



ELECTRONICS, INC.
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NTE30065 thru NTE30071 Super Bright LED Indicators, 10mm

Features:

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

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Reverse Voltage, V _R		
NTE30066, NTE30070, NTE30071	.....	4V
NTE30065, NTE30067, NTE30068, NTE30069	.....	5V
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	.....	100mW
NTE30069	.....	110mW
NTE30066, NTE30070, NTE30071	.....	120mW
LED Junction Temperature, T _j	.....	+100°C
Operating Temperature Range, T _{opr}		
All Devices	.....	-25°C to +85°C
NTE30071 Only	.....	-40°C to +85°C
Storage Temperature Range, T _{stg}		
All Devices	.....	-40°C to +100°C
NTE30067 Only	.....	-25°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°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V _F	I _F = 20mA				
NTE30065			-	2.2	2.5	V
NTE30066, NTE30070			-	3.5	4.0	V
NTE30067, NTE30068			-	2.0	2.5	V
NTE30069			-	1.86	2.5	V
NTE30071	-	3.3	3.8	V		

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	$V_R = 5V$	-	-	10	μA
NTE30066, NTE30070, NTE30071		$V_R = 4V$	-	-	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			600	1200	-	mcd
NTE30071			4000	8500	-	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			-	468	-	nm
NTE30071		CIE Coordinates, Typ	X: 0.30; Y: 0.29			
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
NTE30070			463	470	479	nm
Spectral Line Half Width NTE30065	$\Delta\lambda$	$I_F = 20\text{mA}$	-	15	-	nm
NTE30066			-	45	-	nm
NTE30067, NTE30068			-	25	-	nm
NTE30069			-	20	-	nm
NTE30070			-	35	-	nm
Viewing Angle	$2\theta^{1/2}$	$I_F = 20\text{mA}$	-	40	-	deg.
Terminal Capacitance NTE30065	C_t	$V = 0V$, $f = 1\text{MHz}$	-	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.

