



ELECTRONICS, INC.  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
<http://www.nteinc.com>

## NTE3019 Light Emitting Diode (LED) Red Diffused, 5mm

**Features:**

- Tapered Barrel T-1 3/4 Package
- High Intensity Red light source with various lens colors and effects
- Versatile Mounting on PC Board or Panel
- T-1 3/4 with Stand-off

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

Reverse Voltage,  $V_R$  ..... 5V  
 Peak Forward Current (Note 1,  $I_F$  ..... 1A  
 Power Dissipation ( $T_A = +25^\circ\text{C}$ ),  $P_D$  ..... 180mW  
     Derate linearly from  $25^\circ\text{C}$  ..... 2mW/ $^\circ\text{C}$   
 Operating Temperature Range,  $T_{opr}$  .....  $-55^\circ$  to  $+100^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-55^\circ$  to  $+100^\circ\text{C}$   
 Lead Temperature (During Soldering, 1/16" (1.6mm) from case, 5sec max),  $T_L$  .....  $+260^\circ\text{C}$

Note 1. Pulse Width =  $1\mu\text{s}$ , 0.3% duty cycle.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	$I_V$	$I_F = 20 \text{ mA}$	0.9	3.0	-	mcd
Peak Wavelength	$\lambda_p$	$I_F = 20 \text{ mA}$	-	-	660	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20 \text{ mA}$	-	20	-	nm
Forward Voltage	$V_F$	$I_F = 20 \text{ mA}$	-	1.65	2.0	V
Reverse Current	$I_n$	$V_R = 5.0\text{V}$	-	-	100	$\lambda\text{A}$
Reverse Voltage	$\lambda\text{A}$	$I_R = 100 \lambda\text{A}$	-	5.0	-	V
Capacitance	C	$V = 0$	-	35	-	pF
Viewing Angle	$2\theta_{1/2}$	Between 50% Points	-	60	-	degree
Rise Time	$t_r$	10% - 90% 50 $\Omega$	-	50	-	ns
Fall Time	$t_f$	90% - 10% 50 $\Omega$	-	50	-	ns

