■ RECOMMENDED OPERATING CONDITION

Supply Voltage Range V_{CC} 4.5V ~ 5.5V

■ ELECTRO-OPTICAL CHARACTERISTICS (V_{CC} = 5.0V, Ta = 25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Supply Current	I_{CC}	No Signal Input	—	—	3	mA
Transmission Distance	L_C	Direction of Ray Axis *1	13	18	—	m
Directivity	θ_L	Angle of half Lc, Horizontal *2	—	50	—	deg
	θ_V	Angle of half Lc, Vertical *2	—	35	—	deg
Output Voltage Low	V_L	No Load	—	0.2	0.5	V
Output Voltage High	V_H	No Load	4.5	—	—	V
Low Level Pulse Width	T_{WL}	See Test Circuit	400	—	800	μs
High Level Pulse Width	T_{WH}	See Test Circuit	400	—	800	μs
Center Frequency	f_O	See Line-up	36.0	—	56.8	KHz

Note *1: Test with each center carrier frequency under the test condition shown below.
*2: Place major axis of elliptic lens in horizontal direction and minor in vertical.

■ TEST METHOD

Test condition is as follows:

(1) Standard Transmitter:
Transmitting waveform is shown in Fig.1. Transmitting power should be adjusted so that output voltage Vout will be 400 mVp-p.
Regarding IR LED used for transmitter, λp = 940nm, $\Delta\lambda$ = 50nm.
Regarding photo diode, Sensitivity S = 26nA/Lx, in case light source temperature 2856°K, Ee = 100Lx, VR = 5V

(2) Test system: Shown in Fig.3.

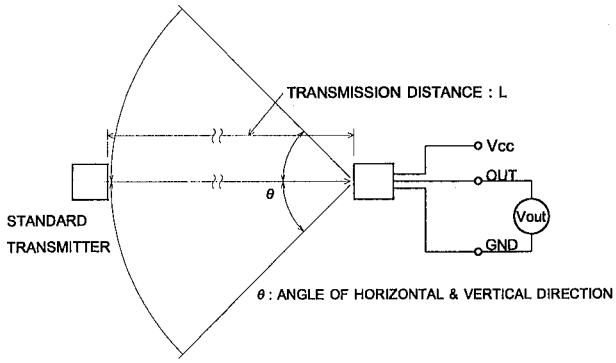


Fig. 3 TEST SYSTEM

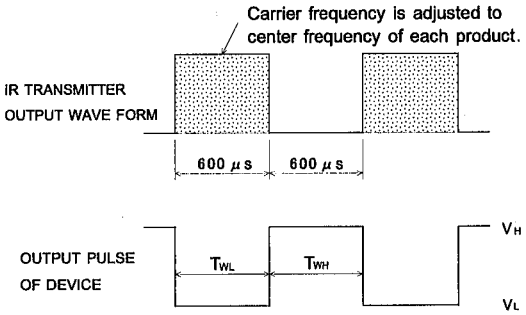


Fig. 1 TRANSMITTER WAVE FORM

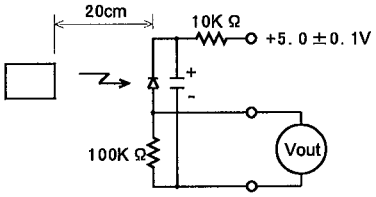
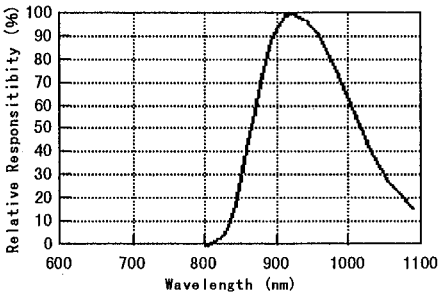


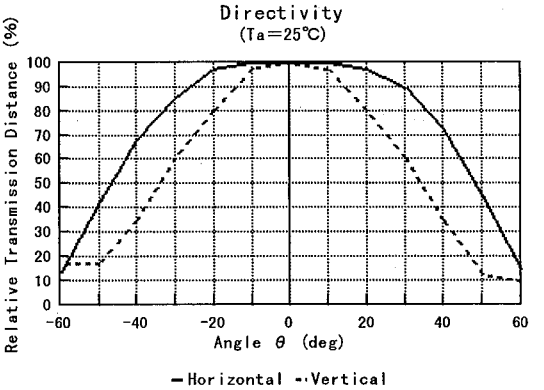
Fig. 2 STD. TRANSMITTER TEST CIRCUIT

■ TYPICAL CHARACTERISTICS

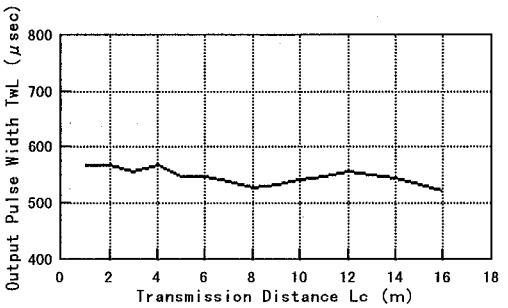
Spectral Response
(Ta=25℃)



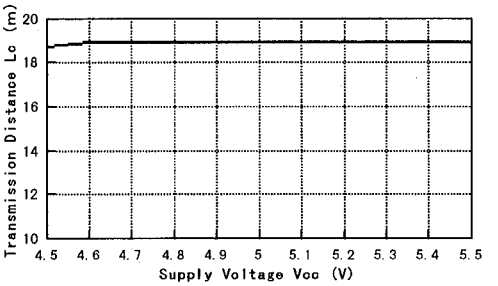
Directivity
(Ta=25℃)



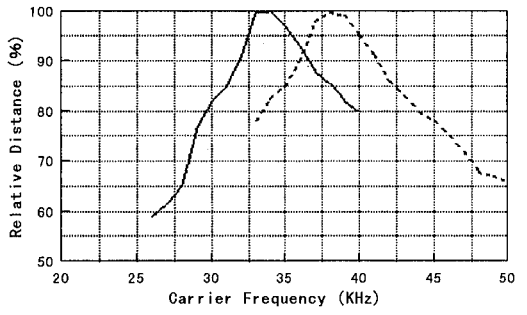
Output Pulse Width vs. Distance
(Input Pulse Width=600μs, Vcc=5.0V, Ta=25℃)



Transmission Distance vs. Supply Voltage
(Ta=25℃)

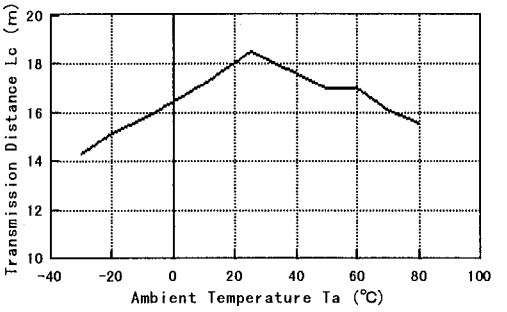


Transmission Distance vs. Carrier Frequency
(Vcc=5.0V, Ta=25℃)

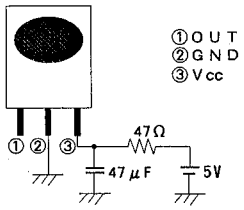


— fo=32.75KHz -- fo=38KHz

Transmission Distance vs. Temperature
(Vcc=5.0V)

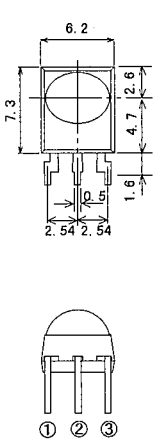


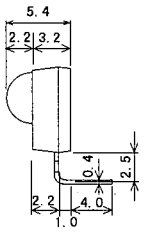
■ RECOMMENDED APPLICATION CIRCUIT



RC Filter should be connected closely between Vcc pin and GND pin.

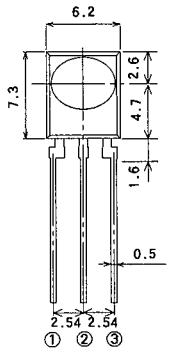
■ OUTLINE

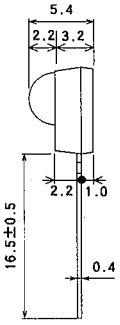




①OUT
②GND
③Vcc

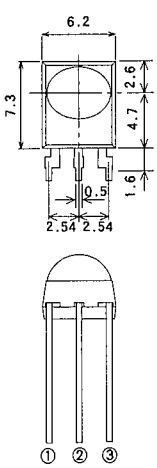
NJL61H000A
UNIT : mm

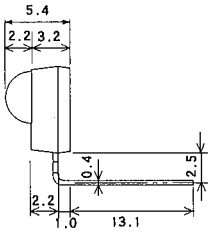




①OUT
②GND
③Vcc

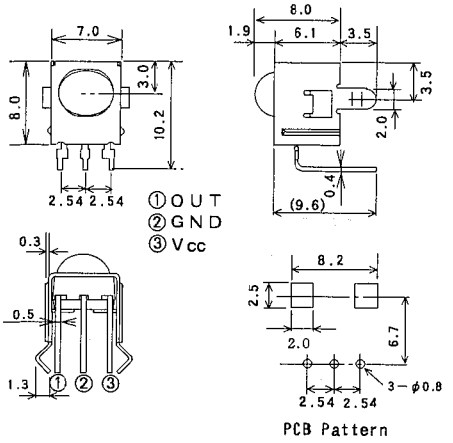
NJL61V000A
UNIT : mm





①OUT
②GND
③Vcc

NJL61H000AF3
UNIT : mm



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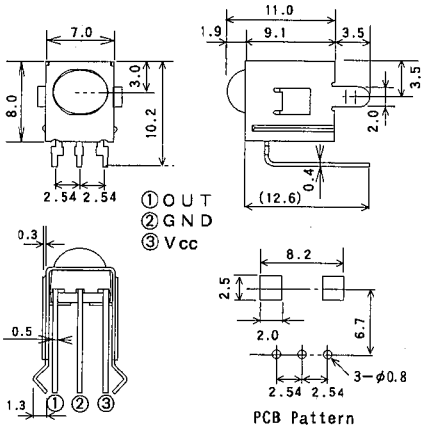

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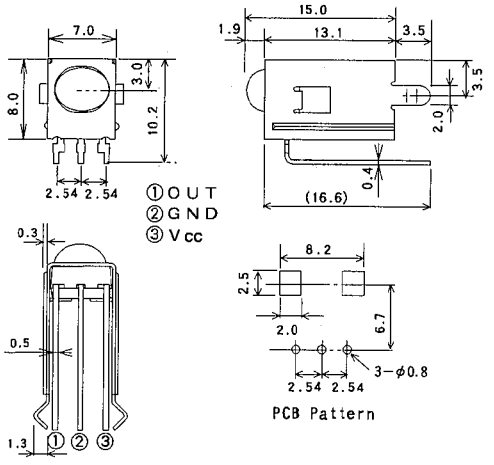

NJL64H000A
UNIT : mm

1. Tolerance is ± 0.3mm unless otherwise noted.

2. Ground metal case on PCB. Metal case is not connected to GND pin inside.

MEMO

Mouser Electronics

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NJR:

NJL62H380A NJL64H380A NJL61H400A NJL63H568A NJL63H380A NJL63H367A NJL63H360A NJL61H568A NJL61H367AF3 NJL61H328A NJL61H360A NJL64H568A NJL63H400A NJL61V400A NJL63H300A NJL62H400A NJL61V380A NJL64H300A NJL64H367A NJL64H360A NJL64H400A NJL61V360A NJL61H380A NJL63H328A NJL61H380AF3 NJL64H328A NJL61H300A