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NTE1561 Integrated Circuit 5 LED VU Level Meter

Description:

The NTE1561 is a monolithic integrated circuit in a 9-Lead SIP type package designed for use as a 5 dot LED level meter driver. With a built-in rectifying amplifier, this device is suitable for AC/DC level meter applications such as VU meters or signal meters.

Features:

- Built-In High Gain Rectifying Amplifier ($A_v = 26\text{dB}$)
- Low Radiation Noise when LED Turns On
- Logarithmic Indicator for Bar Type 5 Dot LED ($-10, -5, 0, +3, +6\text{dB}$)
- Constant Current Output: $I_O = 15\text{mA Typ}$
- Wide Operating Supply Voltage Range: $3.5\text{V to }16\text{V}$
- Minimum Number of External Components Required

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

Supply Voltage, V_{CC}	18V
Amp Input Voltage, V_{8-5}	-0.5 to V_{CC}
Pin7 Voltage, V_{7-5}	6V
D Terminal Output Voltage, V_D	18V
Circuit Current, I_{CC}	12mA
D Terminal Output Current, I_D	20mA
Power Dissipation, P_d	1100mW
Derate Above 25°C	11mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-25° to $+80^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+125^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 6\text{V}$, $f = 1\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{CC}	$V_i = 0\text{V}$	–	6.0	8.5	mA
D Output Current	I_O	$V_i = 0.15\text{V}$	11.0	15.0	18.5	mA
Input Bias Current	I_B		–1	–	0	μA
Amp Gain	A_v	$V_i = 0.1\text{V}$	24	26	28	dB
Comparator ON Level	GD_1		–12	–10	–8	dB
	GD_2		–6	–5	–4	dB
	GD_3	Note 1	–	0	–	dB
	GD_4		2.5	3.0	3.5	dB
	GD_5		5.0	6.0	7.0	dB

Note 1. Definition of 0dB: Input voltage level when GD_3 turn ON (50mV).

Pin Connection Diagram
(Front View)

