ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

RoHS 2002/95/EC

NTE30018 & NTE30019
Light Emitting Diode (LED)
0603 Surface Mount

Features:
- NTE30018: Super Bright Orange (AlInGaP/GaAs)
- NTE30019: Super Bright Blue
- 1.6mm x 0.8mm (0603) SMT LED, 0.75mm Thickness
- Low Power Consumption
- Wide Viewing Angle
- Ideal for Backlight and Indicator Applications

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

DC Forward Current, I_F
- NTE30018 . . . . . 25mA
- NTE30019 . . . . . 20mA

Peak Forward Current (Note 1), $I_{F(peak)}$
- NTE30018 . . . . . 50mA
- NTE30019 . . . . . 100mA

Reverse Voltage, V_R
- NTE30018 . . . . . 5V
- NTE30019 . . . . . 4V

Power Dissipation, P_D
- NTE30018 . . . . . 100mW
- NTE30019 . . . . . 120mW

Electrostatic Discharge (NTE30019 **Only**), ESD 150V

LED Junction Temperature, T_J
- NTE30018 . . . . . +100°C
- NTE30019 . . . . . +125°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°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Viewing Angle of Half Power	2Θ 1/2	I_F = 20mA	–	140	–	degrees
Luminous Intensity NTE30018	I_V	I_F = 20mA, Note 2	35	75	–	mcd
NTE30019			28	52	–	mcd

Note 2. Tolerance: 30% measured with EXELTRON 2001

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage NTE30018	V_F	I_F = 20mA	–	2.0	2.4	V
NTE30019			–	3.5	4.0	V
Reverse Current NTE30018	I_R	V_R = 5V	–	–	10	μA
NTE30019		V_R = 4V	–	–	60	μA
Peak Emission Wave Length NTE30018	λ_P	I_F = 20mA	–	620	–	nm
NTE30019			–	468	–	nm
Dominate Wavelength NTE30018	$\lambda_{d\ (HUE)}$	I_F = 20mA, Note 3	–	615	–	nm
NTE30019			465	470	480	nm
Spectral Line Half Width NTE30018	$\Delta\lambda$	I_F = 20mA	–	20	–	nm
NTE30019			–	45	–	nm

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

