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

RoHS 2002/95/EC

# NTE30074 thru NTE30078
# Light Emitting Diode (LED)
# 1206 Surface Mount

**Features:**

- Available in 5 Different Colors:
  - NTE30074 (Super Fresh Red, AlInGaP/GaAs)
  - NTE30075 (Super Green)
  - NTE30076 (Super Yellow, AlInGaP/GaAs)
  - NTE30077 (Super Orange, AlInGaP/GaAs)
  - NTE30078 (Super Blue)
- 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°C unless otherwise specified)

DC Forward Current, $I_F$
- NTE30074, NTE30076, NTE30077 . . . . . 25mA
- NTE30075, NTE30078 . . . . . 20mA

Peak Forward Current (Note 1), $I_{F(peak)}$
- NTE30074, NTE30076, NTE30077 . . . . . 50mA
- NTE30075, NTE30078 . . . . . 100mA

Reverse Voltage, $V_R$
- NTE30078 . . . . . 4V
- All Other Devices . . . . . 5V

Power Dissipation, $P_D$
- NTE30074, NTE30076, NTE30077 . . . . . 100mW
- NTE30075, NTE30078 . . . . . 120mW

Electrostatic Discharge (NTE30075 & NTE30078 **Only**), ESD . . . . . 150V

LED Junction Temperature, $T_J$
- NTE30078 . . . . . +125°C
- All Other devices . . . . . +100°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

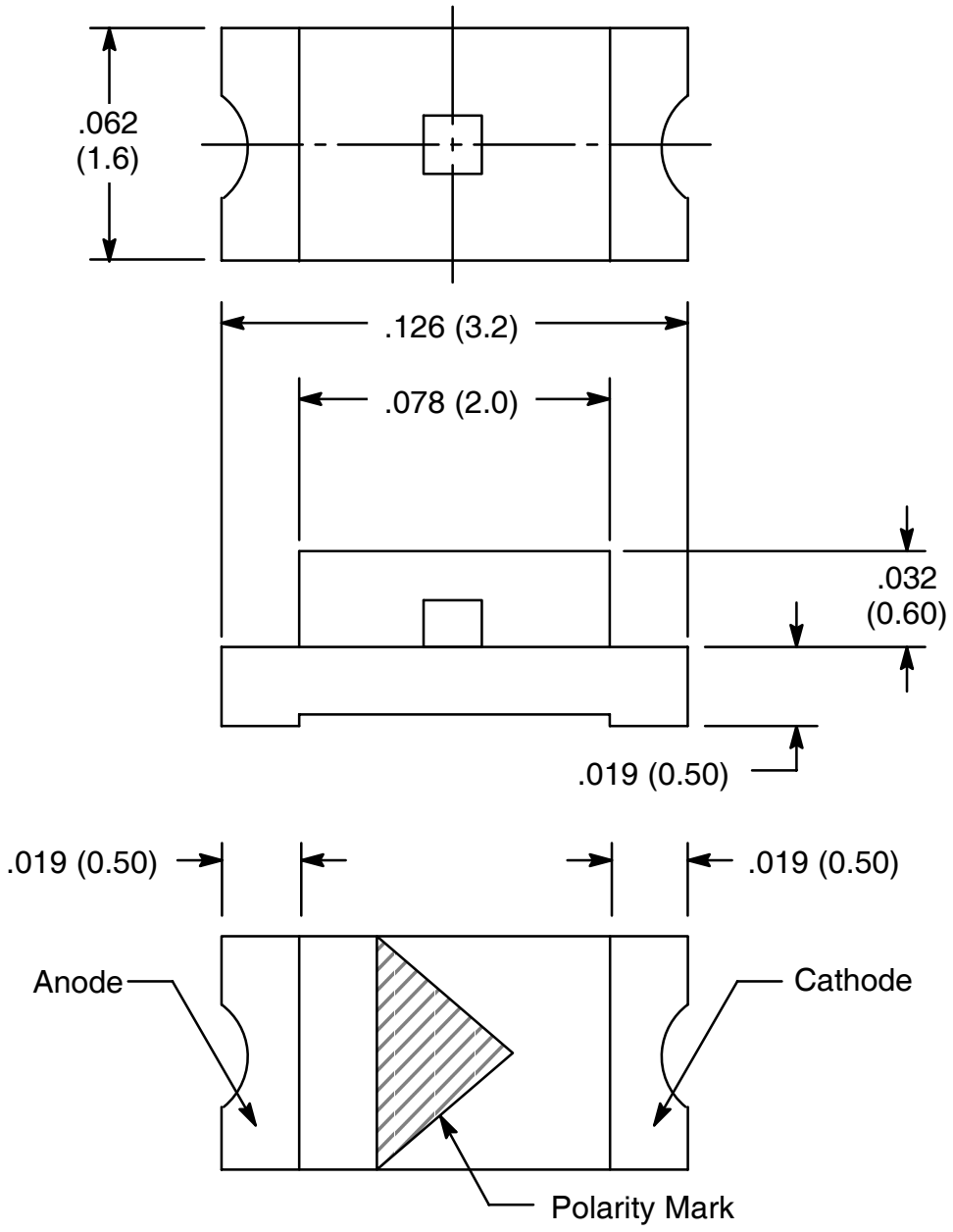
Note 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

**Electrical/Optical Characteristics:** ($T_A$ = +25°C unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Viewing Angle of Half Power | $2\Theta 1/2$ | $I_F$ = 20mA | – | 140 | – | degrees |
| Luminous Intensity<br>NTE30074 | $I_V$ | $I_F$ = 20mA, Note 2 | 50 | 100 | – | mcd |
| NTE30075 | | | 120 | 220 | – | mcd |
| NTE30076 | | | 30 | 100 | – | mcd |
| NTE30077 | | | 60 | 100 | – | mcd |
| NTE30078 | | | 25 | 48 | – | mcd |
| Forward Voltage<br>NTE30074, NTE30076, NTE30077 | $V_F$ | $I_F$ = 20mA | – | 2.0 | 2.4 | V |
| NTE30075 | | | – | 3.5 | 4.2 | V |
| NTE30078 | | | – | 3.5 | 4.0 | V |
| Reverse Current<br>NTE30074, NTE30076, NTE30077 | $I_R$ | $V_R$ = 5V | – | – | 10 | μA |
| NTE30075 | | $V_R$ = 4V | – | – | 10 | μA |
| NTE30078 | | | – | – | 60 | μA |
| Peak Emission Wave Length<br>NTE30074 | $\lambda_P$ | $I_F$ = 20mA | – | 635 | – | nm |
| NTE30075 | | | – | 523 | – | nm |
| NTE30076 | | | – | 589 | – | nm |
| NTE30077 | | | – | 620 | – | nm |
| NTE30078 | | | – | 468 | – | nm |
| Dominate Wavelength<br>NTE30074 | $\lambda_{d\ (HUE)}$ | $I_F$ = 20mA, Note 3 | – | 626 | – | nm |
| NTE30075 | | | – | 525 | – | nm |
| NTE30076 | | | – | 588 | – | nm |
| NTE30077 | | | – | 615 | – | nm |
| NTE30078 | | | 465 | 470 | 480 | nm |
| Spectral Line Half Width<br>NTE30074, NTE30077 | $\Delta\lambda$ | $I_F$ = 20mA | – | 25 | – | nm |
| NTE30075, NTE30078 | | | – | 45 | – | nm |
| NTE30076 | | | – | 20 | – | nm |

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.


.062
(1.6)
.126 (3.2)
.078 (2.0)
.032
(0.60)
.019 (0.50)
.019 (0.50)
.019 (0.50)
Anode
Cathode
Polarity Mark