

NJL1103B

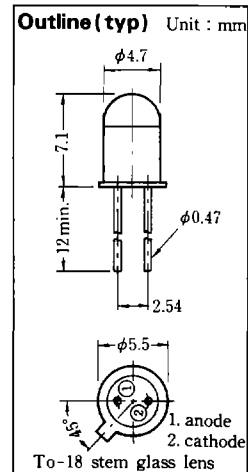
New JRC NJL1103B is a highly efficient infrared emitter with a glass-lens which features narrow beam angle high radiant intensity and fast response time.

In connection with NJL611B, NJL612B, NJL721B, NJL7260B and NJL811B, this device is suitable for use in applications such as card readers, long distance optoelectronic switches, tachometers, smoke detectors and so on.

Absolute Maximum Ratings (Ta=25°C)

Forward Current (Continuous)	I_F	100mA
Pulse Forward Current	I_{FP}	1A (note)
Reverse Voltage (Continuous)	V_R	6V
Power Dissipation	P_D	150mW
Operating Temperature	T_{opr}	-40°C to +100°C
Storage Temperature	T_{stg}	-55°C to +125°C

(note) Pulse Width: 100 μ s, Duty Ratio: 0.01



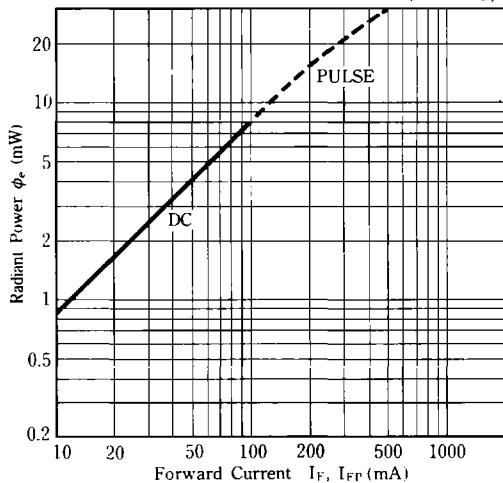
Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Radiant Power	ϕ_e	$I_F=50mA$	—	4.0	—	mW
Spectral Line Halfwidth	$\Delta\lambda$	$I_F=50mA$	—	50	—	nm
Forward Voltage	V_f	$I_F=50mA$	—	1.2	1.5	V
Reverse Current	I_R	$V_R=6V$	—	—	1	μ A
Capacitance	Ct	$V_R=0V, f=1MHz$	—	35	—	pF
Rise Time	t_r	$I_F=50mA$	—	1	—	μ s
Fall Time	t_f	$I_F=50mA$	—	1	—	μ s
Peak Wavelength	λ_p	$I_F=50mA$	—	940	—	nm

Typical Characteristics

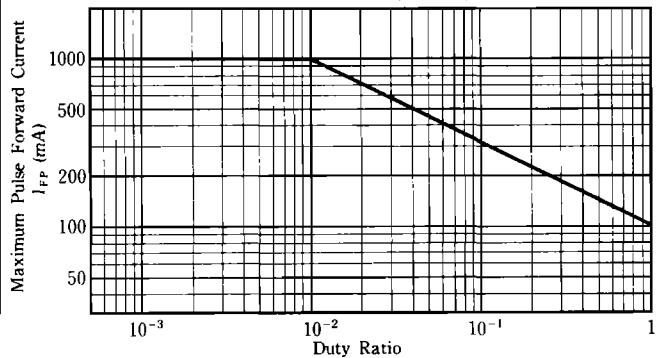
Radiant Power v.s. Forward Current

(Ta=25°C)

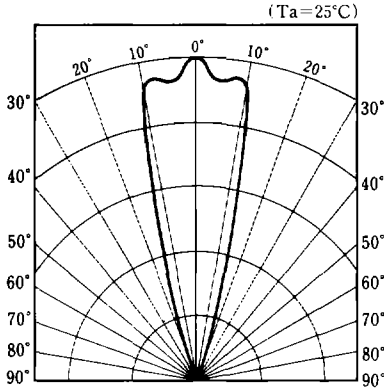


Maximum Pulse Forward Current v.s. Duty Ratio

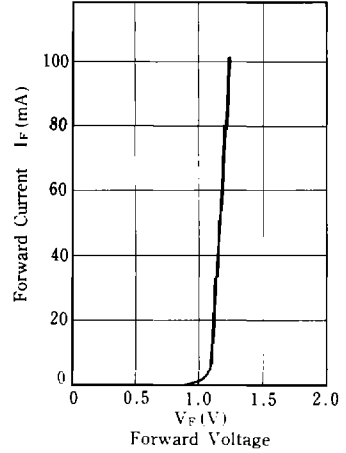
(Ta=25°C, tw=100 μ s max.)



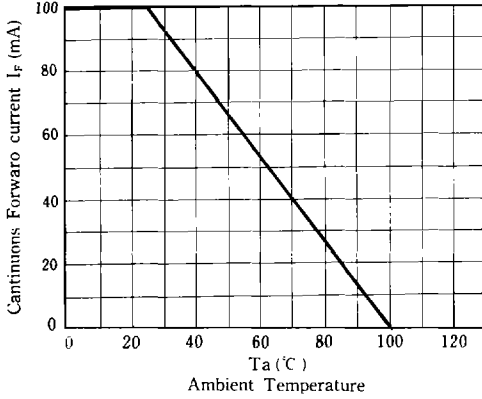
Typical Radiation Pattern



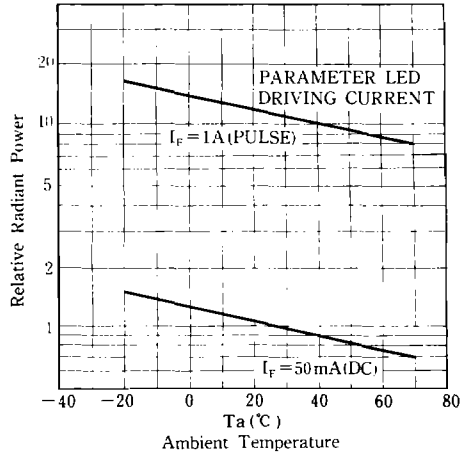
Forward Current v.s. Forward Voltage ($T_a=25^\circ\text{C}$)



Maximum Forward Current v.s. Temperature

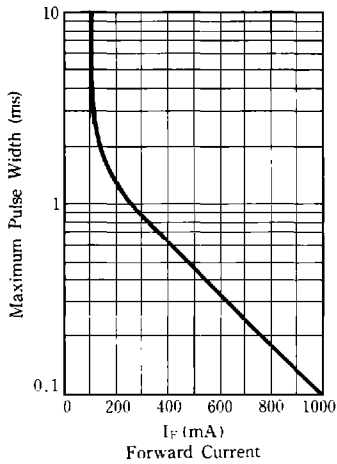


Relative Radiant Power v.s. Temperature



Maximum Pulse Width v.s. Forward Current

($T_a=25^\circ\text{C}$, Duty Ratio 0.01 max.)



Relative Intensity v.s. Wavelength

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

