



ELECTRONICS, INC.
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NTE30074 thru NTE30078 Light Emitting Diode (LED) 1206 Surface Mount

Features:

- Available in 5 Different Colors:
 - NTE30074 (Super Fresh Red, AlInGaP/GaAs)
 - NTE30075 (Super Green)
 - NTE30076 (Super Yellow, AlInGaP/GaAs)
 - NTE30077 (Super Orange, AlInGaP/GaAs)
 - NTE30078 (Super Blue)
- 3.2mm x 1.6mm (1206) SMT LED, 1.1mm Thickness
- Single Color
- Suitable for All SMT Assembly and Solder Process
- Ideal for Backlighting

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

DC Forward Current, I_F	
NTE30074, NTE30076, NTE30077	25mA
NTE30075, NTE30078	20mA
Peak Forward Current (Note 1), $I_{F(\text{peak})}$	
NTE30074, NTE30076, NTE30077	50mA
NTE30075, NTE30078	100mA
Reverse Voltage, V_R	
NTE30078	4V
All Other Devices	5V
Power Dissipation, P_D	
NTE30074, NTE30076, NTE30077	100mW
NTE30075, NTE30078	120mW
Electrostatic Discharge (NTE30075 & NTE30078 Only), ESD	
150V	
LED Junction Temperature, T_J	
NTE30078	+125°C
All Other devices	+100°C
Operating Temperature Range, T_{opr}	
-30° to +85°C	
Storage Temperature Range, T_{stg}	
-40° to +85°C	
Reflow Soldering (Preheat +150° to +180°C 60sec to 120sec, 10sec max)	
+260°C	

Note 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Viewing Angle of Half Power	$2\theta_{1/2}$	$I_F = 20\text{mA}$	-	140	-	degrees
Luminous Intensity NTE30074	I_V	$I_F = 20\text{mA}$, Note 2	50	100	-	mcd
NTE30075			120	220	-	mcd
NTE30076			30	100	-	mcd
NTE30077			60	100	-	mcd
NTE30078			25	48	-	mcd
Forward Voltage NTE30074, NTE30076, NTE30077	V_F	$I_F = 20\text{mA}$	-	2.0	2.4	V
NTE30075			-	3.5	4.2	V
NTE30078			-	3.5	4.0	V
Reverse Current NTE30074, NTE30076, NTE30077	I_R	$V_R = 5\text{V}$	-	-	10	μA
NTE30075		$V_R = 4\text{V}$	-	-	10	μA
NTE30078		-	-	60	μA	
Peak Emission Wave Length NTE30074	λ_P	$I_F = 20\text{mA}$	-	635	-	nm
NTE30075			-	523	-	nm
NTE30076			-	589	-	nm
NTE30077			-	620	-	nm
NTE30078			-	468	-	nm
Dominate Wavelength NTE30074	λ_d (HUE)	$I_F = 20\text{mA}$, Note 3	-	626	-	nm
NTE30075			-	525	-	nm
NTE30076			-	588	-	nm
NTE30077			-	615	-	nm
NTE30078			465	470	480	nm
Spectral Line Half Width NTE30074, NTE30077	$\Delta\lambda$	$I_F = 20\text{mA}$	-	25	-	nm
NTE30075, NTE30078			-	45	-	nm
NTE30076			-	20	-	nm

Note 2. Tolerance: 30% measured with EXELTRON 2001

Note 3. The dominate wavelength, λ_d , is derived from the CIE Chromatic Diagram and represents the color of the device.

