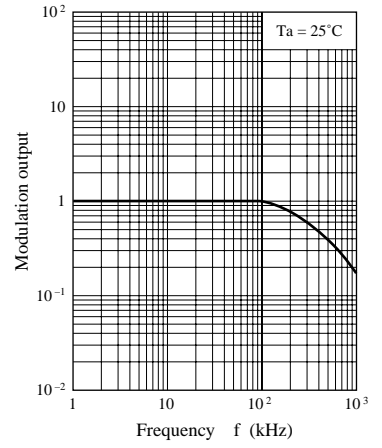
Spectral characteristics



Directivity characteristics



Frequency characteristics



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.

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