

NEC
ELECTRON DEVICE

PHOTO TRANSISTOR

PH108A

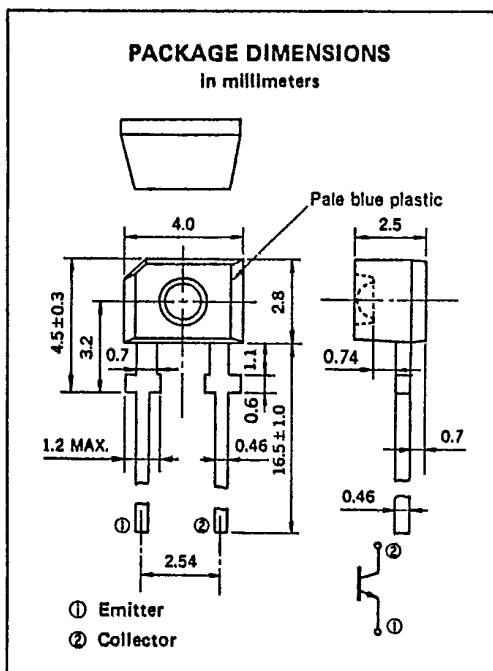
PHOTO TRANSISTOR

T-41-61

—NEPOC SERIES—

DESCRIPTION

The PH108A is a photo transistor in a plastic mold package, and very suitable for a detector of a photo interrupter with combination of the SE308.



FEATURES

- Small size plastic molded package.
- High Sensitivity.
- Spectrally matched to GaAs infrared emitter.

APPLICATION

- Photo Sensor for photo interrupter.
- Optical encoder.
- High speed Optoelectronic Data Links.

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

Collector to Emitter Voltage	V_{CE0}	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_{CE0}			100	nA	$V_{CE} = 10\text{ V}, H = 0\text{ mW/cm}^2$
Collector Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_C = 0.5\text{ mA}, H = 5\text{ mW/cm}^2$ *
Photo Current	I_L	0.2	0.6		mA	$V_{CE} = 5\text{ V}, H = 0.5\text{ mW/cm}^2$ *
Fall Time	t_f			40	μs	$V_{CC} = 10\text{ V}, H = 0.5\text{ mW/cm}^2, R_L = 1\text{ k}\Omega$

* Measured with a GaAs infrared emitter with $\lambda_p = 940\text{ nm}$.

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

