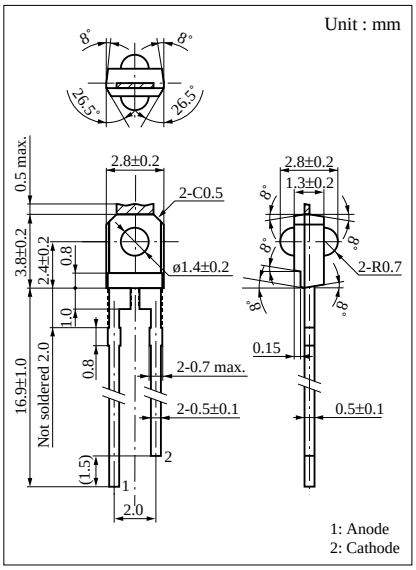
LNA2701L

GaAs Bi-directional Infrared Light Emitting Diode

For light source of VCR (VHS System)



Features

- Two-way directivity
- High-power output, high-efficiency : P_O = 1.8 mW (min.)
- Small resin package
- Long lifetime, high reliability
- Thin type package modified from LN59

Applications

- Light source for tape end sensor of VCR and video camera recorder of VHS system
- Light source for 2-bit photo sensor

Absolute Maximum Ratings (Ta = 25˚C)

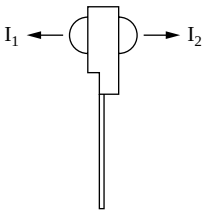
Parameter	Symbol	Ratings	Unit
Power dissipation	P_D	75	mW
Forward current (DC)	I_F	50	mA
Pulse forward current	I_{FP}*	1	A
Reverse voltage (DC)	V_R	3	V
Operating ambient temperature	T_{opr}	–25 to +65	˚C
Storage temperature	T_{stg}	– 30 to +85	˚C

* f = 100 Hz, Duty cycle = 0.1 %

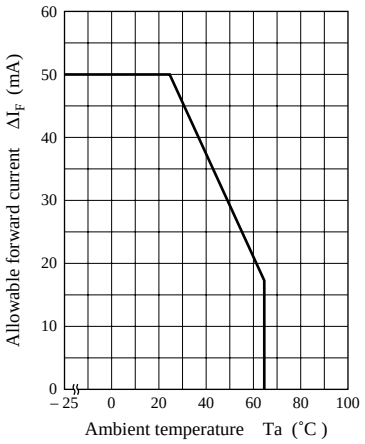
Electro-Optical Characteristics (Ta = 25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant intensity at center	I_e*	I_F = 50mA	1.2			mW/sr
Peak emission wavelength	λ_P	I_F = 20mA		940		nm
Spectral half band width	$\Delta\lambda$	I_F = 20mA		50		nm
Forward voltage (DC)	V_F	I_F = 50mA		1.3	1.5	V
Reverse current (DC)	I_R	V_R = 3V			10	µA
Capacitance between pins	C_t	V_R = 0V, f = 1MHz		35		pF

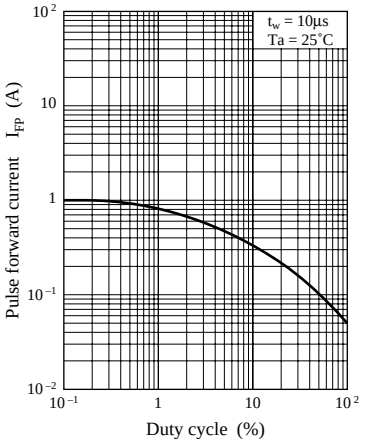
* Radiant intensity I_e shows each value of intensity I_1 and I_2 in two directions.



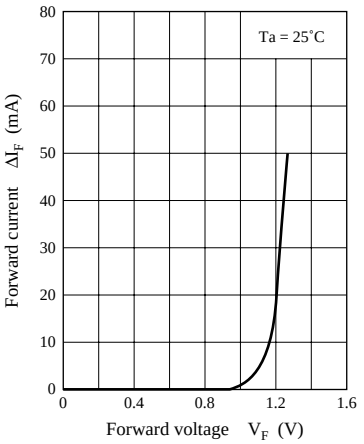
ΔI_F — Ta



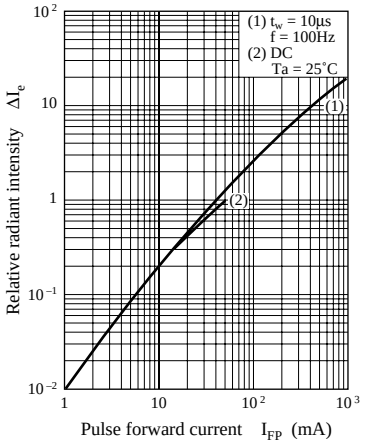
I_{FP} — Duty cycle



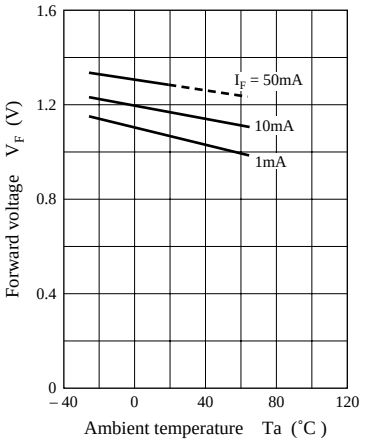
ΔI_F — $V_F\Delta$



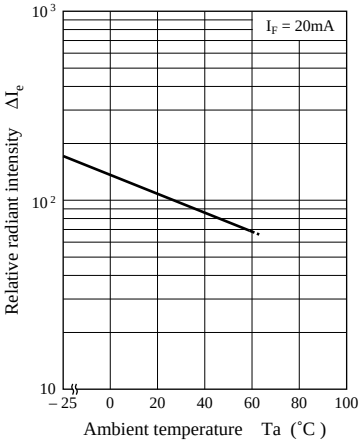
ΔI_e — I_{FP}



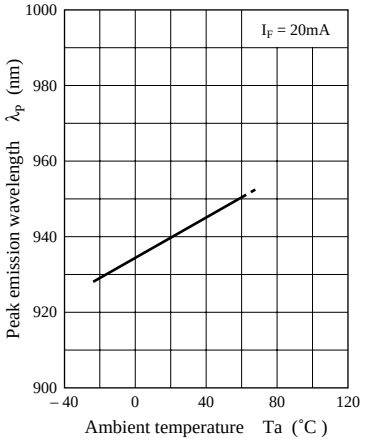
V_F — Ta



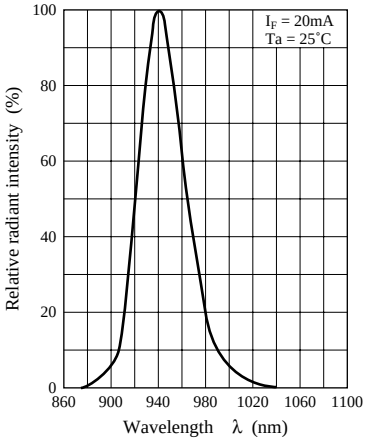
ΔI_e — Ta



λ_P — Ta



Spectral characteristics



θ Direction light distribution characteristics