

## NTE3068 thru NTE3071 0.4" Single Digit Numeric Display Seven Segment, RHDP

### **Description:**

The NTE3068 through NTE3071 are 0.4 inch (10.16mm) height single digit displays. The NTE3068 and NTE3069 devices utilize LED chips which are made from GaP on a transparent GaP substrate. The NTE3070 and NTE3071 devices utilize chips which are made from GaAsP on a transparent GaP substrate.

### **Features:**

- 0.4 Inch (10.16mm) Digit Height
- Continuous Uniform Segments
- Choice of Two Bright Colors:
  - Red – NTE3068, NTE3069
  - Orange – NTE3070, NTE3071
- Low Power Requirement
- Excellent Characters Appearance
- Categorized for Luminous Intensity
- IC Compatible
- Easy Mounting on PC Board or Socket

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

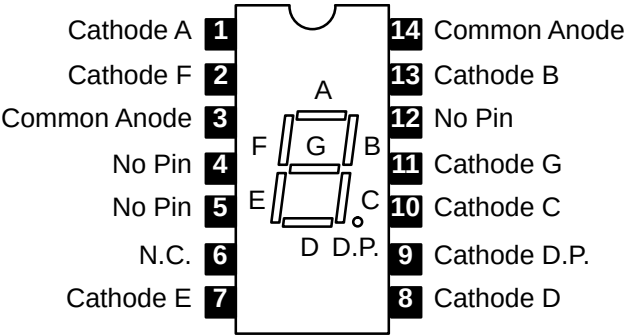
|                                                                                            |                                        |
|--------------------------------------------------------------------------------------------|----------------------------------------|
| Power Dissipation (Per Segment), $P_T$                                                     |                                        |
| NTE3068, NTE3069 .....                                                                     | 55mW                                   |
| NTE3070, NTE3071 .....                                                                     | 75mW                                   |
| Peak Forward Current (Per Segment, 1/10 Duty Cycle, 0.1ms Pulse Width), $I_{F\text{peak}}$ |                                        |
| NTE3068, NTE3069 .....                                                                     | 160mA                                  |
| NTE3070, NTE3071 .....                                                                     | 100mA                                  |
| Continuous Forward Current (Per Segment), $I_F$ .....                                      |                                        |
| Derate Linearly from $25^{\circ}\text{C}$ (Per Segment) .....                              | 0.30mA/ $^{\circ}\text{C}$             |
| Reverse Voltage (Per Segment), $V_R$ .....                                                 | 5V                                     |
| Operating Temperature Range, $T_{\text{opr}}$ .....                                        | $-25^{\circ}$ to $+85^{\circ}\text{C}$ |
| Storage Temperature Range, $T_{\text{stg}}$ .....                                          | $-25^{\circ}$ to $+85^{\circ}\text{C}$ |
| Lead Temperature (During Solder, 1/16" Below Seating Plane, 3sec max), $T_L$ .....         | $+260^{\circ}\text{C}$                 |

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

| Parameter                                                | Symbol          | Test Conditions     | Min | Typ  | Max | Unit           |
|----------------------------------------------------------|-----------------|---------------------|-----|------|-----|----------------|
| Average Luminous Intensity<br>NTE3068, NTE3069           | $I_V$           | $I_F = 10\text{mA}$ | 200 | 500  | —   | $\mu\text{cd}$ |
| NTE3070, NTE3071                                         |                 |                     | 850 | 2200 | —   | $\mu\text{cd}$ |
| Peak Emission Wavelength<br>NTE3068, NTE3069             | $\lambda_P$     | $I_F = 20\text{mA}$ | —   | 655  | —   | nm             |
| NTE3070, NTE3071                                         |                 |                     | —   | 630  | —   | nm             |
| Spectral Line Half-Width<br>NTE3068, NTE3069             | $\Delta\lambda$ | $I_F = 20\text{mA}$ | —   | 24   | —   | nm             |
| NTE3070, NTE3071                                         |                 |                     | —   | 40   | —   | nm             |
| Forward Voltage, Any Segment or D.P.<br>NTE3068, NTE3069 | $V_F$           | $I_F = 20\text{mA}$ | —   | 1.7  | 2.0 | V              |
| NTE3070, NTE3071                                         |                 |                     | —   | 2.1  | 2.8 | V              |
| Reverse Current, Any Segment or D.P.                     | $I_R$           | $V_R = 5\text{V}$   | —   | —    | 100 | $\mu\text{A}$  |
| Luminous Intensity Matching Ratio                        | $I_{V-m}$       | $I_F = 20\text{mA}$ | —   | —    | 2:1 |                |

**Pin Connection Diagram**

**NTE3068, NTE3070**



**NTE3069, NTE3071**

