ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
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NTE3140 thru NTE3143
Light Emitting Diode – 3mm

Features:

- All Plastic Mold Type w/Water Clear Lens:
  NTE3140 (High Efficiency Red, AlGaP/GaAs)
  NTE3141 (Yellow Green, GaInN/GaN)
  NTE3142 (Yellow, AlInGaP/GaAs)
  NTE3143 (Orange, AlInGaP/GaAs)

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

Power Dissipation, P_D
- NTE3140, NTE3142, NTE3143 . . . . . 90mW
- NTE3141 . . . . . 84mW

Continuous Forward Current, I_F
- NTE3140, NTE3143 . . . . . 30mA
- NTE3141, NTE3142 . . . . . 25mA

Peak Forward Current (0.1 ms pulse width, 1/10 duty cycle), I_{FM} 50mA
Reverse Voltage, V_R 5V
LED Junction Temperature, T_J . . . . . +100°C
Operating Temperature Range, T_{opr} . . . . . –25° to +85°C
Storage Temperature Range, T_{stg} . . . . . –40° to +100°C
Lead Temperature (During Soldering, 5sec max, 1.6mm below package base) . . . . . +240°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
View Angle of Half Power	2θ1/2	I_F = 20mA	–	40	–	Degree
Forward Voltage NTE3140, NTE3143	V_F	I_F = 20mA	–	2.05	2.80	V
NTE3141			–	2.15	2.80	V
NTE3142			–	2.10	2.80	V
Reverse Current	I_R	V_R = 5V	–	–	10	uA
Luminous Intensity NTE3140, NTE3143	I_V	I_F = 20mA, Note 1	20	35	–	mcd
NTE3141			20	40	–	mcd
NTE3142			20	30	–	mcd

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
Peak Emission Wavelength NTE3140, NTE3143	λ_P	I_F = 20mA	–	625	–	nm
NTE3141			–	570	–	nm
NTE3142			–	589	–	nm
Dominate Wave Length NTE3140, NTE3143	λ_d(HUE)	I_F = 20mA, Note 2	–	618	–	nm
NTE3141			–	567	–	nm
NTE3142			–	585	–	nm
Specturm Width of Half Valve NTE3140, NTE3143	$\Delta\lambda$	I_F = 20mA	–	45	–	nm
NTE3141			–	30	–	nm
NTE3142			–	35	–	nm
Terminal Capacitance NTE3140, NTE3143	C_t	V = 0V, F = 1MHz	–	6	–	pF
NTE3141			–	7	–	pF
NTE3142			–	5	–	pF
Response Frequency	F_c		–	4	–	MHz

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