



ELECTRONICS, INC.
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NTE3076 & NTE3077 0.560 Inch, Seven Segment, Red 1 Digit ^w/Overflow and ±, RHDP

Features:

- Available in 2 Configurations:
 Common Anode (NTE3076)
 Common Cathode (NTE3077)
- High Performance GaAsP
- Large, Easy to Read Digits
- Fast Switching – Excellent for Multiplexing
- Low Power Consumption
- Solid State Reliability – Long Operation Life
- Rugged Plastic Construction
- Directly Compatible with Integrated Circuits
- High Brightness with High Contrast
- Low Forward Voltage
- Wide Viewing Angle – 150°

Applications:

- Digital Readout Displays
- Instrument Panels
- Point of Sale Equipment
- Digital Clocks
- TV and Radios

Absolute Maximum Ratings:

Power Dissipation ($T_A = +25^\circ\text{C}$), P_D	840mW
Derate linearly from $+25^\circ\text{C}$	-12.0mW/ $^\circ\text{C}$
Continuous Forward Current, I_C	
Total	420mA
Per Segment	30mA
Decimal Point	30mA
Reverse Voltage, V_R	
Per Segment	6V
Decimal Point	6V
Soldering Time at $+260^\circ\text{C}$ (Note 1, Note 2)	5 sec.
Operating Temperature Range, T_{opr}	-40° to $+85^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+85^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient, R_{thJA}	$+160^\circ\text{C/W}$

- Note 1. Leads of the device immersed to 1/16 inch from the body. Maximum device surface temperature is $+140^\circ\text{C}$.
- Note 2. For flux removal, Freon TF, Freon TE, Isoproponal or water may be used up to their boiling points.

Operating Characteristics: (Per Diode, $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity, Digit Average	$I_F = 10\text{mA}$ (Note 3,4)	125	420	-	μcd
Peak Emission Wavelength		-	650	-	nm
Spectral Line Half Width		-	20	-	nm
Forward Voltage Segment	$I_F = 20\text{mA}$	-	-	2.0	V
Decimal Point		-	-	2.0	V
Dynamic Resistance Segment	$I_{pk} = 100\text{mA}$	-	2	-	Ω
Decimal Point		-	2	-	Ω
Capacitance Segment	$V = 0$	-	35	80	pF
Decimal Point		-	35	80	pF
Reverse Current Segment	$V_R = 5.0\text{V}$	-	-	100	μA
Decimal Point		-	-	100	μA
Segment C or D of "+"		-	-	100	μA

Note 3. The digit average Luminous Intensity is obtained by summing the Luminous Intensity of each segment and dividing by the total number of segments. Intensity will not vary more than $\pm 33\%$ between all segments within a digit.

Note 4. The decimal point is designed to have the same surface brightness as the segments, therefore, the Luminous Intensity of the decimal point is .3 times the Luminous Intensity of the segments, since the area of the decimal point is .3 times the area of the average points.



