

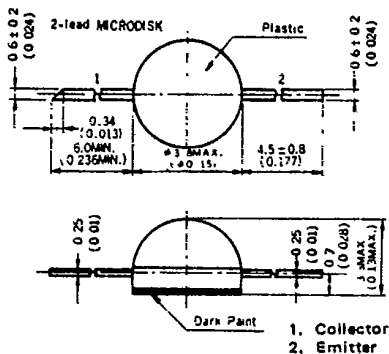
# PHOTO TRANSISTOR PH101

## NPN EPITAXIAL DARLINGTON PHOTOTRANSISTOR PHOTO DETECTOR

### DESCRIPTION

The PH101 is a miniature NPN silicon phototransistor having exceptionally stable characteristics and high illuminance sensitivity mounted in a two-terminal MICRODISK package. The spectral response, extending from 4,000 to 10,000Å, is compatible with daylight, tungsten, and gallium arsenide sources. The packaging of this unit permits close-spacing in linear arrays. Its low cost and volume producibility opens new areas of use anywhere a photo detector is desirable.

### PACKAGE DIMENSIONS in millimeters (inches)



\* Soldering conditions are at 260°C or less within 5sec. at 3 mm or farther from the case.

### FEATURES

- Low cost.
- Low Leakage Current.
- Wide Spectral Response.
- Convenient MICRODISK Package.
- Wide Temperature Range.
- Compact, Rugged, Light Weight.
- High Sensitivity.

### APPLICATIONS

- Optical Switching and Encoding.
- Intrusion Alarm.
- Tape and Card Reader Sensor.
- Level Control
- Motor governor.

### ABSOLUTE MAXIMUM RATINGS

Maximum Collector to Emitter Voltage (Ta=25°C)	V <sub>CEO</sub>	20	V
Maximum Collector Current (Ta=25°C)	I <sub>C</sub>	50	mA
Maximum Power Dissipation (Ta=25°C)	P <sub>C</sub>	100	mW
Maximum Temperatures (Ta=25°C)			
Junction Temperature	T <sub>J</sub>	80	°C
Storage Temperature	T <sub>stg</sub>	-30 to +80	°C

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector to Emitter Dark Current	I <sub>CE01</sub>			0.5	μA	V <sub>CE</sub> = 15V, L = 0
Collector to Emitter Dark Current	I <sub>CE02</sub>			500	μA	V <sub>CE</sub> = 15V, L = 0, Ta = 80°C
Collector Saturation Voltage	V <sub>CE (sat)</sub>		0.7	1.5	V	I <sub>C</sub> = 10 mA, L* = 1,000 lx
Photo Current	I <sub>L</sub>	4	12		mA	V <sub>CE</sub> = 2.0V, L* = 100 lx

\* Measured with a tungsten filament lamp operated at a color temperature of 2854°K.

PH101

T-41-63

TYPICAL CHARACTERISTICS (Ta = 25°C)

