

UNCONTROLLED DOCUMENT

PART NUMBER

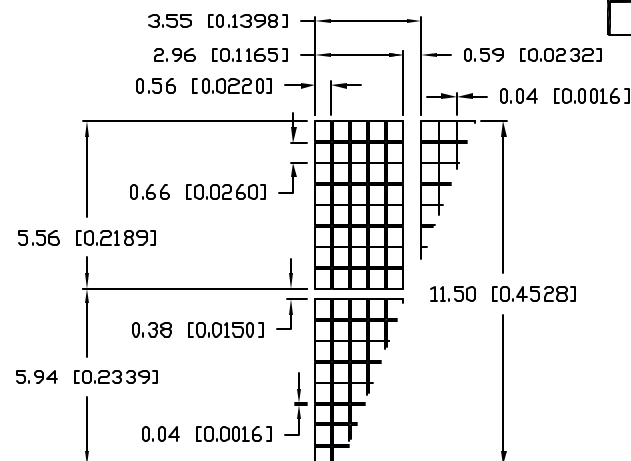
LCM-H01602DWF/CB2

REV.

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REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	02.13.07

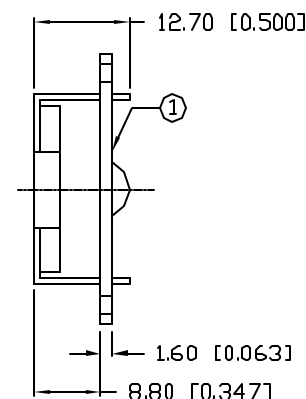
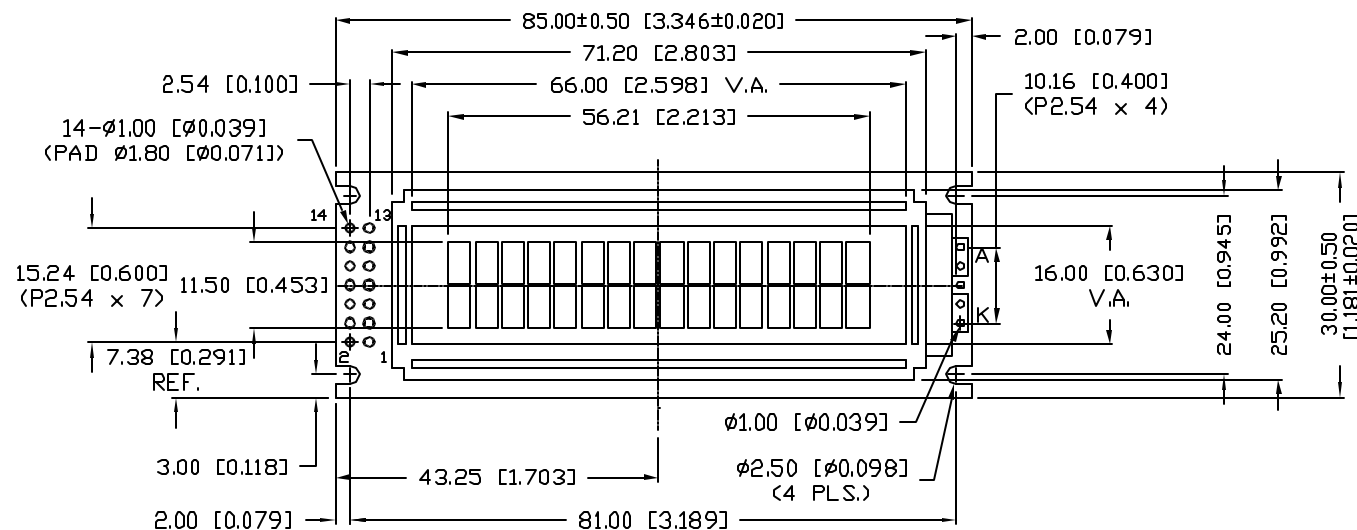
CHARACTER DETAIL



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

NOTES:

1. NO LUMEX LOGO PRINTED ON THE BACK.



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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 -0.00 MAX.=+0.00 -DECIMAL PRECISION

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CONFIDENTIAL INFORMATION

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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

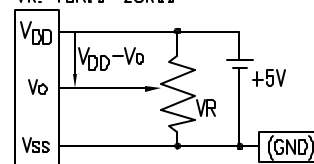
SCALE: N/A

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

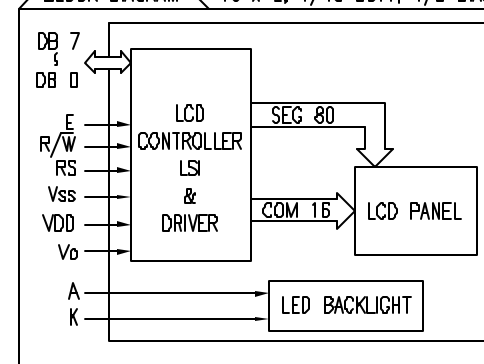
PIN CONFIGURATION

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 Ω —20K Ω



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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