

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°C	$0.5\text{mA}/^\circ\text{C}$
Green	30mW
Derate Linearly Above 25°C	$0.4\text{mA}/^\circ\text{C}$
Reverse Voltage, V_R	5V
Operating Temperature Range, T_{opr}	-55° to $+100^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° 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	λ_{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	μA
Capacitance Red	C	$V_F = 0, f = 1\text{MHz}$	—	30	—	pF
Green			—	35	—	pF

