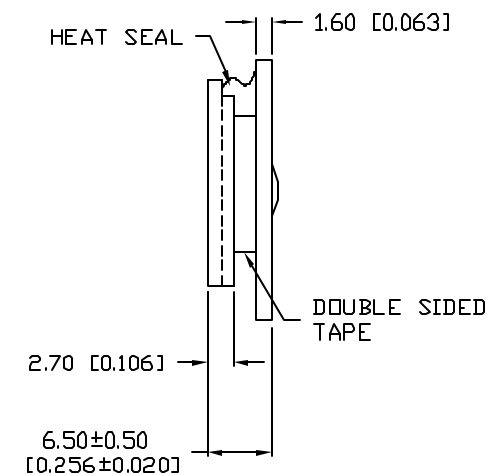
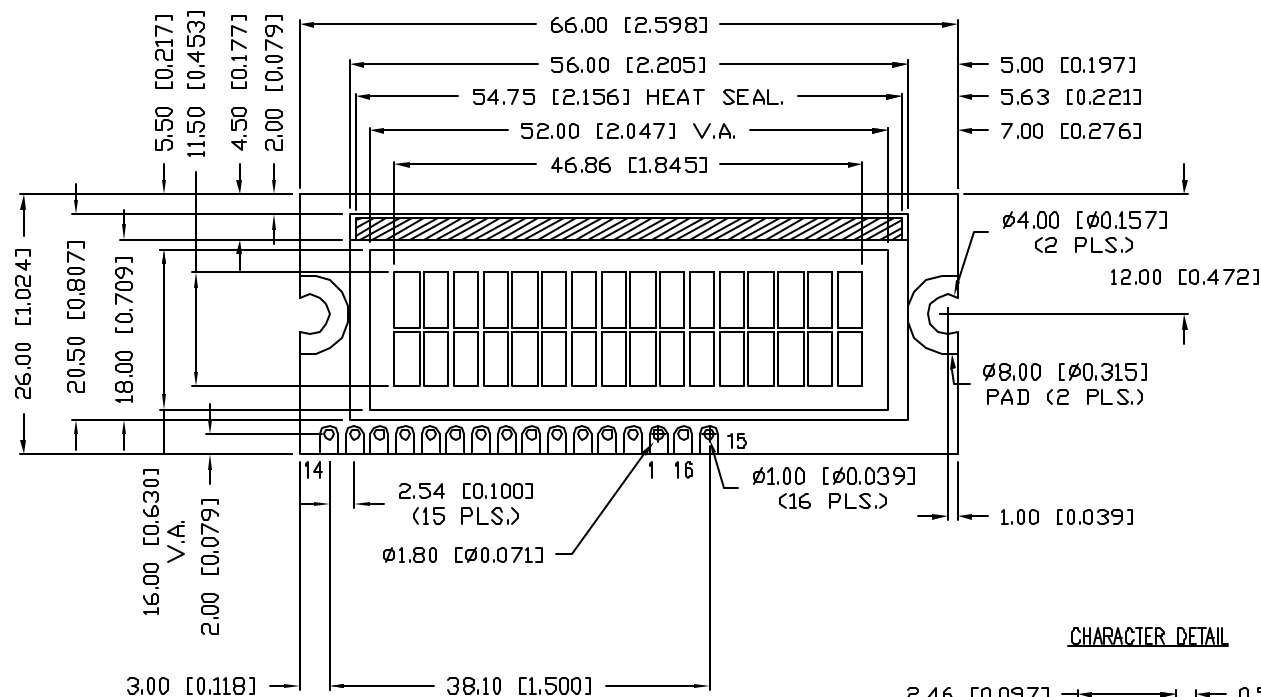


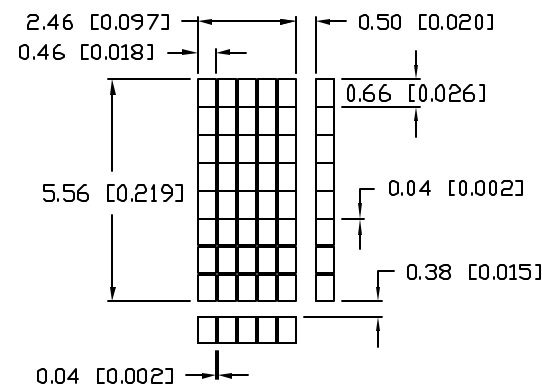
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PART NUMBER  
LCM-S01602DTR/M

REV.



## CHARACTER DETAIL



\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.=<sup>+DECIMAL PRECISION</sup><sub>-0.00</sub> MAX.=<sup>+0.00</sup><sub>-DECIMAL PRECISION</sub>

REV.

PART NUMBER

LCM-S01602DTR/M

16 x 2 CHARACTER LCD MODULE, TN, REFLECTIVE.  
1/16 DUTY, 1/5 BIAS.

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## RELIABILITY NOTE

OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



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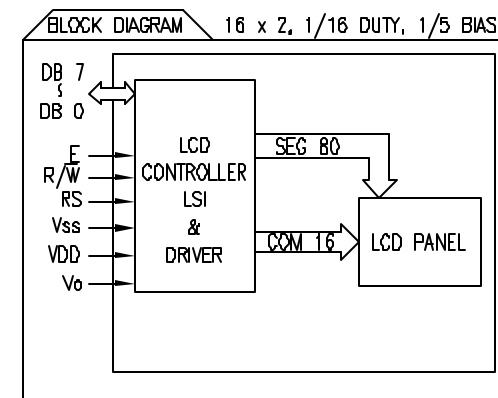
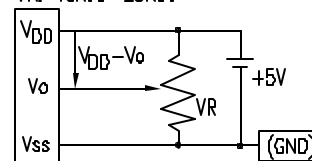
DATE: 9.11.02

PAGE: 1 OF 2

SCALE: N/A

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	—	POWER SUPPLY GND (0V) 5V FOR LCD DRIVE
2	V <sub>DD</sub>	—	
3	V <sub>O</sub>	—	
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT
5	R/W	H/L	H: DATA READ (MODULE→MPU) L: DATA WRITE (MODULE←MPU)
6	E	H,H→L	ENABLE
7~14	DB0~DB7	H/L	DATA BUS—SOFTWARE SELECTABLE 4 OR 8 BIT MODE.
15	NC	—	NO CONNECTION
16	NC	—	NO CONNECTION

V<sub>DD</sub>-V<sub>O</sub>: LCD DRIVING VOLTAGE  
VR: 10K $\Omega$  - 20K $\Omega$



ELECTRICAL CHARACTERISTICS		V <sub>DD</sub> =4.7V to 5.3V, T <sub>A</sub> =25°C				
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	—	MIN.	TYP.	MAX.	V
SUPPLY CURRENT FOR LOGIC	I <sub>DD</sub>	V <sub>DD</sub> =5V	—	2.0	3.0	mA
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	—	2.2	—	V <sub>DD</sub> V
	LOW	V <sub>IL</sub>	—	0	—	0.6 V
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	—	2.4	—	V
	LOW	V <sub>OL</sub>	—	—	0.4	V

## ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE	
			MIN	MAX
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	T <sub>a</sub> =25°C	4.7	5.3
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>O</sub>	—	4.2@50°C	4.8@0°C
INPUT VOLTAGE	V <sub>I</sub>	T <sub>a</sub> =25°C	V <sub>SS</sub>	V <sub>DD</sub>
OPERATING TEMPERATURE	T <sub>opr</sub>	LCM-S	0	50
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-S	-20	70

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