



ELECTRONICS, INC.
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NTE30065 thru NTE30071 Super Bright LED Indicators 10mm (T-3 1/4) Water Clear Lens

Features:

- RoHS Compliant
- All Plastic Mold Type w/Water Clear Lens:
 - NTE30065 (Yellow Green, AlInGaP/GaAs)
 - NTE30066 (Light Green, InGaN/GaN)
 - NTE30067 (Orange, AlInGaP/GaAs)
 - NTE30068 (Light Red, AlInGaP/GaAs)
 - NTE30069 (Deep Red, GaAlAs/GaAlAs)
 - NTE30070 (Blue)
 - NTE30071 (Super White, GaInN/GaN)

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

Reverse Voltage, V_R	
All Device	5V
NTE30066 Only	4V
Continuous Forward Current, I_F	
All Devices	25mA
NTE30066 Only	30mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width), I_{FM}	
NTE30065, NTE30067, NTE30068, NTE30069	50mA
NTE30066, NTE30070, NTE30071	100mA
Electrostatic Discharge (HBM, NTE30071 Only), ESD	150V
Power Dissipation, P_D	
NTE30065, NTE30067, NTE30068, NTE30070	100mW
NTE30069	110mW
NTE30066	120mW
NTE30071	80mW
LED Junction Temperature, T_j	+100°C
Operating Temperature Range, T_{opr}	
All Devices	-25°C to +85°C
NTE30070, NTE30071 Only	-20°C to +80°C
Storage Temperature Range, T_{stg}	
NTE30067 Only	-25°C to +100°C
NTE30070, NTE30071 Only	-30°C to +100°C
All Other Devices	-40°C to +100°C
Lead Temperature (During Soldering, .063 (1.6mm) from body, 5sec max), T_L	+260°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	$I_F = 20\text{mA}$				
NTE30065			-	2.2	2.5	V
NTE30066			-	3.5	4.0	V
NTE30067, NTE30068			-	2.0	2.5	V
NTE30069			-	1.86	2.5	V

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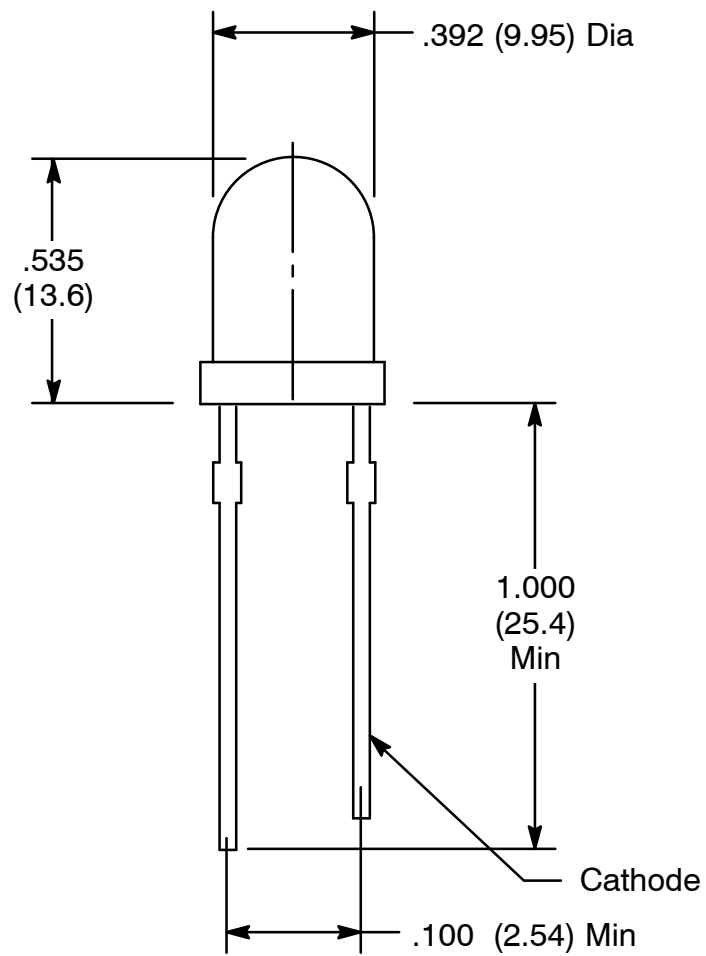
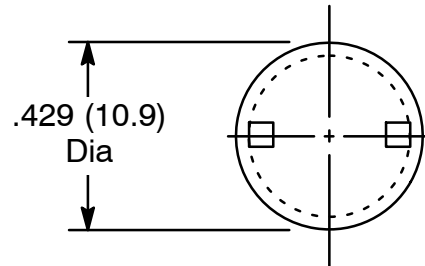


Electro-Optical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage (Cont'd) NTE30070	V_F	$I_F = 20\text{mA}$	3.0	–	3.4	V
NTE30071			3.0	3.3	3.6	V
Reverse Current All Devices	I_R	$V_R = 5\text{V}$	–	–	10	μA
NTE30070			–	–	1.0	μA
NTE30066		$V_R = 4\text{V}$	–	–	60	μA
Luminous Intensity NTE30065	I_V	$I_F = 20\text{mA}$, Note 1	600	1300	–	mcd
NTE30066			1800	3500	–	mcd
NTE30067			1200	2000	–	mcd
NTE30068			1400	2000	–	mcd
NTE30069			1500	3000	–	mcd
NTE30070			3000	–	4000	mcd
NTE30071			10000	–	12000	mcd
Peak Emission Wave Length NTE30065	λ_P	$I_F = 20\text{mA}$	–	575	–	nm
NTE30066			–	523	–	nm
NTE30067			–	592	–	nm
NTE30068			–	620	–	nm
NTE30069			–	660	–	nm
NTE30070			460	465	470	nm
NTE30071		CIE Coordinates, Typ	X: 0.30; Y: 0.30			
Dominate Wave Length NTE30065	λ_d (HUE)	$I_F = 20\text{mA}$, Note 2	–	572	–	nm
NTE30066			520	525	540	nm
NTE30067			–	590	–	nm
NTE30068			–	615	–	nm
NTE30069			–	645	–	nm
Correlative Color Temp (NTE30071 Only)	T_c	$I_F = 20\text{mA}$	7000	–	9000	K
Spectral Line Half Width NTE30065	$\Delta\lambda$	$I_F = 20\text{mA}$	–	15	–	nm
NTE30066			–	45	–	nm
NTE30067, NTE30068			–	25	–	nm
NTE30069			–	20	–	nm
Viewing Angle All Devices	$2\theta^{1/2}$	$I_F = 20\text{mA}$	–	40	–	deg.
NTE30070, NTE30071			–	30	–	deg.
Terminal Capacitance NTE30065	C_t	$V = 0\text{V}$, $f = 1\text{MHz}$	–	35	–	pF
NTE30067			–	14	–	pF
NTE30068			–	20	–	pF
NTE30069			–	22	–	pF
Response Frequency NTE30065, NTE30067, NTE30068, NTE30069	F_c		–	4	–	MHz
Optic Rise Time (NTE30066 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.



Revision:

Revision Date	Changes
Nov 13, 2020	Changed RoHS symbol. Changed specs for NTE30071 due to new source.
Aug 22, 2022	Changed specs for NTE30070 due to new source.
Aug 17, 2023	Changed/updated heading.