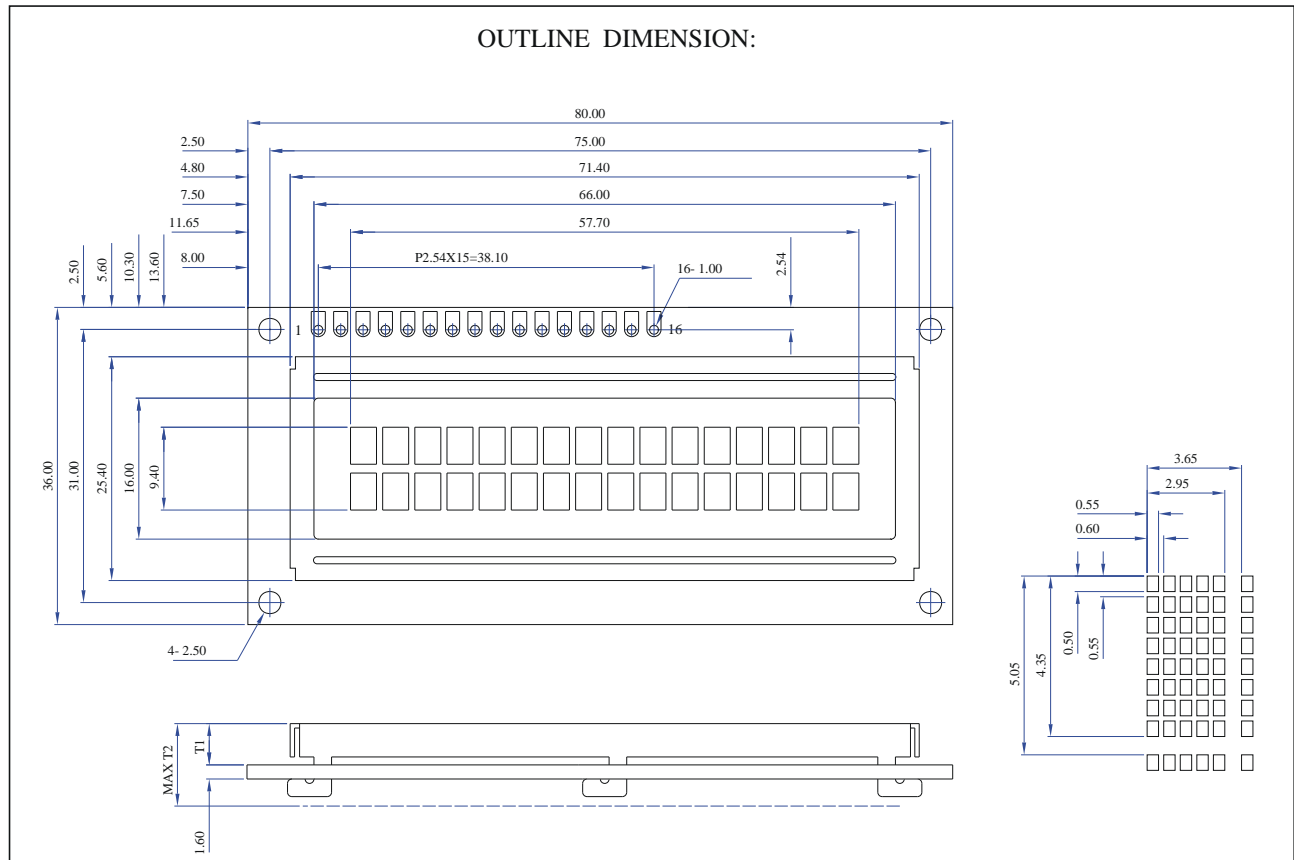


OUTLINE DIMENSION:



FEATURE

1. 16 CHARACTERS X 2LINES
2. 5 X 7 DOTS WITH CURSOR
3. BUILT IN CONTROLLER
4. +5V POWER SUPPLY  
(ALSO AVAILABLE FOR +3V)
5. 1/16 DUTY CYCLE

ELECTRICAL CHARACTERISTICS:

ITEM	SYN	CONDITION	MIN	TYPE	MAX	UNIT
SUPPLY VOLTAGE FOR LCD	V <sub>D-V 0</sub>	T <sub>a</sub> = 0	--	4.5	--	V
		T <sub>a</sub> = 05	--	4.2	--	V
		T <sub>a</sub> = 60	--	3.9	--	V
INPUT HIGH VOL.	V <sub>H</sub>	--	2.2	--	VDD	V
INPUT LOW VOL.	V <sub>L</sub>	--	-0.3	--	0.6	V
OUTPUT HIGH VOL.	V <sub>H</sub>	--	2.4	--	--	V
OUTPUT LOW VOL.	V <sub>L</sub>	--	--	--	0.4	V
SUPPLY CURRENT	I <sub>DD</sub>	V <sub>D</sub> = V	--	2.0	4.0	mA

INTERFACE PIN CONNECTIONS:

NO.	SYMBOL	LEVEL	FUNCTION	NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>S</sub>	--	GND(OV)	9	DB2	H/L	DATA BIT 2
2	V <sub>D</sub>	--	VCC(+5V 5%)	10	DB3	H/L	DATA BIT 3
3	V	--	CONTRAST ADJ	11	DB4	H/L	DATA BIT 4
4	RS	H/L	REGISTER SELECT	12	DB5	H/L	DATA BIT 5
5	R/W	H/L	READ/WRITE	13	DB6	H/L	DATA BIT 6
6	E	H,H-L	ENABLE SIGNAL	14	DB7	H/L	DATA BIT 7
7	DB0	H/L	DATA BIT 0	15	V <sub>HD</sub>	4.2 V	BACKLIGHT(+)
8	DB1	H/L	DATA BIT 1	16	V <sub>SS</sub>	0 V	BACKLIGHT(-)

ABSOLUTE MAXIMUM RATINGS:

ITEM	SYMBOL	MIN	TYPE	MAX	UNIT
OPERATING TEMPERATURE	T <sub>P</sub>	0	--	+50	C
STORAGE TEMPERATURE	T <sub>T</sub>	-20	--	+70	C
INPUT VOLTAGE	V	V <sub>S</sub>	--	V <sub>D</sub>	V
SUPPLY VOLTAGE FOR LOGIC	V <sub>D-V SS</sub>	2.7	5.0	5.5	V
SUPPLY VOLTAGE FOR LCD	V <sub>D-V 0</sub>	3.0	--	13.0	V

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	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
DD RAM Address	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF

THICKNESS:

Version	T <sub>i</sub>	T <sub>e</sub>	UNIT
EL & No Backlight	4.7	10.0	mm
LED Backlight	9.0	14.0	mm