



**ELECTRONICS, INC.**  
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## NTE3026 Light Emitting Diode (LED)

**Description:**

The Red/Green NTE3026 bicolor lamp is a white diffused, wide viewing angle, dual chips, utilizing Gallium Arsenide Phosphide on Gallium Phosphide red LED and Gallium Phosphide on Gallium Phosphide green LED. These dual chips operate independently of each other.

**Features:**

- Red and Green Chips are matched for Uniform Light Output
- T-1 3/4 Type Package
- Long Life Solid State Reliability
- Low Power Consumption
- IC Compatible

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

Power Dissipation, $P_D$		
Red	80mW	
Green	100mW	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width), $I_F$		
Red	200mA	
Green	120mA	
Continuous Forward Current, $I_F$		
Red	40mW	
Derate Linearly Above $25^\circ\text{C}$	0.5mA/ $^\circ\text{C}$	
Green	30mW	
Derate Linearly Above $25^\circ\text{C}$	0.4mA/ $^\circ\text{C}$	
Reverse Voltage, $V_R$		5V
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, 1.6mm from body, 5sec), $T_L$		$+260^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	$I_V$	$I_F = 20\text{mA}$ , Note 1	0.4	1.2	-	mcd
Red						
Green			2.5	8.7	-	mcd
Viewing Angle		Note 2	-	50	-	deg.

- Note 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.
- Note 2. Viewing Angle is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Emission Wavelength Red	$\lambda_{\text{PEAK}}$	Measurement at Peak	-	655	-	nm
Green			-	565	-	nm
Spectral Line Half Width Red	$\Delta\lambda$		-	24	-	nm
Green			-	30	-	nm
Forward Voltage Red	$V_F$	$I_F = 20\text{mA}$	-	1.7	2.0	V
Green			-	2.1	2.8	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	-	-	100	$\mu\text{A}$
Capacitance Red	C	$V_F = 0, f = 1\text{MHz}$	-	30	-	pF
Green			-	35	-	pF

