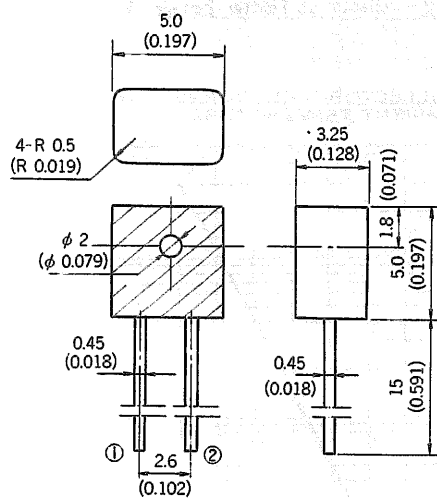


PHOTO TRANSISTOR

—NEPOC SERIES—

PACKAGE DIMENSIONS
in millimeters (inches)



① Emitter
② Collector



The PH104 is a photo transistor in a plastic molded package, and very suitable for a detector of a photo interrupter.

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

Collector to Emitter Voltage	V_{CEO}	30	V
Collector Current	I_C	40	mA
Power Dissipation	P_C	100	mW
Junction Temperature	T_j	100	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +100	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector to Emitter Dark Current	I_{CEO}			100	nA	$V_{CE} = 10\text{ V}, L = 0\text{ lx}$
Collector saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_C = 0.5\text{ mA}, L = 1\ 000\text{ lx}^*$
Photo Current	I_L	20			μA	$V_{CE} = 2.0\text{ V}, L = 100\text{ lx}^*$
Fall Time	t_f		5		μs	$V_{CC} = 10\text{ V}, I_L = 2\text{ mA}, R_L = 100\ \Omega$

*Measured with a tungsten filament lamp operated at a color temperature of 2 854 K.

TYPICAL CHARACTERISTICS (Ta = 25 °C)

POWER DISSIPATION vs. AMBIENT TEMPERATURE

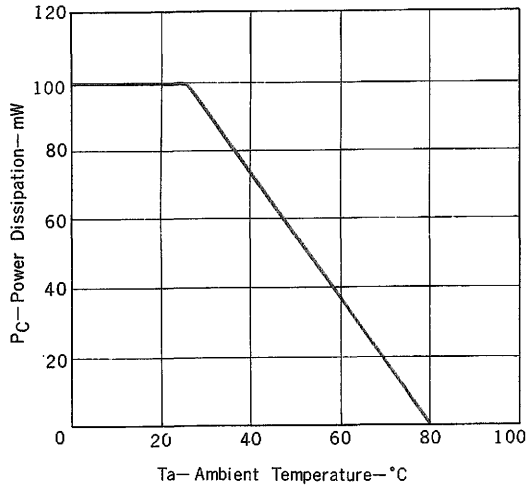
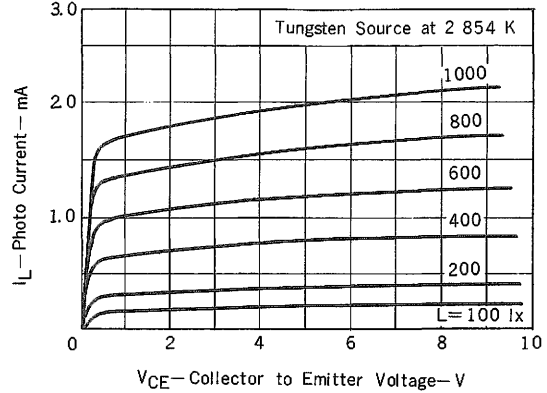


PHOTO CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



COLLECTOR DARK CURRENT vs. AMBIENT TEMPERATURE

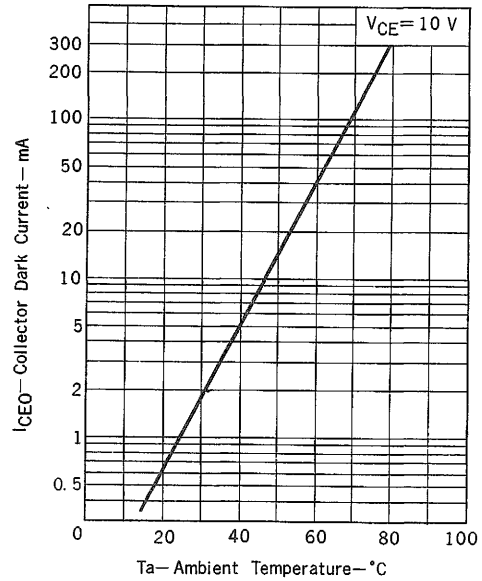
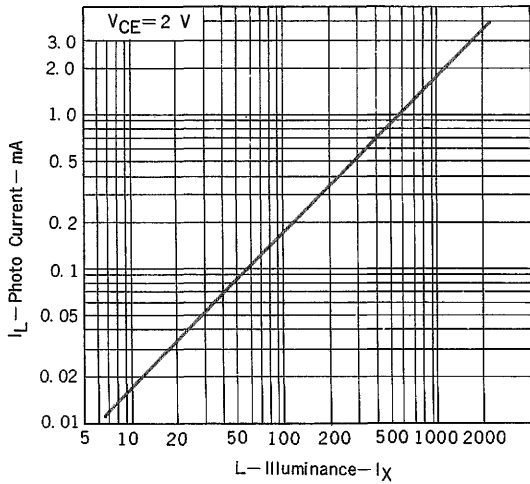
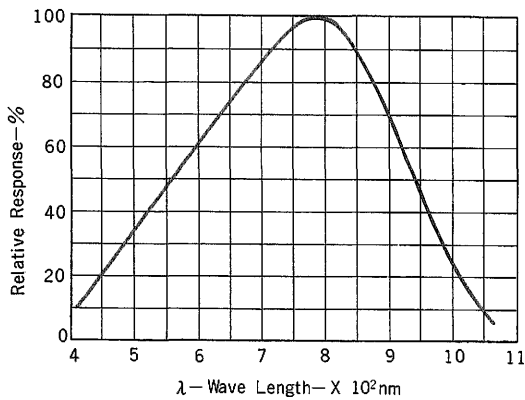


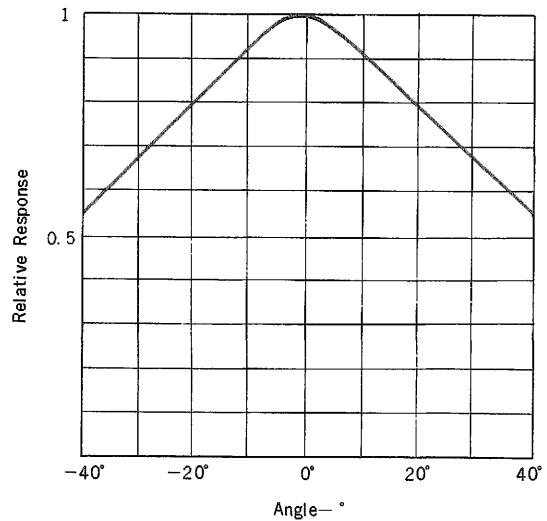
PHOTO CURRENT vs. ILLUMINANCE



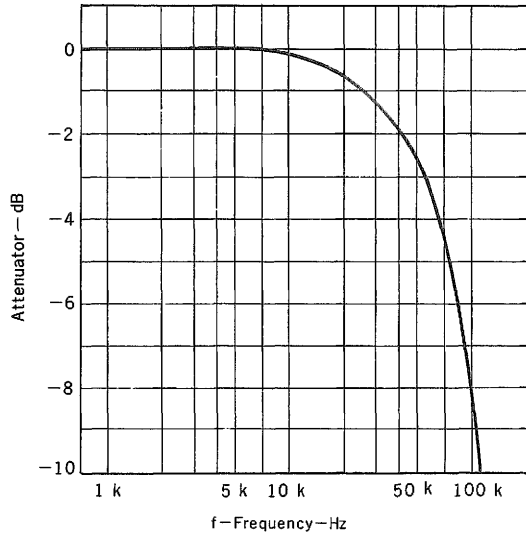
SPECTRAL RESPONSE



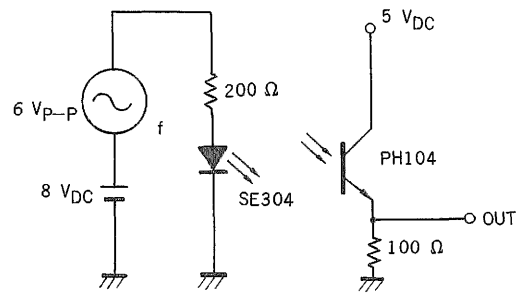
SPATIAL DISTRIBUTION



FREQUENCY RESPONSE



FREQUENCY RESPONSE TEST CIRCUIT



Nippon Electric Co.,Ltd.

NEC Building, 33-1, Shiba-Gochome, Minato-ku, Tokyo 108, Japan
Tel: Tokyo 454 - 1111
Telex Address: NECTOK J22686
Cable Address: MICROPHONE TOKYO

LC-1063
MAY-15-80M
Printed in Japan