ELECTRONICS, INC.
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NTE3034A
Phototransistor Detector

Description:

The NTE3034A is designed for industrial processing and control applications such as light modulators, shaft or position encoders, and end tape detectors. The NTE3034A is designed to be used with the NTE3029B infrared emitter in optical slotted coupler/interrupter applications.

Features:

- Economical, Miniature Plastic Package
- Package Designed for Accurate Positioning
- Lens Molded into Package

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 30V
Total Device Dissipation (T_A = +25°C), P_D 150mW
Derate Above 25°C (Note 1) . . . . . 2mW/°C
Operating Junction Temperature Range, T_J . . . . . –40° to +100°C
Storage Temperature Range, T_{stg} . . . . . –40° to +100°C
Lead Temperature (During Soldering, 1/16” from case, 5sec max., Note 2), T_L . . . . . +260°C

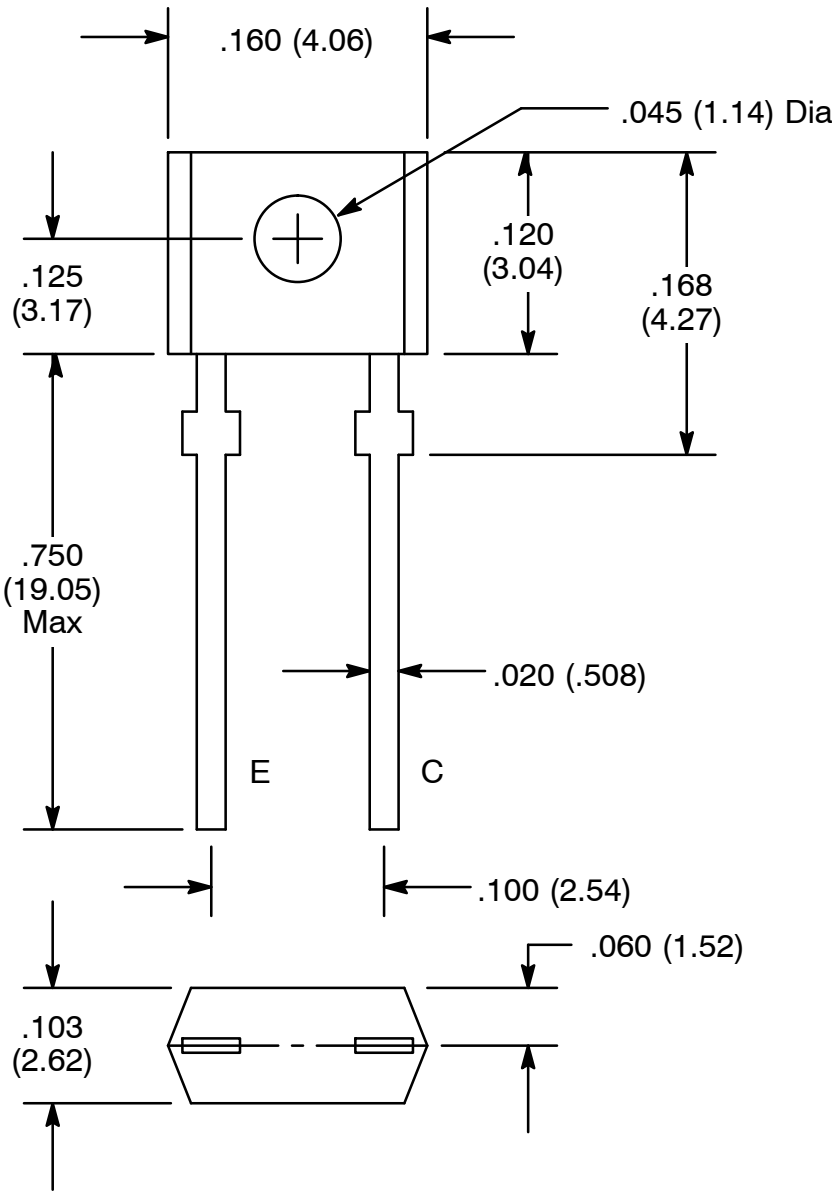
Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Dark Current	I_D	V_{CE} = 10V, H ≈ 0	–	–	100	nA
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10mA, H ≈ 0	30	–	–	V

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Light Current	I_L	V_{CE} = 5V, H = 500μW/cm^2	100	500	–	μA
Turn–On Time	t_{on}	H = 5mW/cm^2, V_{CC} = 5V, R_L = 2400Ω	–	60	–	μs
Turn–Off Time	t_{off}		–	0.25	0.4	μs
Saturation Voltage	$V_{CE(sat)}$	H = 5mW/cm^2, I_C = 2mA, V_{CC} = 5V	–	0.25	0.4	V
Wavelength of Maximum Sensitivity	λ_s		–	0.8	–	μm

Note 1. Measured with device soldered into a typical PC board.
Note 2. Heat sink should be applied to leads during soldering to prevent case temperature from exceeding +100°C.


.160 (4.06)
.045 (1.14) Dia
.125
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