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NTE3001 Light Emitting Diode Miniature, Diffused Red

Description:

The NTE3001 is a deep red source color device made with a diffused Gallium Aluminum Indium Phosphide (AlGaInP) Red Light Emitting Diode mounted in a two lead epoxy package with a red diffused lens.

The NTE3001 is intended for high volume indicator light applications where low cost, high reliability, and top performance are required. Major usage is in applications such as diagnostic lights on printed circuit boards and panel lights. This device can be used to displace subminiature lamps as small as T3/4 size.

Features:

- Subminiature Package
- Wide Viewing Angle
- Long Life Solid State Reliability
- Low Package Profile

Applications:

- Small Indicator for Indoor Applications
- Flat Backlight for LCD, Switches and Symbols
- Indicator and Backlight in Office Equipment
- Indicator and Backlight for Battery Driven Devices
- Indicator and Backlight for Audio and Video Equipment
- Automotive: Backlighting in Dashboards and Switches
- Telecommunication: Indicator and Backlighting in Telephone and FAX

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Reverse Voltage, V_R	5V
Forward Current, I_F	25mA
Peak Forward Current (Duty 1/10 @ 1kHz), I_{FP}	60mA
Power Dissipation, P_d	60mW
Electrostatic Discharge (HBM), ESD	2000V
Operating Temperature Range, T_{opr}	-40° to $+85^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+100^\circ\text{C}$
Lead Temperature, T_L	
(Reflow soldering, 10sec)	$+260^\circ\text{C}$
(Hand soldering, 3sec)	$+350^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	I_V	$I_F = 20\text{mA}$	63	125	-	mcd
Viewing Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	-	45	-	degrees
Peak Wavelength	λ_p	$I_F = 20\text{mA}$	-	650	-	nm
Dominate Wavelength	λ_d	$I_F = 20\text{mA}$	-	639	-	nm
Spectral Radiation Bandwidth	$\Delta\lambda$	$I_F = 20\text{mA}$	-	20	-	nm
Forward Voltage	V_F	$I_F = 20\text{mA}$	1.7	2.0	2.4	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	10	μA

