

NTE3032 Phototransistor Detector NPN-Si, Visible & IR

Description:

The NTE3032 is a silicon NPN phototransistor detector in a TO18 type package designed for use in industrial inspection, processing and control, counter, sorter, switching, and logic circuit applications or any design requiring radiation sensitivity and stable characteristics.

Features:

- Sensitive Throughout Visible and Near Infrared Spectral Range for Wider Application
- Minimum Light Current: 8mH @ H = 5mW/cm²
- External Base for Added Control
- Annular Passivated Structure for Stability and Reliability
- Popular TO18 Type Package for Easy Handling and Mounting

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Collector-Emitter Voltage, V _{CEO}	30V
Collector-Base Voltage, V _{CBO}	80V
Emitter-Collector Voltage, V _{ECO}	5V
Total Device Dissipation, P _D	150mW
Derate Above 25°C	1.43mW/°C
Operating Junction Temperature Range, T _J	-65° to +150°C
Storage Temperature Range, T _{stg}	-65° to +150°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Collector Dark Current	I _{CEO}	V _{CC} = 10V, H ~ 0	—	—	100	nA
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C = 100μA	80	—	—	V
Emitter-Collector Breakdown Voltage	V _{(BR)ECO}	I _E = 100μA	5	—	—	V
Optical Characteristics						
Light Current	I _L	V _{CC} = 5V, R _L = 100Ω, Note 1	8	—	—	mA
Photo Current Rise Time	t _r	R _L = 100Ω, I _L = 1mA (Peak), Note 2	—	15	—	μs
Photo Current Fall Time	t _f		—	15	—	μs

Note 1. Radiation flux density (H) equal to 5mW/cm² emitted from a tungsten source at a color temperature of 2870 K.

Note 2. For unsaturated response time measurement, radiation is provided by pulsed GaAs (gallium arsenide) light-emitting diode (λ ~ μm) with a pulse width equal to or greater than 10μs, I_L = 1mA Peak.

