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## NTE3144 thru NTE3147 Light Emitting Diode – 5mm

**Features:**

- All Plastic Mold Type w/Colored Diffused Lens:
  - NTE3144 (High Efficiency Red, AlGaP/GaAs)
  - NTE3145 (Yellow Green, GaInN/GaN)
  - NTE3146 (Yellow)
  - NTE3147 (Orange)

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

Power Dissipation, $P_D$	
NTE3144, NTE3146 .....	100mW
NTE3145 .....	84mW
NTE3147 .....	90mW
Continuous Forward Current, $I_F$	
NTE3144 .....	20mA
NTE3145, NTE3146, NTE3147 .....	25mA
Peak Forward Current (0.1 ms pulse width, 1/10 duty cycle), $I_{FM}$	
NTE3144, NTE3146, NTE3147 .....	100mA
NTE3145 .....	50mA
Reverse Voltage, $V_R$ .....	5V
LED Junction Temperature, $T_j$ .....	+100°C
Operating Temperature Range, $T_{opr}$	
NTE3144 .....	-40° to +85°C
NTE3146, NTE3147 .....	-20° to +80°C
NTE3145 .....	-25° to +85°C
Storage Temperature Range, $T_{stg}$	
NTE3146, NTE3147 .....	-30° to +100°C
NTE3144, NTE3145 .....	-40° to +100°C
Lead Temperature (During Soldering, 3sec max, 1.6mm below package base), $T_L$ .....	+260°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
View Angle of Half Power	2θ1/2	$I_F = 20\text{mA}$	-	40	-	Degree
NTE3144						
All Others				30		Degree
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	-	2.0	2.5	V
NTE3144						
NTE3145				2.15	2.80	V
NTE3146				2.0	-	2.2
NTE3147				2.0	2.2	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	-	-	10	uA

Note 1. Tolerance: 30%, measured using Exeltron 2001.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE3144	$I_V$	$I_F = 20\text{mA}$ , Note 1	80	100	-	mcd
NTE3145			50	80	-	mcd
NTE3146			40	-	80	mcd
NTE3147			40	-	60	mcd
Peak Emission Wavelength NTE3144	$\lambda_p$	$I_F = 20\text{mA}$	630	-	635	nm
NTE3145			-	570	-	nm
NTE3146			585	590	595	nm
NTE3147			600	605	610	nm
Dominate Wave Length NTE3145 <b>Only</b>	$\lambda_d(\text{HUE})$	$I_F = 20\text{mA}$ , Note 2	-	567	-	nm
Specturm Width of Half Valve NTE3144	$\Delta\lambda$	$I_F = 20\text{mA}$	-	20	-	nm
NTE3145			-	30	-	nm
Terminal Capacitance NTE3145 <b>Only</b>	$C_t$	$V = 0\text{V}$ , $F = 1\text{MHz}$	-	7	-	pF
Response Frequency	$F_C$		-	4	-	MHz

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

