

# WD-C1602M

16x2 Characters

SPECIFICATIONS FOR CHARACTER TYPE LCM

## FEATURE:

1. 5x7 dots with cursor
2. Built in Controller (HD44780 OR Equivalent)
3. +5V Power Supply  
(Also available for +3V)
4. 1/16 Duty Cycle

## INTERFACE PIN CONNECTIONS:

NO	SYMBOL	LEVEL	FUNCTION	NO	SYMBOL	LEVEL	FUNCTION
1	V <sub>DD</sub>	—	VCC(+5V±5%)	8	DB1	H/L	DATA BIT1
2	V <sub>SS</sub>	—	GND(OV)	9	DB2	H/L	DATA BIT2
3	V <sub>b</sub>	—	CONTRAST ADJ.	10	DB3	H/L	DATA BIT3
4	RS	H/L	REGISTER SELECT	11	DB4	H/L	DATA BIT4
5	R/W	H/L	READ/WRITE	12	DB5	H/L	DATA BIT5
6	E	H/L→L	ENABLE SIGNAL	13	DB6	H/L	DATA BIT6
7	DB0	H/L	DATA BIT0	14	DB7	H/L	DATA BIT7

## DISPLAY CHARACTER ADDRESS CODE:

Display Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DD RAM Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
DD RAM Address	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F

## ELECTRICAL CHARACTERISTICS:

ITEM	SYN	CONDITION	MIN	TYPE	MAX	UNIT
SUPPLY VOLTAGE FOR LCD	V <sub>DD</sub> -V <sub>b</sub>	T <sub>a</sub> = 0°C	---	4.8	---	V
		T <sub>a</sub> = 25°C	---	4.5	---	V
		T <sub>a</sub> = 50°C	---	4.2	---	V
INPUT VOLTAGE	V <sub>i</sub>	---	4.7	5.0	5.3	V
INPUT HIGH VOL	V <sub>IH</sub>	---	2.2	---	V <sub>DD</sub>	V
INPUT LOW VOL	V <sub>IL</sub>	---	0	---	0.6	V
OUTPUT HIGH VOL	V <sub>OH</sub>	---	2.4	---	---	V
OUTPUT LOW VOL	V <sub>OL</sub>	---	---	---	0.4	V
SUPPLY CURRENT	I <sub>DD</sub>	V <sub>DD</sub> =5V	---	2.0	3.0	mA

## ABSOLUTE MAXIMUM RATINGS:

ITEM	SYMBOL	MIN	TYPE	MAX	UNIT
OPERATING TEMPERATURE	T <sub>OP</sub>	0	---	+50	°C
STORAGE TEMPERATURE	T <sub>ST</sub>	-20	---	+70	°C
INPUT VOLTAGE	V <sub>i</sub>	V <sub>SS</sub>	---	V <sub>DD</sub>	V
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	-0.3	---	6.5	V
SUPPLY VOLTAGE FOR LCD	V <sub>DD</sub> -V <sub>b</sub>	0	---	6.5	V

## OUTLINE DIMENSION:

