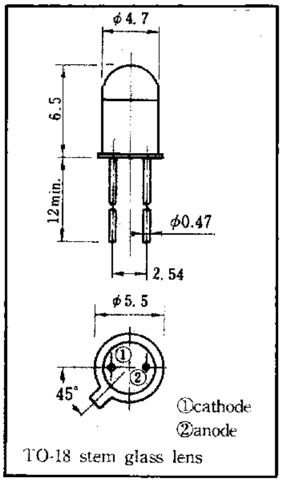
GaAlAs INFRARED EMITTING DIODE

■ FEATURES

- High output, high speed infrared emitting diode due to the use of GaAlAs.
- High output — equivalent to 4 times approximately to that of our conventional products due to the use of GaAlAs chip and header cup
- In combination with NJL611B, NJL612B, NJL721B, NJL7260B, and NJL811B, this NJL1121B is most suitable to be applied for card readers, other information units, far distance optoelectronic switches, tachometers, smoke sensors and others.

■ OUTLINE (typ.) Unit: mm



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Forward Current (Continuous)	I_F	100	mA
Pulse Forward Current	I_{FP}	1(note)	A
Reverse Voltage (Continuous)	V_R	6	V
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

(note) Pulse Width: 100μs. Duty Ratio: 0.01

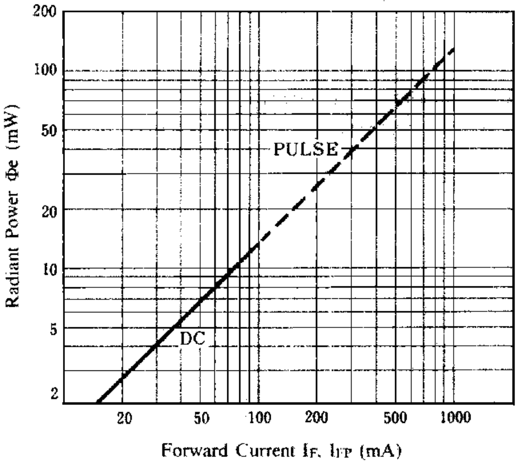
■ ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Radiant Power	Φe	I_F=50mA	—	6.5	—	mW
Spectral Line Halfwidth	$\Delta\lambda$	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

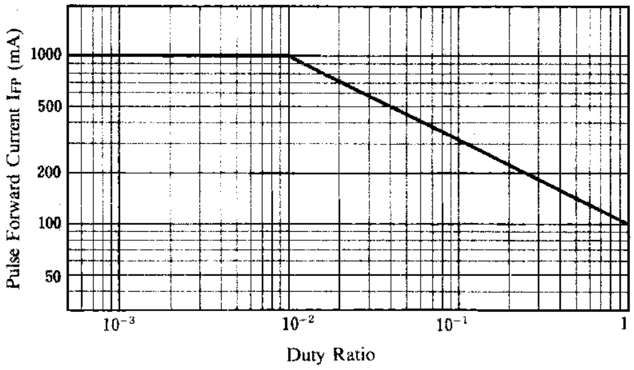
Radiant Power vs. Forward Current

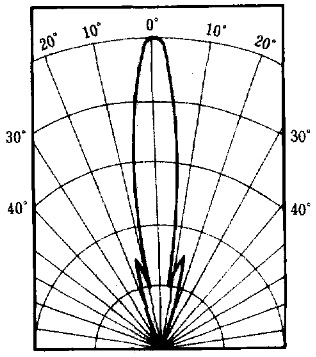
(Ta=25°C)



Maximum Pulse Forward Current vs. Duty Ratio

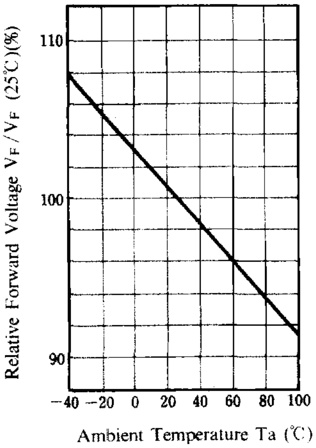
(Ta=25°C, tw=100μs max.)



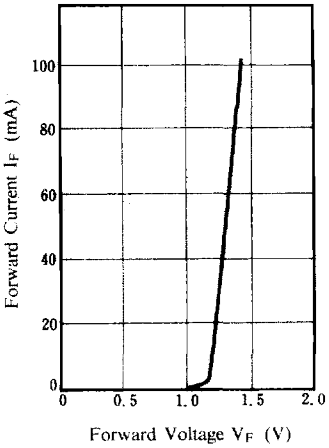


Typical Radiation Pattern

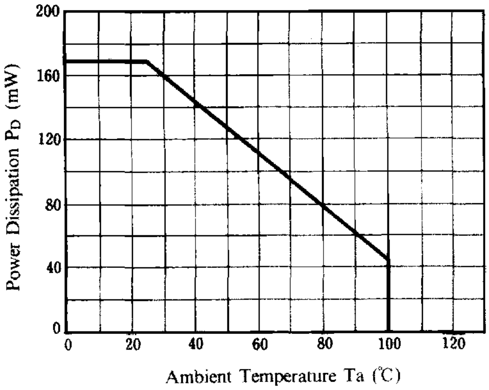
(T$_a$ =25℃)



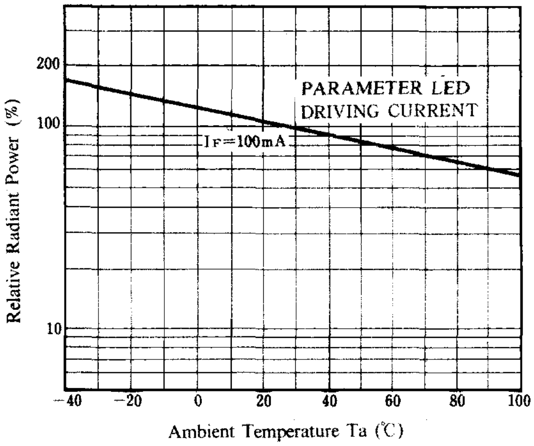
Forward Voltage vs. Temperature



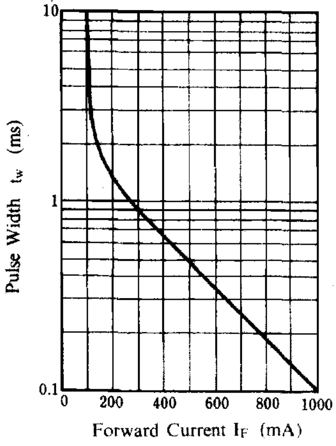
Forward Current vs. Forward Voltage (Ta=25℃)



Power Dissipation vs. Temperature

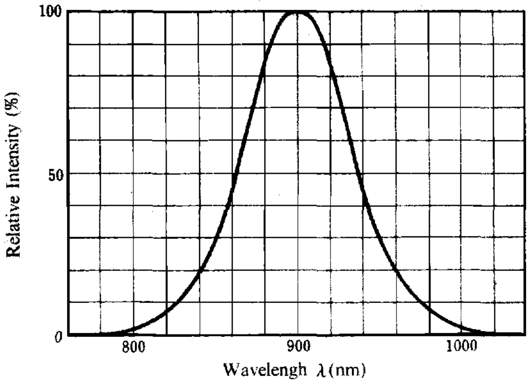


Relative Radiant Power vs. Temperature



Maximum Pulse Width vs. Forward Current

(Ta =25℃, Duty Ratio 0.01 max.)



Relative Intensity vs. Wavelengh (Ta=25℃)