

NTE3037

Silicon NPN Phototransistor Detector

Description:

The NTE3037 is designed for counters, Industrial and process control, sorters, switching and logic controls. This device is packaged in a TO-18 case with domed glass lid.

Features:

- High Sensitivity
- Base Contact Externally Available
- Saturation Level Directly Compatible with Most TTL

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector-Emitter Voltage, V_{CEO}	40V
Collector-Base Voltage, V_{CBO}	50V
Emitter-Base Voltage, V_{EBO}	5V
Emitter-Collector Voltage, V_{ECO}	5V
Collector Current (I_L), I_C	50mA
Collector Power Dissipation, P_C	150mW
Derate Above 25°C	1.2mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-30° to $+125^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ\text{C}$

Opto-Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Dark Current	$I_D (I_{CEO})$	$V_{CE} = 3V, E = 0$	—	10	200	nA
Light Current	I_L	$V_{CE} = 3V, E = 0.1\text{mW/cm}^2$	60	300	—	mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 30\mu\text{A}, E = 0.1\text{mW/cm}^2$	—	0.25	0.4	V
Rise Time	t_r	$V_{CC} = 5V, I_C = 10\text{mA}, R_L = 100\Omega$	—	2	—	μs
Fall Time	t_f		—	2	—	μs

