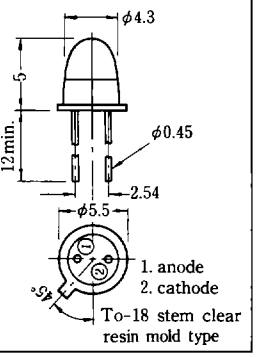
NJL1110A

This high-output infrared emitting device can obtain a radiant power output of higher than 60mW by pulse drive.

This device is characterized with wide beam angle and easy axial alignment, and it is suitable for infrared headphones, card readers and other information devices, photoelectric switches, tachometers and other precision devices with NJL611B, NJL612B, NJL7112E/NJL7141E, NJL7260E (photo darlington transistor), NJL721B, and NJL811B combined.

Outline (typ) Unit : mm



■ Absolute Maximum Ratings (Ta=25°C)

Forward Current (Continuous)	I_F	75mA
Pulse Forward Current	I_{FP}	750mA (note)
Reverse Voltage (Continuous)	V_R	6V
Power Dissipation	P_D	100mW
Operating Temperature	T_{opr}	−20°C to +70°C
Storage Temperature	T_{stg}	−30°C to +80°C

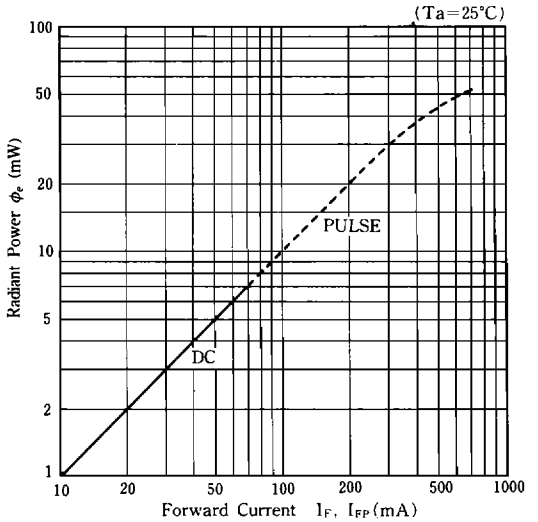
(note) Pulse Width: 100 μs, Duty Ratio: 0.01

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Radiant Power	ϕ_e	I_F=50mA	—	5	—	mW
Spectral Line Halfwidth	Δλ	I_F=50mA	—	50	—	nm
Forward Voltage	V_F	I_F=75mA	—	1.25	1.5	V
Reverse Current	I_R	V_R=6V	—	—	1	μA
Capacitance	Ct	V_R=0V, f=1MHz	—	70	—	pF
Rise Time	t_r	I_F=50mA	—	1	—	μs
Fall Time	t_f	I_F=50mA	—	1	—	μs
Peak Wavelength	λp	I_f=50mA	—	940	—	nm

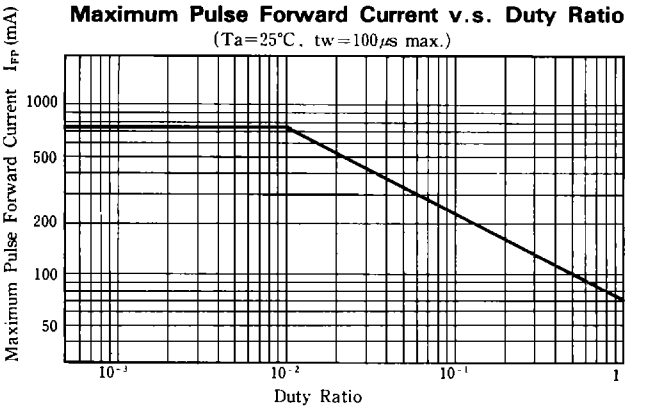
■ Typical Characteristics

Radiant Power v.s. Forward Current



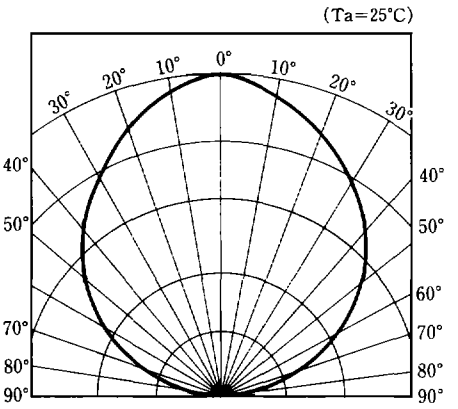
Maximum Pulse Forward Current v.s. Duty Ratio

(Ta=25°C, tw=100μs max.)

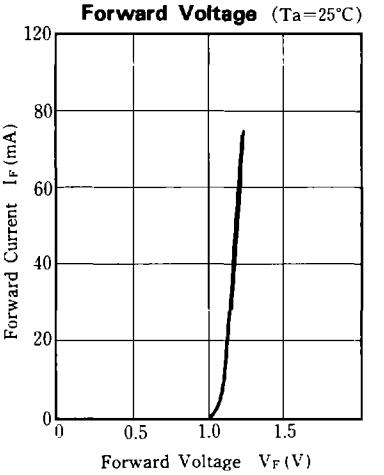


Typical Radiation Pattern

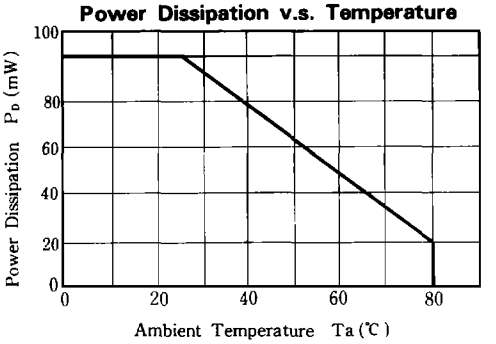
(Ta=25°C)



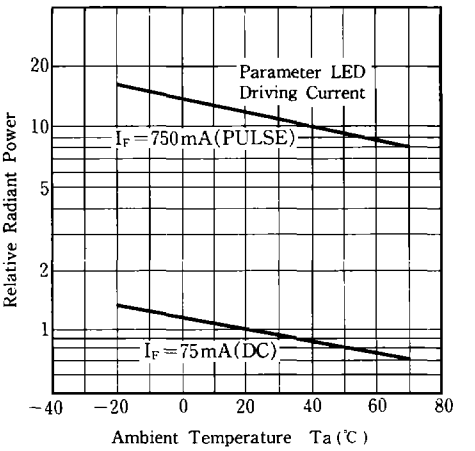
Forward Current v.s. Forward Voltage (Ta=25°C)



Power Dissipation v.s. Temperature



Relative Radiant Power v.s. Temperature



Relative Intensity v.s. Wavelength (Ta=25°C)