ELECTRONICS, INC.
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NTE3144 thru NTE3147
Light Emitting Diode – 5mm

Features:

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

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

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

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

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE3144	I_V	I_F = 20mA, Note 1	80	100	–	mcd
NTE3145			50	80	–	mcd
NTE3146			40	–	80	mcd
NTE3147			40	–	60	mcd
Peak Emission Wavelength NTE3144	λp	I_F = 20mA	630	–	635	nm
NTE3145			–	570	–	nm
NTE3146			585	590	595	nm
NTE3147			600	605	610	nm
Dominate Wave Length NTE3145 **Only**	λ_d(HUE)	I_F = 20mA, Note 2	–	567	–	nm
Specturm Width of Half Valve NTE3144	Δλ	I_F = 20mA	–	20	–	nm
NTE3145			–	30	–	nm
Terminal Capacitance NTE3145 **Only**	C_t	V = 0V, F = 1MHz	–	7	–	pF
Response Frequency	F_C		–	4	–	MHz

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