

## NJL1110B

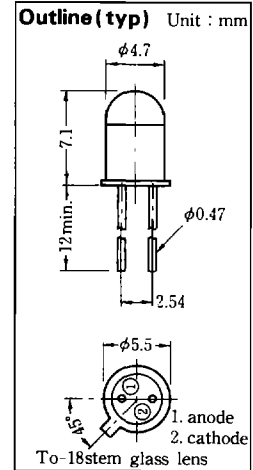
New JRC NJL1110B is a highly efficient infrared emitter with a glasslens which features narrow beam angle, high radiant intensity and fast response time.

In connection with 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	$T_{opr}$	-55°C to +100°C
Storage Temperature	$T_{stg}$	-55°C to +125°C

(note) Pulse Width: 100  $\mu$ s, Duty Ratio: 0.01



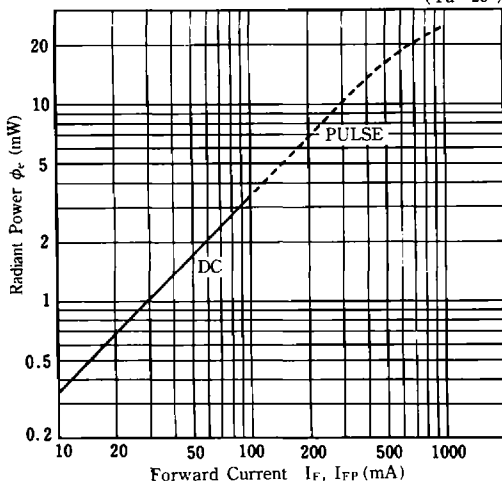
### Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Radiant Power	$\phi_e$	$I_F=50mA$	—	1.7	—	mW
Spectral Line Halfwidth	$\Delta\lambda$	$I_F=50mA$	—	50	—	nm
Forward Voltage	$V_F$	$I_F=100mA$	—	1.3	1.5	V
Reverse Current	$I_R$	$V_R=6V$	—	—	1	$\mu$ A
Capacitance	$C_t$	$V_R=0V, f=1MHz$	—	70	—	pF
Rise Time	$t_r$	$I_F=50mA$	—	1	—	$\mu$ s
Fall Time	$t_f$	$I_F=50mA$	—	1	—	$\mu$ s
Peak Wavelength	$\lambda_p$	$I_F=50mA$	—	940	—	nm

### Typical Characteristics

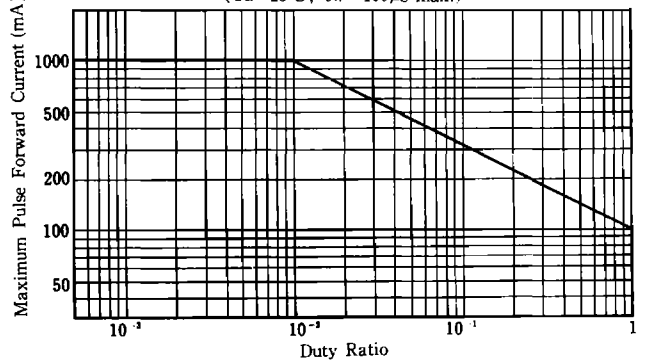
#### Radiant Power v.s. Forward Current

(Ta=25°C)

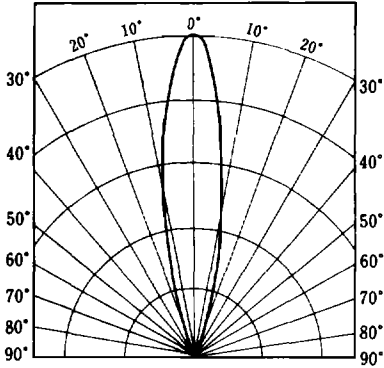


#### Maximum Pulse Forward Current v.s. Duty Ratio

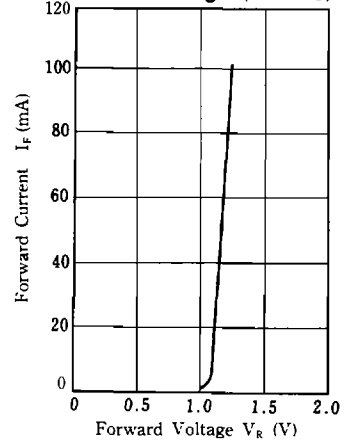
(Ta=25°C,  $t_w=100\mu$ s max.)



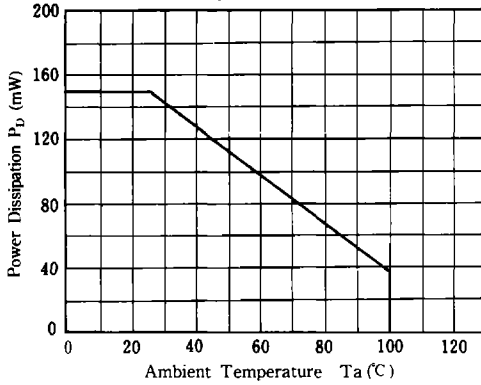
**Typical Radiation Pattern**  
( $T_a = 25^\circ\text{C}$ )



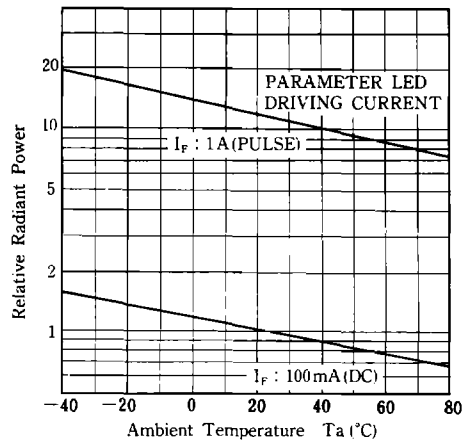
**Forward Current v.s. Forward Voltage** ( $T_a = 25^\circ\text{C}$ )



**Power Dissipation v.s. Temperature**

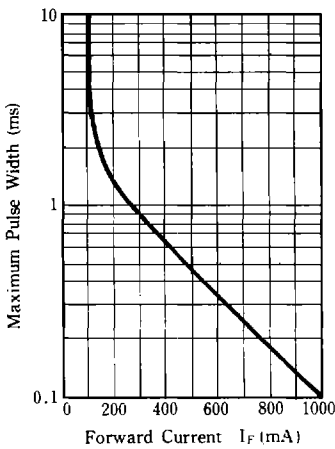


**Relative Radiant Power v.s. Temperature**



**Maximum Pulse Width v.s. Forward Current**

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



**Relative Intensity v.s. Wavelength**

