



ELECTRONICS, INC.
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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)
 - 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
NTE30045	30mA
NTE30043	40mA
Peak Forward Current (1.10 Duty Cycle, 0.1ms Pulse Width), I_{FM}	
NTE30037, NTE30042	50mA
NTE30039, NTE30040, NTE30041, NTE30045	100mA
NTE30038	150mA
NTE30043	200mA
Power Dissipation, P_D	
NTE30037, NTE30040	100mW
NTE30041	110mW
NTE30038, NTE30045	120mW
NTE30039, NTE30042	150mW
NTE30043	200mW
Operating Temperature Range, T_{opr}	-25°C to $+85^\circ\text{C}$
NTE30038 Only	-40°C to $+100^\circ\text{C}$
NTE30039, NTE30040, NTE30042, NTE30043 Only	-20°C to $+80^\circ\text{C}$
Storage Temperature Range, T_{stg}	
NTE30038, NTE30042 Only	-40°C to $+100^\circ\text{C}$
NTE30039, NTE30040, NTE30043 Only	-30°C to $+100^\circ\text{C}$
All other devices	-25°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			3.0	-	3.4	V
NTE30045			-	3.6	4.0	V
Reverse Current NTE30037, NTE30040, NTE30041	I_R	$V_R = 5\text{V}$	-	-	10	μA
NTE30038			-	-	100	μA
NTE30045		$V_R = 4\text{V}$			60	μA
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, NTE30043			8000	-	10000	mcd
NTE30045			-	16000	-	mcd
Peak Emission Wave Length NTE30037	λ_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			460	465	470	nm
NTE30045		CIE Coordinates, Typ	X: 0.30; Y: 0.31			
Viewing Angle NTE30037	$2\theta^{1/2}$	$I_F = 20\text{mA}$	-	12	-	deg.
NTE30038			-	15	-	deg.
NTE30045			-	22	-	deg.
All Others			-	30	-	deg.

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

