GaAlAs INFRARED EMITTING DIODE

■ GENERAL DESCRIPTION

The NJL1121B-S is a high output and high efficiency infrared emitting diode with a glass lens using GaAlAs.

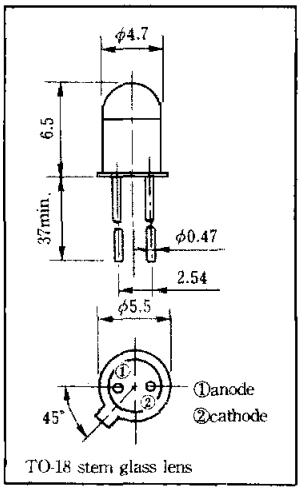
■ FEATURES

- Its the long lead specification of NJL1121B
- lead length is 37mm (min.)
- High output GaAlAs
- High reliability due to Duble Wire bonding

■ APPLICATIONS

- Card reader
- Long distance Optoelectronic switches
- Tachometer
- Smoke detectors

■ OUTLINE (typ.) Unit: mm



TO-18 stem glass lens

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

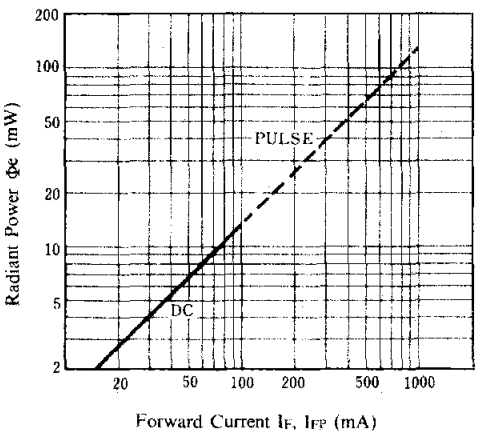
PARAMETER	SYMBOL	RATINGS	UNIT
Forward Current (Continuous)	I_F	100	mA
Pulse Forward Current	I_{FP}	1(Pulse width 100μS, Duth Ratio 0.01)	A
Reverse Voltage (Continuous)	V_R	6	A
Power Dissipation	P_D	170	mW
Operating Temperature	T_{opr}	−40～+100	°C
Storage Temperature	T_{stg}	−55～+125	°C
Soldering Temperature	T_{sol}	260 (10sec. 1.5mm from body)	°C

■ ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C)

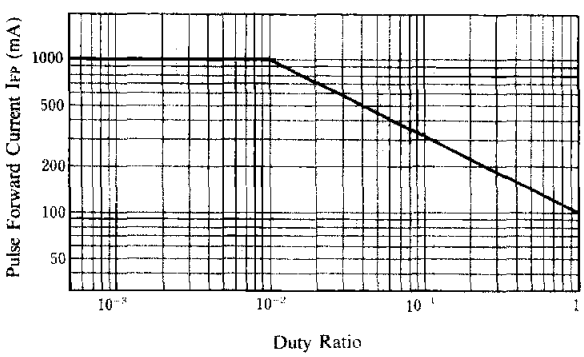
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Radiant Power	Φe	I_F=50mA	—	6.5	—	mW
Spectral Line Halfwidth	Δλ	I_F=50mA	—	75	—	nm
Forward Voltage	V_F	I_F=50mA	—	1.28	—	V
Reverse Current	I_R	V_R=6V	—	—	1	μA
Capacitance	Ct	V_R=0V, f=1MHz	—	25	—	pF
Rise Time	t_r	I_F=50mA	—	500	—	ns
Fall Time	t_f	I_F=50mA	—	500	—	ns
Peak Wavelength	λp	I_F=50mA	—	900	—	nm

■ TYPICAL CHARACTERISTICS

Radiant power vs. Forward Current (Ta=25°C)



Maximum Pulse Forward Current vs. Duty Ratio (Ta=25°C, tw=100μs max.)



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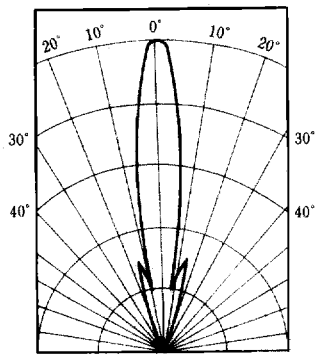
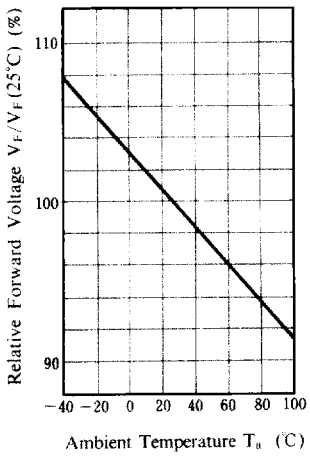
Typical Radiation Pattern

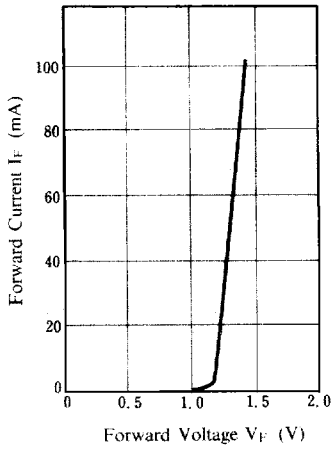
(Ta=25℃)



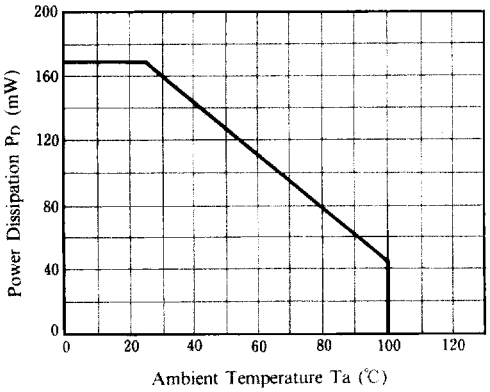
Forward Voltage vs. Temperature



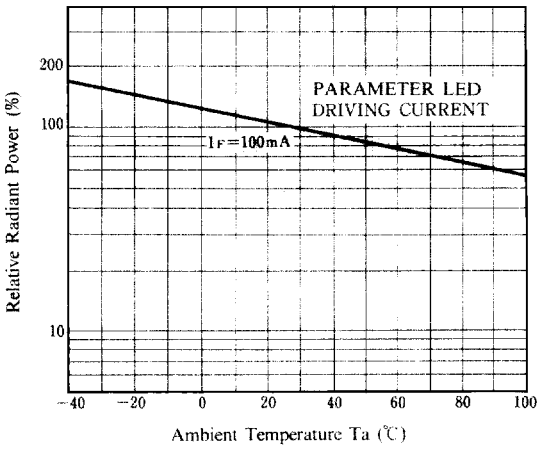
Forward Current vs. Forward Voltage (Ta=25℃)



Power Dissipation vs. Temperature

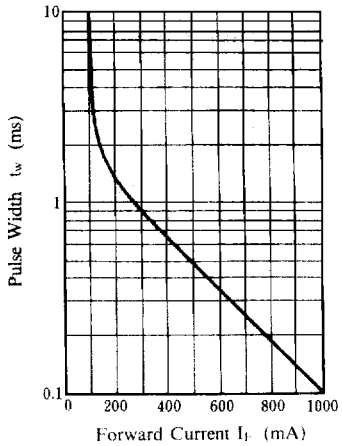


Relative Radiant Power vs. Temperature



Maximum Pulse Width vs. Forward Current

(Ta=25℃, Duty Ratio 0.01 max.)



Relative Intensity vs. Wavelengh (Ta=25℃)