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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 $+150^\circ\text{C}$
Lead Temperature (During Soldering, 1.5mm from body, 5sec max), T_L	$+260^\circ\text{C}$

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})	$V_{CE} = 30V, E = 0$	–	10	200	μA
Light Current	I_L	$V_{CE} = 3V, E = 0.1\text{mW}/\text{cm}^2$, Note 1	60	200	–	μA
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 30\mu\text{A}, E = 0.1\text{mW}/\text{cm}^2$, Note 1	–	0.25	0.4	V
Rise Time	t_r	$V_{CC} = 10V, I_C = 10\text{mA}$, $R_L = 100\Omega$	–	2	–	μs
Fall Time	t_f		–	2	–	μs

Note 1. Color temperature = 2870°K, Standard Tungsten Lamp.

