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NTE3029A Infrared-Emitting Diode

Description:

The NTE3029A 940nm LED is a multi-purpose device designed for use in numerous applications. This Gallium Arsenide device is manufactured to tight tolerances for maximum performance and long lifetime.

Features:

- Low Cost
- Low Degradation
- New Mold Technology Improves Performance under Variable Environmental Conditions
- New Lens Design offers Improved Optical Performance

Applications:

- Low Bit Rate Communication Systems
- Keyboards
- Coin Handlers
- Paper Handlers
- Touch Screens
- Shaft Encoders
- General Purpose Interruptive and Reflective Event Sensors

Absolute Maximum Ratings:

Reverse Breakdown Voltage, V_R	6V
Forward Current, I_F	
Continuous	100mA
Peak Pulse	1A
Device Power Dissipation ($T_A = +25^\circ\text{C}$, Note 2), P_D	100mW
Derate Above 55°C	2mW/ $^\circ\text{C}$
Ambient Operating Temperature Range, T_{opr}	-40° to $+100^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+100^\circ\text{C}$
Lead Temperature (During Soldering, Note 3), T_L	$+260^\circ\text{C}$

Note 1. The **NTE3029A** is a **discontinued** device and has been replaced by **NTE3029B**.

Note 2 Measured with device soldered into a typical printed circuit board.

Note 3 Maximum exposure time: 5sec. Minimum of 1/16 inch from the case. A heat sink should be applied in order to prevent the case temperature from exceeding $+100^\circ\text{C}$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Leakage Current	I_R	$V_R = 6V$	–	0.05	100	μA
Forward Voltage	V_F	$I_F = 50\text{mA}$	–	1.3	1.5	V
Temperature Coefficient of Forward Voltage	ΔV_F		–	–1.6	–	mV/ $^\circ\text{C}$
Capacitance	C	$V = 0V, f = 1\text{MHz}$	–	24	50	pF

