



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



NTE30091 Light Emitting Diode (LED) High-Efficiency Red + Green SOT-23 Surface Mount

Features:

- 3.0mm x 1.6mm SOT-23 SMT LED, 1.0mm Thickness
- High-Efficiency Red + Green

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

DC Forward Current, I_F	
High-Efficiency Red	30mA
Green	25mA
Peak Forward Current (Note 1), $I_{F(\text{peak})}$	50mA
Reverse Voltage, V_R	5V
Power Dissipation, P_D	
High-Efficiency Red	90mW
Green	84mW
Operating Temperature Range, T_{opr}	-30° to $+85^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+85^\circ\text{C}$
Reflow Soldering (Preheat $+150^\circ$ to $+180^\circ\text{C}$ 60sec to 120sec, 10sec max)	$+260^\circ\text{C}$

Note 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Viewing Angle of Half Power	$2\theta_{1/2}$	$I_F = 20\text{mA}$	–	140	–	degrees
Luminous Intensity	I_V	$I_F = 20\text{mA}$, Note 2	2.0	4.0	–	mcd
High-Efficiency Red						
Green			2.0	4.0	–	mcd
Forward Voltage	V_F	$I_F = 20\text{mA}$	–	2.05	2.60	V
High-Efficiency Red						
Green			–	2.15	2.80	V
Peak Emission Wave Length	λ_p	$I_F = 20\text{mA}$	–	625	–	nm
High-Efficiency Red						
Green			–	570	–	nm
Dominate Wavelength	λ_d (HUE)	$I_F = 20\text{mA}$, Note 3	–	618	–	nm
High-Efficiency Red						
Green			–	567	–	nm

Note 2. Tolerance: 30% measured with EXELTRON 2001

Note 3. The dominate wavelength, λ_d , is derived from the CIE Chromatic Diagram and represents the color of the device.

