

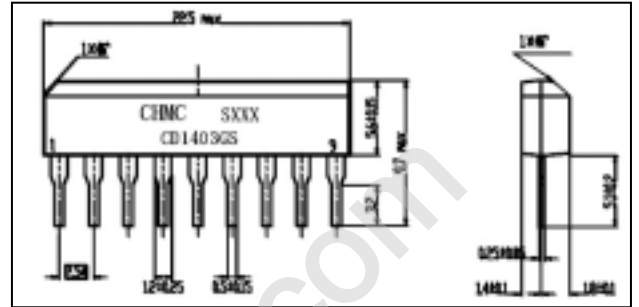


5-Dot Red/Green LED Level Meter CD1403GS

Use

- AC level meters such as VU meters.
- DC level meters such as signal meters.

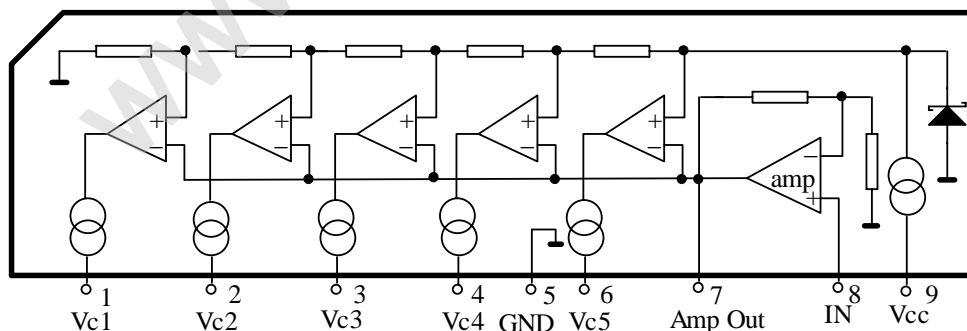
Outline Drawing



Features and Functions

- Capable of generating a bar-display for input voltage with 5 LEDs.
- Operates from either AC or DC input voltage because of on-chip rectifier amplifier.
- Lighting levels remain stable to line regulation because of on-chip voltage reference.
- LEDs are driven by a constant current; stable to line regulation.
- Power supply voltage range is wide (3.5 to 16V), for a wide range of applications.
- Five types of ICs constitute the series with various lighting levels of the LEDs and driving currents.
- SIP-9 pin package and fewer externally connected components result in smaller space requirements on the circuit board.
- Low noise at LED lighted mode

Block Diagram AND PIN CONNECTION



Absolute Maximum Ratings (Ta=25°C)

Characteristics	Symbol	Value	Unit
Maximum Supply Voltage	Vcc max	18	V
Allowable Power dissipation	Pd max	1100	mW
Operating Temperature	Topg	-25 to +75	°C
Storage Temperature	Tstg	-55 to +125	°C

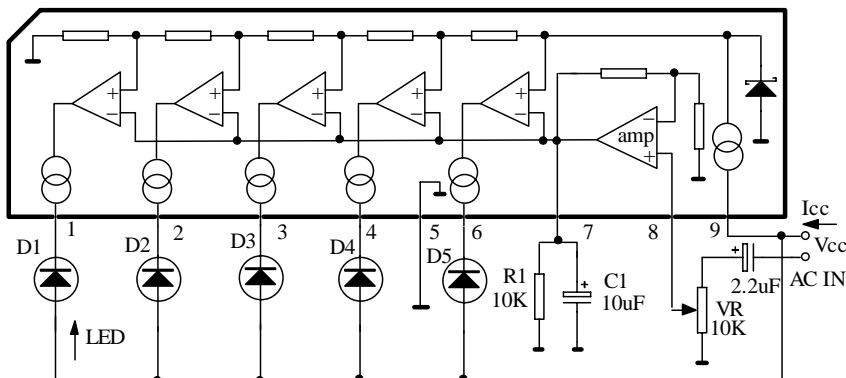
Allowable Operating Conditions (Ta=25°C)

Characteristics	Symbol	min	Typ	max	Unit
Supply Voltage	Vcc	3.5	6	16	V

Electrical Characteristics (Ta=25°C ,Vcc=6V,F=1kHz)

Characteristics	Symbol	Test Condition	min	Typ	max	Unit
Current Dissipation	Icc	VIN=0		5	8	mA
Sensitivity	VIN	Vc3 on-level	74	85	96	mVrms
Comparator Level 1	Vc1		-11.5	-10	-8.5	dB
Comparator Level 2	Vc2		-6	-5	-4	dB
Comparator Level 3	Vc3	Point of adjustment		0		dB
Comparator Level 4	Vc4		2.5	3	3.5	dB
Comparator Level 5	Vc5		5	6	7	dB
LED Constant Current	ILED		11	15	18.5	mA
Input Bias Current	IINB		-1.0	-0.3		uA

Sample Application Circuit and Test Circuit (AC input VU meter)



*Capacitor to be omitted when used as a DC-input signal meter

* C1、R1 time constant:

The response time can be varied by varying the C1,R1 time constant (mainly the C1 value)

When the C1,R1 time constant is larger:

.....The response time (attack time and release time) is made slower.

When the C1,R1 time constant is smaller:

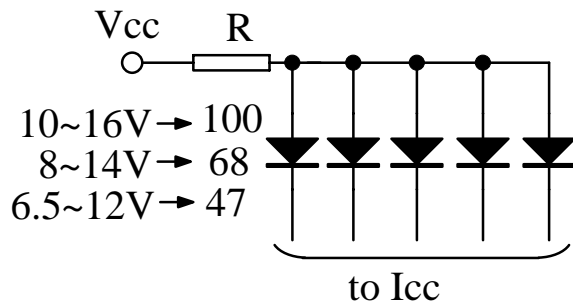
.....The response time (attack time and release time) is made faster.

* Considerations relative to Pd max of the package:

Due to the constant current ILED, most of the power consumed by the circuits is consumed within the IC.

When lighting the five LEDs continuously for a prolonged length of time, make sure that Vcc does not exceed: Vcc=9V

When using a higher power supply voltage, insert a resistor in series with the LEDs to restrain the power consumed within the IC package.



CHARACTERISTIC CURVE

