



ELECTRONICS, INC.
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NTE30030 thru NTE30036, NTE30044 Super Bright LED Indicators, 3mm

Features:

- All Plastic Mold Type w/Water Clear Lens:
 - NTE30030 (Yellow Green, AlGaP/GaAs)
 - NTE30031 (Pure Green, GaInN/GaN)
 - NTE30032 (Yellow, AlInGaP/GaAs)
 - NTE30033 (Orange, AlInGaP/GaAs)
 - NTE30034 (Deep Red, GaAlAs/GaAlAs)
 - NTE30035 (Amber, AlGaP/GaAs)
 - NTE30036 (Blue, GaInN/GaN)
 - NTE30044 (White, GaInN/GaN)

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

Reverse Voltage, V_R	5V
Continuous Forward Current, I_F	
NTE30030, NTE30032, NTE30033, NTE30034, NTE30035	25mA
NTE30031, NTE30036, NTE30044	30mA
Peak Forward Current (1.10 Duty Cycle, 0.1ms Pulse Width), I_{FM}	
NTE30030, NTE30032, NTE30033, NTE30035	50mA
NTE30031, NTE30034, NTE30036, NTE30044	100mA
Power Dissipation, P_D	
NTE30030, NTE30032, NTE30033, NTE30034, NTE30035	100mW
NTE30031, NTE30036, NTE30044	120mW
Operating Temperature Range, T_{opr}	-25°C to $+85^\circ\text{C}$
NTE30034 Only	-20°C to $+80^\circ\text{C}$
NTE30036 Only	-40°C to $+85^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40°C to $+100^\circ\text{C}$
NTE30034 Only	-30°C to $+100^\circ\text{C}$
Lead Temperature (During Soldering, .063 (1.6mm) from body, 5sec max), T_L	$+240^\circ\text{C}$
NTE30034 Only	$+260^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$				
NTE30030			–	2.2	2.4	V
NTE30031			–	3.5	4.0	V
NTE30032, NTE30035			–	2.0	2.4	V
NTE30033			–	2.0	2.6	V
NTE30034			2.0	–	2.2	V
NTE30036			2.7	3.3	4.0	V
NTE30044			3.0	3.3	4.0	V

Rev. 7-19



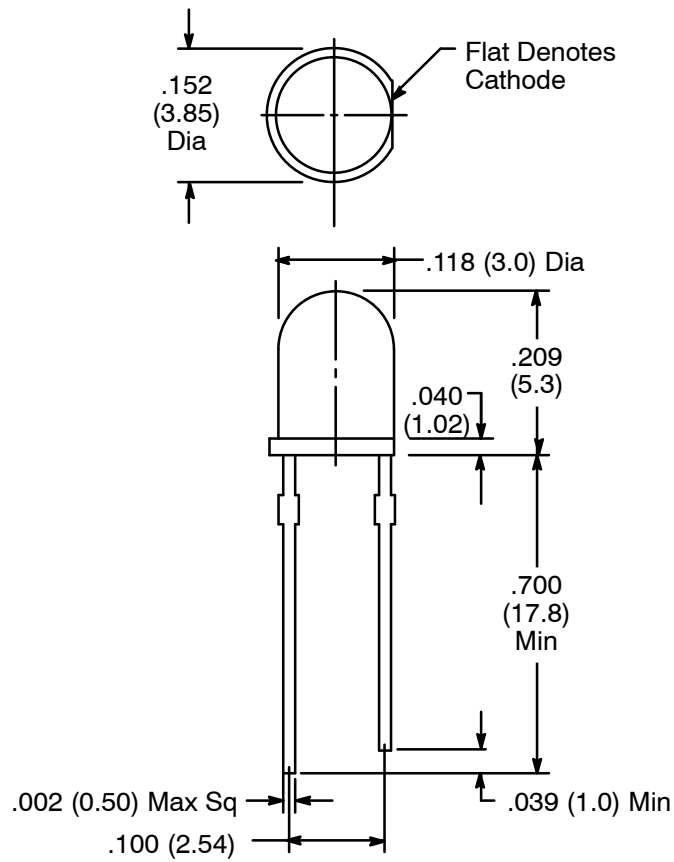
Electro-Optical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Current All Devices	I_R	$V_R = 5\text{V}$	–	–	10	μA
NTE30031, NTE30036		$V_R = 4\text{V}$	–	–	60	μA
NTE30044 Only		$V_R = 5\text{V}$	–	–	50	μA
Luminous Intensity NTE30030	I_V	$I_F = 20\text{mA}$, Note 1	–	1600	–	mcd
NTE30031			–	5000	–	mcd
NTE30032, NTE30033, NTE30035			–	2500	–	mcd
NTE30034			1500	–	2500	mcd
NTE30036			2000	3000	–	mcd
NTE30044			6000	7000	–	mcd
Peak Emission Wave Length NTE30030	λ_P	$I_F = 20\text{mA}$	–	575	–	nm
NTE30031			–	523	–	nm
NTE30032			–	592	–	nm
NTE30033			–	620	–	nm
NTE30034			655	660	665	nm
NTE30035			–	607	–	nm
NTE30036			–	468	–	nm
NTE30044		CIE Coordinates, Typ	X: 0.28; Y: 0.30			
Dominate Wave Length (NTE30036 Only)	$\lambda_d(\text{HUE})$	$I_F = 20\text{mA}$, Note 2	465	470	475	nm
Spectral Line Half Width NTE30030, NTE30033, NTE30035	$\Delta\lambda$	$I_F = 20\text{mA}$	–	20	–	nm
NTE30031			–	45	–	nm
NTE30032			–	25	–	nm
NTE30036			–	20	–	nm
NTE30044			–	22	–	nm
Viewing Angle NTE30030, NTE30031	$2\theta^{1/2}$	$I_F = 20\text{mA}$	–	14	–	deg.
NTE30032, NTE30033, NTE30035			–	10	–	deg.
NTE30034			–	30	–	deg.
NTE30036			–	10	–	deg.
NTE30044			–	30	–	deg.
Optic Rise Time (NTE30036 Only)	τ	$I_F = 20\text{mA}$	–	30	–	ns

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

Note 2. The dominate wavelength, λ_d , is derived from the CIE Chromaticity Diagram and represents the color of the device.

NTE30030 thru NTE30036



NTE30044, NTE30036

