

LN671

GaAlAs Infrared Light Emitting Diode

Light source for distance measuring systems

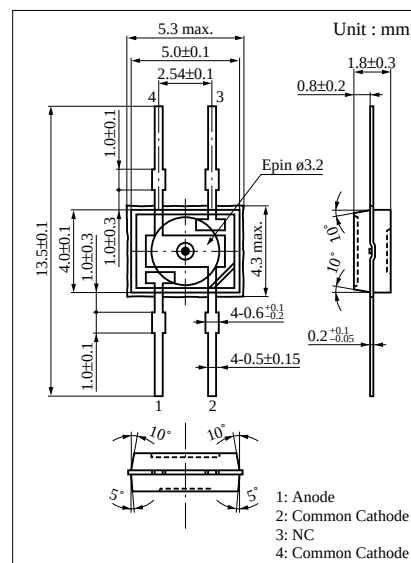
Features

- High-power output, high-efficiency : $P_O = 10 \text{ mW}$ (typ.)
- Fast response and high-speed modulation capability :
 $t_r, t_f = 30 \text{ ns}$ (typ.)
- Small plastic package

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

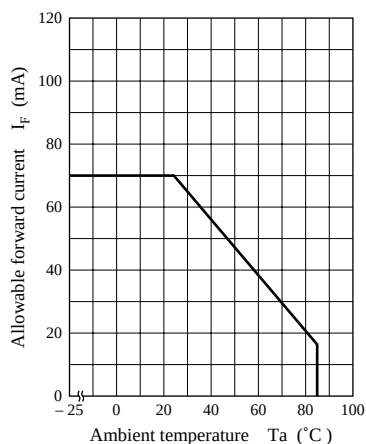
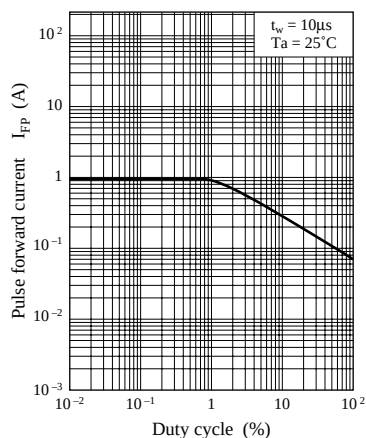
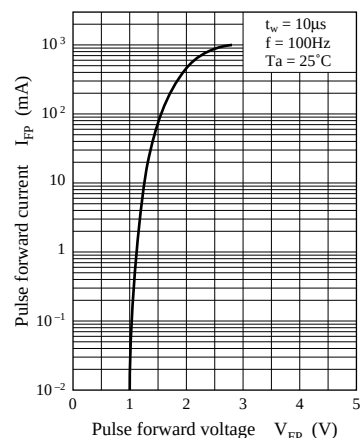
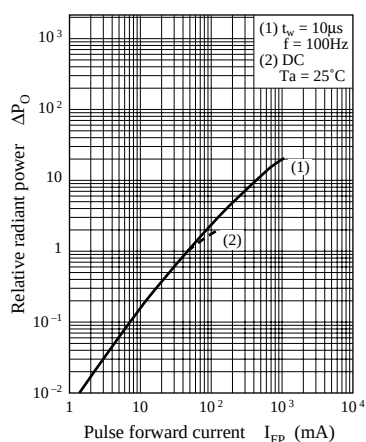
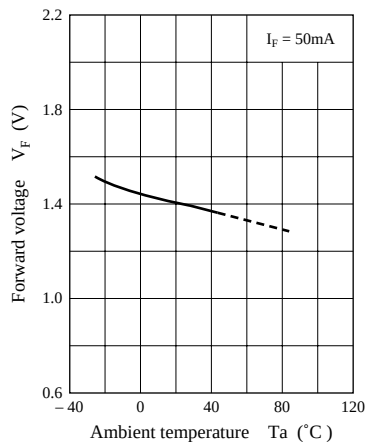
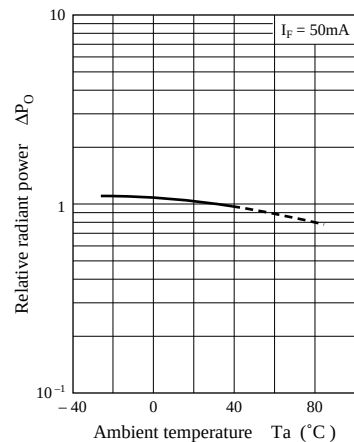
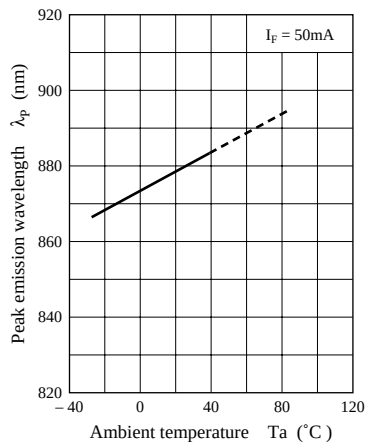
Parameter	Symbol	Ratings	Unit
Power dissipation	P_D	130	mW
Forward current (DC)	I_F	70	mA
Pulse forward current	I_{FP}^*	1	A
Reverse voltage (DC)	V_R	3	V
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

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

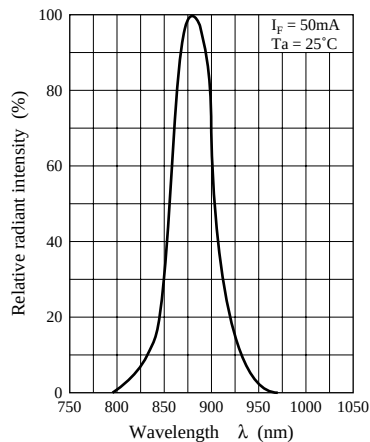


Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	P_O	$I_F = 50\text{mA}$	6	10		mW
Peak emission wavelength	λ_P	$I_F = 50\text{mA}$		880		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50\text{mA}$		50		nm
Forward voltage (DC)	V_F	$I_F = 50\text{mA}$		1.4	1.8	V
Reverse current (DC)	I_R	$V_R = 3\text{V}$			10	μA
Rise time	t_r	$I_{FP} = 50\text{mA}$		30		ns
Fall time	t_f	$I_{FP} = 50\text{mA}$		30		ns
Half-power angle	θ	The angle in which radiant intensity is 50%		50		deg.

$I_F - T_a$  $I_{FP} - \text{Duty cycle}$  $I_{FP} - V_{FP}$  $\Delta P_O - I_{FP}$  $V_F - T_a$  $\Delta P_O - T_a$  $\lambda_p - T_a$ 

Spectral characteristics



Directivity characteristics

