

UNCONTROLLED DOCUMENT

PART NUMBER

LCM-H01602DWF/C-1B

REV.

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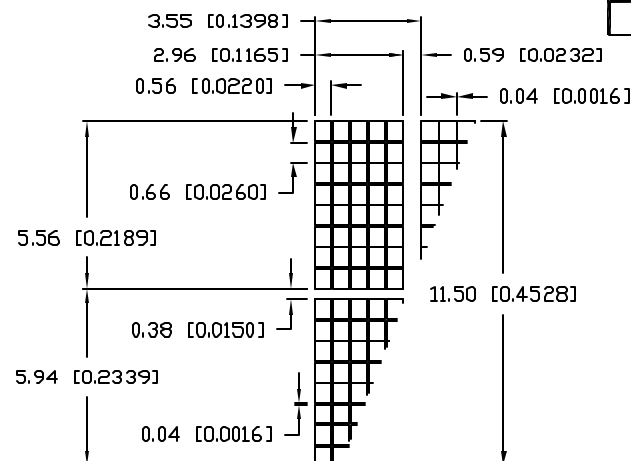
REV. E.C.N. NUMBER AND REVISION COMMENTS

A E.C.N. #11148.

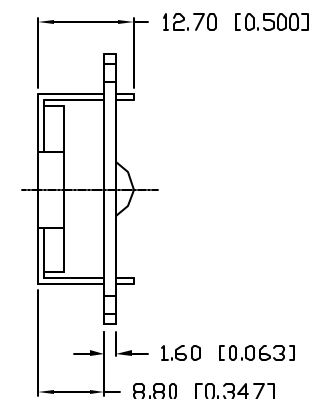
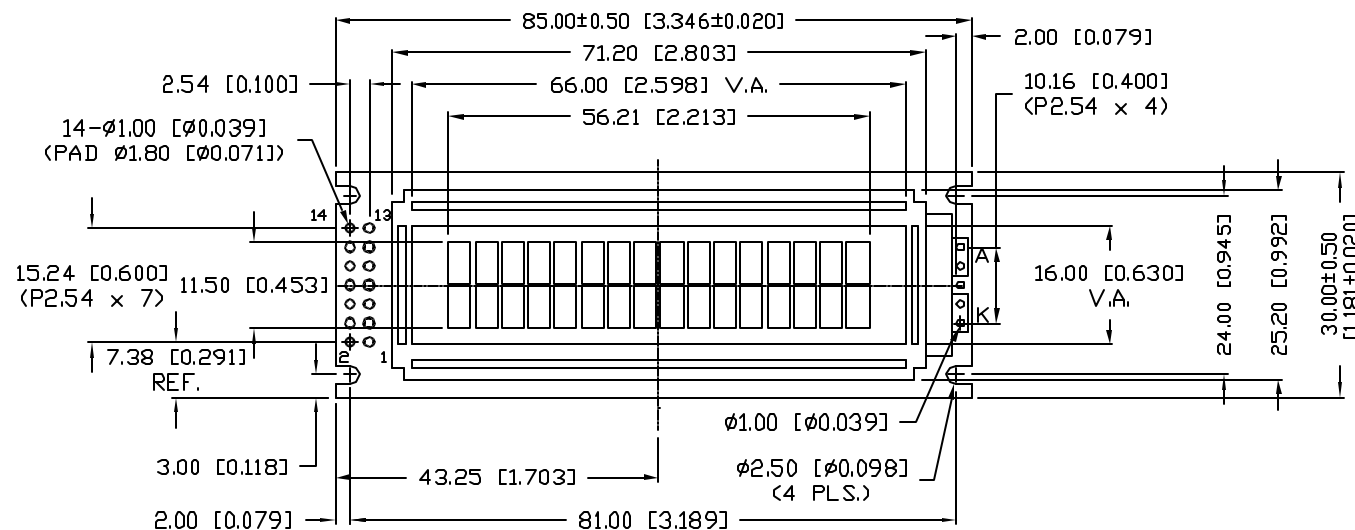
DATE

4.18.07

## CHARACTER DETAIL



CAUTION: STATIC SENSITIVE DEVICE  
FOLLOW PROPER E.S.D. HANDLING PROCEDURES  
WHEN WORKING WITH THIS PART.



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

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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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PAGE: 1 OF 2

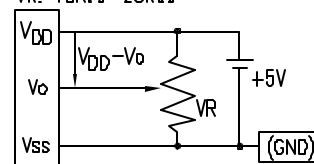
SCALE: N/A

16 x 2 CHARACTERS LCD MODULE, TOP VIEW,  
FSTN, TRANFLECTIVE, ONE CHIP BLUE LED BACKLIGHT,  
1/16 DUTY, 1/5 BIAS, WIDE OPERATING TEMP.

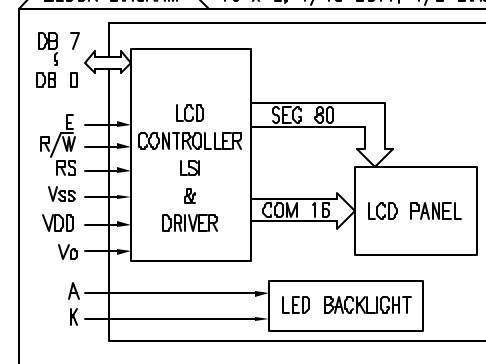
## PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	$V_{DD}$	—	POWER SUPPLY 5V GND (0V) FOR LCD DRIVE
2	$V_{SS}$	—	
3	$V_o$	—	
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.
	A	—	ANODE LED BACKLIGHT
	K	—	CATHODE LED BACKLIGHT

$V_{DD}-V_o$ : LCD DRIVING VOLTAGE  
VR: 10K $\Omega$  - 20K $\Omega$



## BLOCK DIAGRAM 16 x 2, 1/16 DUTY, 1/5 BIAS



## ELECTRICAL CHARACTERISTICS

 $V_{DD}=4.7V$  to  $5.3V$ ,  $T_A=25^{\circ}C$ 

ITEM		SYMBOL	CONDITION	STANDARD VALUE			UNIT	
				MIN.	TYP.	MAX.		
SUPPLY VOLTAGE FOR LOGIC		$V_{DD}-V_{SS}$	—	—	5.0	—	V	
SUPPLY CURRENT FOR LOGIC		$I_{DD}$	$V_{DD}=5V$	—	2.0	3.0	mA	
INPUT VOLTAGE	HIGH	$V_{IH}$	—	2.2	—	4.7	V	
	LOW	$V_{IL}$	—	0	—	0.6	V	
OUTPUT VOLTAGE	HIGH	$V_{OH}$	—	2.4	—	—	V	
	LOW	$V_{OL}$	—	—	—	0.4	V	
*LED BACKLIGHT	VOLTAGE		$V_f$	$I_f=20mA$	3.3	3.4	3.5	V
	CURRENT		$I_f$	—	10	20	25	mA
	POWER CONSUMPTION		PD	$I_f=20mA$	—	53	—	mW
	COLOR		—	BLUE	—	—	—	nm

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

## ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	$V_{DD}-V_{SS}$	$T_a=25^{\circ}C$	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	$V_{DD}-V_o$	—	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	$V_I$	$T_a=25^{\circ}C$	$V_{SS}$	$V_{DD}$	V
OPERATING TEMPERATURE	$T_{opr}$	LCM-H	-20	70	°C
STORAGE TEMPERATURE	$T_{stg}$	LCM-H	-30	80	°C

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# Mouser Electronics

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