



ELECTRONICS, INC.  
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## NTE30074 thru NTE30079 Light Emitting Diode (LED) 1206 Surface Mount

**Features:**

- Available in 5 Different Colors:
  - NTE30074 (Super Red, AllnGaP/GaAs)
  - NTE30075 (Super Green)
  - NTE30076 (Super Yellow, AllnGaP/GaAs)
  - NTE30077 (Super Orange, AllnGaP/GaAs)
  - NTE30078 (Super Blue)
  - NTE30079 (Super White)
- 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, NTE30079 .....	20mA
Peak Forward Current (Note 1), $I_{fp}$	
NTE30074, NTE30076, NTE30077 .....	50mA
NTE30075, NTE30078, NTE30079 .....	100mA
Reverse Voltage, $V_R$	
NTE30078 & NTE30079 .....	4V
All Other Devices .....	5V
Power Dissipation, $P_D$	
NTE30074, NTE30076, NTE30077 .....	100mW
NTE30075, NTE30078, NTE30079 .....	120mW
Electrostatic Discharge (NTE30075, NTE30078 & NTE30079 <b>Only</b> ), ESD .....	
150V	
LED Junction Temperature, $T_J$	
NTE30078 <b>Only</b> .....	+125°C
All Other Devices .....	+100°C
Operating Temperature Range, $T_{opr}$	
NTE30074 <b>Only</b> .....	-40° to +85°C
NTE30079 <b>Only</b> .....	-25° to +85°C
All Other Devices .....	-30° to +85°C
Storage Temperature Range, $T_{stg}$	
NTE30074 <b>Only</b> .....	-40° to +100°C
NTE30079 <b>Only</b> .....	-30° to +85°C
All Other Devices .....	-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 NTE30074 <b>Only</b> All Other Devices	$2\theta_{1/2}$	$I_F = 20\text{mA}$	- -	130 140	- -	degrees
Luminous Intensity NTE30074	$I_V$	$I_F = 20\text{mA}$ , Note 2	120	-	150	mcd
NTE30075			120	220	-	mcd
NTE30076			30	100	-	mcd
NTE30077			60	100	-	mcd
NTE30078			25	48	-	mcd
NTE30079			200	350	-	mcd
Forward Voltage NTE30076, NTE30077	$V_F$	$I_F = 20\text{mA}$	-	2.0	2.4	V
NTE30075, NTE30079			-	3.5	4.2	V
NTE30074			2.0	-	2.2	V
NTE30078			-	3.5	4.0	V
Reverse Current NTE30074, NTE30076, NTE30077	$I_R$	$V_R = 5\text{V}$	-	-	10	$\mu\text{A}$
NTE30075		$V_R = 4\text{V}$	-	-	10	$\mu\text{A}$
NTE30078, NTE30079		-	-	60	$\mu\text{A}$	
Peak Emission Wave Length NTE30074	$\lambda_P$	$I_F = 20\text{mA}$	620	-	625	nm
NTE30075			-	523	-	nm
NTE30076			-	589	-	nm
NTE30077			-	620	-	nm
NTE30078			-	468	-	nm
Dominate Wavelength NTE30074	$\lambda_d$ (HUE)	$I_F = 20\text{mA}$ , Note 3	620	-	625	nm
NTE30075			-	525	-	nm
NTE30076			-	588	-	nm
NTE30077			-	615	-	nm
NTE30078			465	470	480	nm
Spectral Line Half Width NTE30077	$\Delta\lambda$	$I_F = 20\text{mA}$	-	25	-	nm
NTE30075, NTE30078			-	45	-	nm
NTE30074, NTE30076			-	20	-	nm
Chromaticity Coordinates (NTE30079 <b>Only</b> )	x	$I_F = 20\text{mA}$	-	0.29	-	
	y		-	0.31	-	

Note 2. Tolerance: 30% measured with EXELTRON 2001

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

