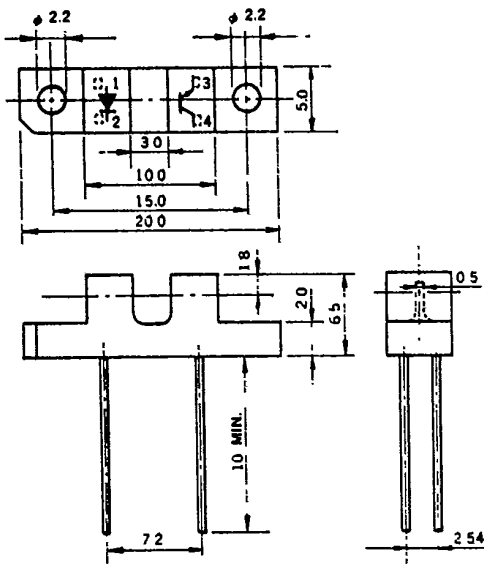


# PHOTO INTERRUPTER PS4501

## PHOTO INTERRUPTER

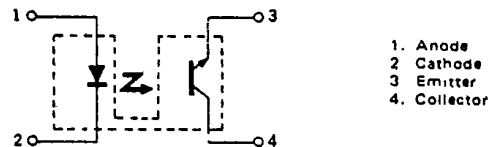
### PACKAGE DIMENSIONS in millimeters



### DESCRIPTION

The PS4501 photo coupled interrupter module containing a GaAs light emitting diode and an NPN silicon photo-transistor.

### CONNECTION DIAGRAM (Top View)



- 1. Anode
- 2. Cathode
- 3. Emitter
- 4. Collector

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

Diode			
Reverse Voltage	$V_R$	5.0	V
Forward Current	$I_F$	50	mA
Power Dissipation	$P_D$	100	mW
Transistor			
Collector to Emitter Voltage	$V_{CE0}$	30	V
Collector Current	$I_C$	40	mA
Power Dissipation	$P_C$	100	mW
Storage Temperature	$T_{stg}$	-40 to +100	$^\circ\text{C}$
Operating Temperature	$T_{opt}$	-20 to +80	$^\circ\text{C}$

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

CHARACTERISTICS		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Diode	Forward Voltage	$V_F$		1.1	1.4	V	$I_F = 10\text{ mA}$
	Reverse Current	$I_R$			20	$\mu\text{A}$	$V_R = 5.0\text{ V}$
	Junction Capacitance	$C$		100		pF	$V = 0, f = 1.0\text{ MHz}$
Transistor	Collector to Emitter Dark Current	$I_{CE0}$			100	nA	$V_{CE} = 10\text{ V}, I_F = 0$
Coupled	Output Current	$I_C$	250	1000		$\mu\text{A}$	$I_F = 10\text{ mA}, V_{CE} = 2.0\text{ V}$
	Collector Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_F = 10\text{ mA}, I_C = 100\text{ }\mu\text{A}$

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

