



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

NTE30005, NTE30006, NTE30007 Light Emitting Diode (LED) 0603 Surface Mount

Description:

The NTE30005 thru NTE30007 are 1.6mm x 0.8mm chip LED lamps in a 0603 surface mount type package. The Super Bright Red source color device (NTE30005) is made with Gallium Aluminum Arsenide Red Light Emitting Diode. The Super Bright Green source color device (NTE30006) is made with Gallium Phosphide Green Light Emitting Diode. The Yellow source color device (NTE30007) is made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Features:

- 1.6mm x 0.8mm (0603) SMT LED, 0.75mm Thickness
- Low Power Consumption
- Wide Viewing Angle
- Ideal for Backlight and Indicator Applications

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

DC Forward Current, I_F		
NTE30005, NTE30007	30mA	
NTE30006	25mA	
Peak Forward Current (Note 1), $I_{F(\text{peak})}$		
NTE30005	155mA	
NTE30006, NTE30007	140mA	
Reverse Voltage, V_R	5V	
Viewing Angle ($2\theta_{1/2}$)	120°	
Power Dissipation, P_D		
NTE30005	100mW	
NTE30006, NTE30007	105mW	
Operating Temperature Range, T_{opr}	-40° to +85°C	
Storage Temperature Range, T_{stg}	-40° to +85°C	

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

Note 2. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	I_v	$I_F = 20\text{mA}$				
NTE30005			36	100	-	mcd
NTE30006			4	15	-	mcd
NTE30007			3	8	-	mcd

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage NTE30005	V_F	$I_F = 20\text{mA}$	-	1.85	2.5	V
NTE30006			-	2.2	2.5	V
NTE30007			-	2.1	2.5	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	10	μA
Peak Emission Wave Length NTE30005	λ_P	$I_F = 20\text{mA}$	-	660	-	nm
NTE30006			-	565	-	nm
NTE30007			-	590	-	nm
Dominate Wavelength NTE30005	λ_D	$I_F = 20\text{mA}$	-	640	-	nm
NTE30006			-	568	-	nm
NTE30007			-	588	-	nm
Spectral Line Half Width NTE30005	$\Delta\lambda$	$I_F = 20\text{mA}$	-	20	-	nm
NTE30006			-	30	-	nm
NTE30007			-	25	-	nm
Capacitance NTE30005	C	$V_F = 0\text{V}, f = 1\text{MHz}$	-	45	-	pF
NTE30006			-	15	-	pF
NTE30007			-	20	-	pF

