



ELECTRONICS, INC.

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

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

### Description:

The NTE30005 thru NTE30007 are 1.6mm x 0.8mm chip LED lamps in a surface mount type package. The High Efficiency Red source color device (NTE30005) is made with Gallium Arsenide Phosphide on Gallium Phosphide Orange 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 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	.....	160mA
NTE30006, NTE30007	.....	140mA
Reverse Voltage, $V_R$	.....	5V
Viewing Angle ( $2\theta_{1/2}$ )	.....	120°
Power Dissipation, $P_D$	.....	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			5	12	-	mcd
NTE30006			3	10	-	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	$V_F$	$I_F = 20\text{mA}$	-	2.0	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	$\mu\text{A}$
Peak Emission Wave Length NTE30005	$\lambda_P$	$I_F = 20\text{mA}$	-	627	-	nm
NTE30006			-	565	-	nm
NTE30007			-	590	-	nm
Dominate Wavelength NTE30005	$\lambda_D$	$I_F = 20\text{mA}$	-	625	-	nm
NTE30006			-	568	-	nm
NTE30007			-	588	-	nm
Spectral Line Half Width NTE30005	$\Delta\lambda$	$I_F = 20\text{mA}$	-	45	-	nm
NTE30006			-	30	-	nm
NTE30007			-	25	-	nm
Capacitance NTE30005, NTE30006	C	$V_F = 0\text{V}, f = 1\text{MHz}$	-	15	-	pF
NTE30007			-	20	-	pF

