DDH INFRARED EMITTING DIODE

PRELIMINARY

■ GENERAL DESCRIPTION

The NJL1127L is DDH (Dissubstrate Double Heterstrusture) infrared LED of high speed and high efficiency. Output light power is 2.5 times of usual LED.

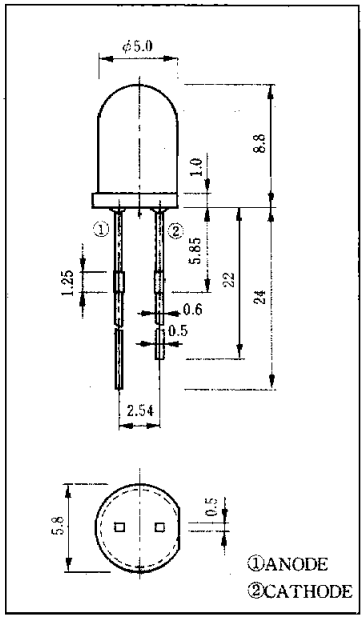
The NJL1127L is suitable for the light source of codeless optical communications, LAN system, and optical fiber communication.

The NJL1127L is 2-pin package of 5mmϕ visible molding compound. The NJL1127L corresponds to EIAJ CP-1205, BAND V (6MHz~30MHz).

■ FEATURES

- High speed fc=30MHz
- High output power ϕe=15mW

■ OUTLINE (typ.) Unit: mm



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Forward Current (Continuous)	I_F	60	mA
Pulse Forward Current	I_{FP}	800(Note1)	mA
Reverse Voltage (Continuous)	V_R	6	V
Power Dissipation	P_D	120	mW
Operating Temperature	T_{opr}	−20~+90	°C
Storage Temperature	T_{stg}	−30~+100	°C
Soldering Temperture	T_{sol}	260(Note2)	°C

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Radiant Power	ϕ_e	I_F=50mA	—	15	—	mW
Peak Wave Length	λ_P	I_F=50mA	—	850	—	mm
Spectral Line Halfwidth	$\Delta\lambda$	I_F=50mA	—	40	—	mm
Forward Voltage	V_F	I_F=50mA	—	1.6	—	V
Reverse Current	I_R	V_R=6V	—	—	10	μA
Capacitance	C_t	V_R=OV, f=1MHz	45	70	90	pF
Rise Time	t_r	I_F=50mA	—	10	—	ns
Fall Time	t_f	I_F=50mA	—	10	—	ns
Cut-off Frequency	f_c	I_F=50mA	—	30	—	MHz

■ TYPICAL CHARACTERISTICS

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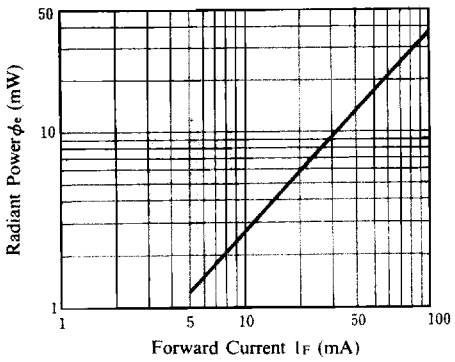
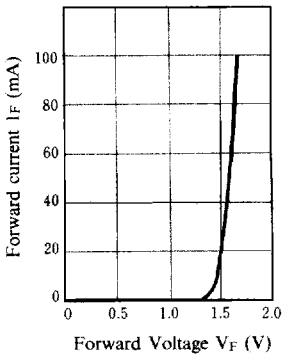
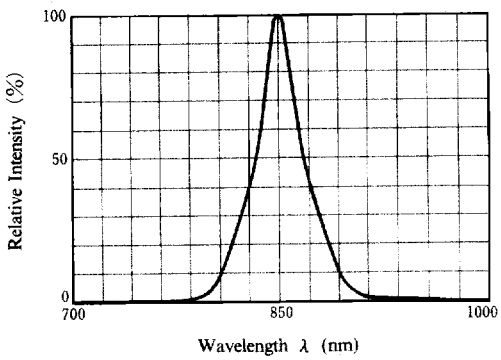
Radiant Power vs. Forward Current (Ta=25 °C)



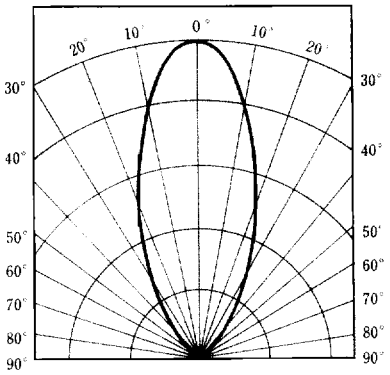
Forward Current vs. Forward Voltage (Ta=25 °C)



Relative intensity vs. Wavelength (Ta=25 °C)



Typical Radiation Pattern (Ta=25°C)



Frequency Characteristics (Ta=25 °C)