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NTE3000 Light Emitting Diode Miniature, Clear Red

Description:

The NTE3000 is a red diffused Gallium Arsenide phosphide diode in a two lead epoxy package with a clear lens. The NTE3000 is intended for high volume indicator light applications. Major usage is in applications such as diagnostic lights on printed circuit boards and panel lights. It can also be used to displace subminiature lamps as small as T3/4 size.

Absolute Maximum Ratings:

Power Dissipation ($T_A = +25^\circ\text{C}$)	80mW
Derate linearly from 25°C	1.6mW/ $^\circ\text{C}$
Forward Current	
Continuous	40mA
Peak (1 μsec pulse width, 0.3% duty cycle)	1.0A
Reverse Voltage	5.0V
Operating Temperature Range	-55° to $+100^\circ\text{C}$
Storage Temperature Range	-55° to $+100^\circ\text{C}$
Lead Temperature (During Soldering, 5sec max, Note 1)	$+230^\circ\text{C}$

Note 1. The leads of the device were immersed in molten solder at $+230^\circ\text{C}$ to a point 1/16 (1.6mm) inch from the body of the device per MIL S-750, with a dwell time of 5 seconds.

Typical Thermal Characteristics:

Wavelength Temperature Coefficient (Case Temperature)	0.3nm/ $^\circ\text{C}$
Forward Voltage Temperature Coefficient	$-2.0\text{mV}/^\circ\text{C}$

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

Parameter	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	$I_F = 20\text{mA}$, Note 2	0.5	1.4	–	mcd
Peak Emission Wavelength	$I_F = 20\text{mA}$	–	660	–	nm
Spectral Line Halfwidth	$I_F = 20\text{mA}$	–	20	–	nm
Forward Voltage	$I_F = 20\text{mA}$	–	1.65	2.0	V
Capacitance	$V = 0$	–	80	–	pF
Rise & Fall Time	50 Ω System $I_F = 20\text{mA}$	–	50	–	ns
Reverse Current	$V_R = 3.0\text{V}$	–	5.0	–	nA
Reverse Breakdown Voltage	$I_R = 100\mu\text{A}$	5	15	–	V
View Angle	Between 50% points	–	80	–	degrees

Note 2. As measured with a Photo Research Corp. "SPECTRA" Microcandela Meter (Model IV-D).

