

LN175

GaAlAs Infrared Light Emitting Diode

For optical control systems

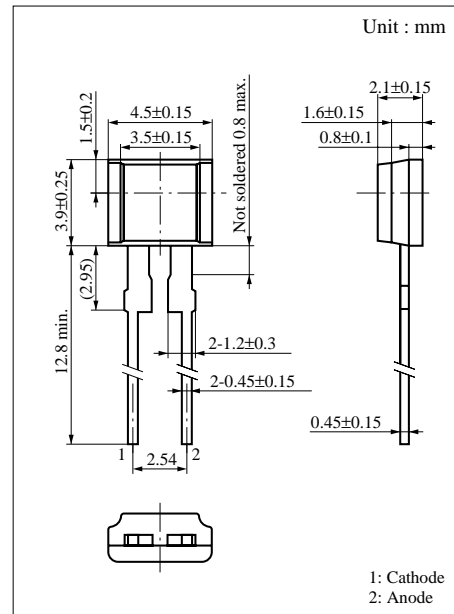
■ Features

- High-power output, high-efficiency : $P_O = 12 \text{ mW}$ (typ.)
- Emitted light spectrum suited for silicon photodetectors : $\lambda_p = 900 \text{ nm}$ (typ.)
- Good radiant power output linearity with respect to input current
- Wide directivity : $\theta = 120 \text{ deg.}$ (typ.)

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

Parameter	Symbol	Ratings	Unit
Power dissipation	P_D	170	mW
Forward current (DC)	I_F	100	mA
Pulse forward current	I_{FP}^*	2	A
Reverse voltage (DC)	V_R	3	V
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 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	$I_F = 100\text{mA}$	7	12		mW
Peak emission wavelength	λ_p	$I_F = 100\text{mA}$		900		nm
Spectral half band width	$\Delta\lambda$	$I_F = 100\text{mA}$		70		nm
Forward voltage (DC)	V_F	$I_F = 100\text{mA}$		1.4	1.7	V
Reverse current (DC)	I_R	$V_R = 3\text{V}$			10	μA
Capacitance between pins	C_t	$V_R = 0\text{V}$, $f = 1\text{MHz}$		50		pF
Response time	t_r, t_f	$I_F = 100\text{mA}$		700		ns
Half-power angle	θ	The angle in which radiant intensity is 50%		120		deg.

