



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

## NTE30037 thru NTE30043, NTE30045 Super Bright LED Indicators, 5mm

**Features:**

- All Plastic Mold Type w/Water Clear Lens:
  - NTE30037 (Yellow Green, AlGaP/GaAs)
  - NTE30038 (Pure Green, GaInN/GaN)
  - NTE30039 (Yellow, AlInGaP/GaP)
  - NTE30040 (Orange)
  - NTE30041 (Deep Red, GaAlAs/GaAlAs)
  - NTE30042 (Amber)
  - NTE30043 (Blue, InGaN)
  - NTE30045 (White, GaInN/GaN)

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

Reverse Voltage, $V_R$	
All devices	5V
Continuous Forward Current, $I_F$	
NTE30037, NTE30038, NTE30039, NTE30040, NTE30041, NTE30042	25mA
NTE30043, NTE30045	30mA
Peak Forward Current (1.10 Duty Cycle, 0.1ms Pulse Width), $I_{FM}$	
NTE30037, NTE30042	50mA
NTE30039, NTE30040, NTE30041, NTE30043, NTE30045	100mA
NTE30038	150mA
Power Dissipation, $P_D$	
NTE30037, NTE30040, NTE30043	100mW
NTE30041	110mW
NTE30038, NTE30045	120mW
NTE30039, NTE30042	150mW
Operating Temperature Range, $T_{opr}$	$-25^\circ\text{C}$ to $+85^\circ\text{C}$
NTE30043 <b>Only</b>	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
NTE30038 <b>Only</b>	$-40^\circ\text{C}$ to $+100^\circ\text{C}$
NTE30039, NTE30040, NTE30042 <b>Only</b>	$-20^\circ\text{C}$ to $+80^\circ\text{C}$
Storage Temperature Range, $T_{stg}$	
NTE30038, NTE30042, NTE30043 <b>Only</b>	$-40^\circ\text{C}$ to $+100^\circ\text{C}$
NTE30039, NTE30040 <b>Only</b>	$-30^\circ\text{C}$ to $+100^\circ\text{C}$
All other devices	$-25^\circ\text{C}$ to $+100^\circ\text{C}$
Lead Temperature (During Soldering, .063 (1.6mm) from body, 5sec max), $T_L$	$+260^\circ\text{C}$



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage NTE30037	$V_F$	$I_F = 20\text{mA}$	-	2.2	2.4	V
NTE30038			3.0	3.3	3.6	V
NTE30039, NTE30040, NTE30042			2.0	-	2.2	V
NTE30041			1.8	2.0	2.2	V
NTE30043			2.6	3.0	3.4	V
NTE30045			-	3.6	4.0	V
Reverse Current NTE30037, NTE30040, NTE30041, NTE30043	$I_R$	$V_R = 5\text{V}$	-	-	10	$\mu\text{A}$
NTE30038			-	-	100	$\mu\text{A}$
NTE30045			$V_R = 4\text{V}$			60
Luminous Intensity NTE30037	$I_V$	$I_F = 20\text{mA}$ , Note 1	-	2500	-	mcd
NTE30038			-	11000	-	mcd
NTE30039, NTE30042			10000	-	12000	mcd
NTE30040			2000	-	3000	mcd
NTE30041			8000	-	10000	mcd
NTE30043			3800	6000	9000	mcd
NTE30045			-	16000	-	mcd
Peak Emission Wave Length NTE30037	$\lambda_P$	$I_F = 20\text{mA}$	-	575	-	nm
NTE30038			-	523	-	nm
NTE30039			590	593	595	nm
NTE30040			620	-	625	nm
NTE30041			660	-	665	nm
NTE30042			600	605	610	nm
NTE30043			-	470	-	nm
NTE30045			CIE Coordinates, Typ	X: 0.30; Y: 0.31		
Dominant Wavelength (NTE30043 <b>Only</b> )	$\lambda_d$	$I_F = 20\text{mA}$	461	467	473	nm
Spectrol Line Half-Width (NTE30043 <b>Only</b> )	$\Delta\lambda$	$I_F = 20\text{mA}$	-	30	-	nm
Viewing Angle NTE30037	$2\theta^{1/2}$	$I_F = 20\text{mA}$	-	12	-	deg.
NTE30038			-	15	-	deg.
NTE30039, NTE30041, NTE30040, NTE30042			-	30	-	deg.
NTE30043			-	20	-	Deg.
NTE30045			-	22	-	deg.

Note 1. Luminous intensity is measured with an Exeltron 2001.

