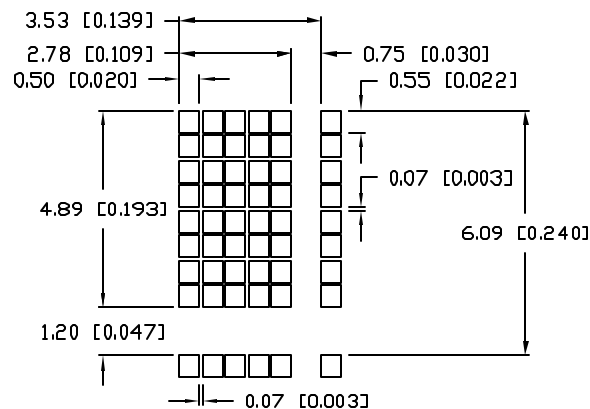


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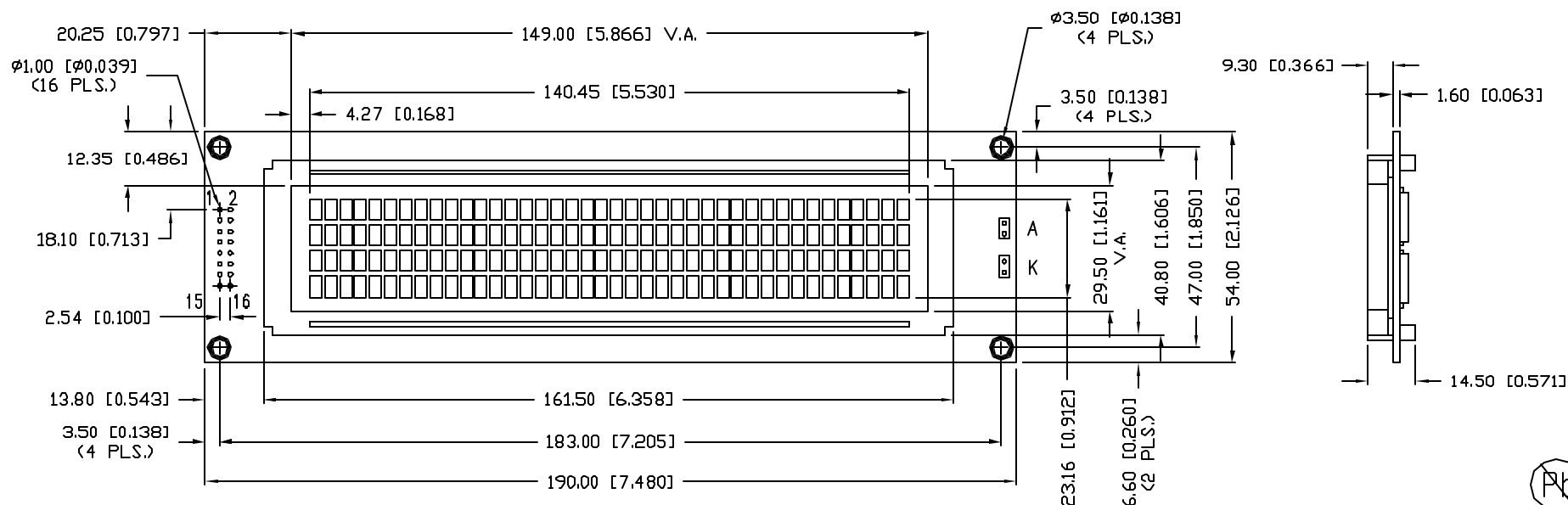
PART NUMBER
LCM-H04004DWF

REV.

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 TOLERANCE IS $\pm 0.25\text{mm}$ ($\pm 0.010"$)

REV.

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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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DRAWN BY: JC	CHECKED BY:	APPROVED BY:	DATE: 03.07.07
			PAGE: 1 OF 1
			SCALE: N/A

4.89nm CHARACTER HEIGHT, 5 x 8 DOT MATRIX,
FSTN, WIDE OPERATING TEMPERATURE,
40 x 4 CHARACTER MODULE, 1/16 DUTY, 1/5 BIAS.

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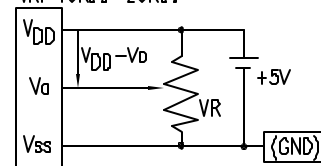
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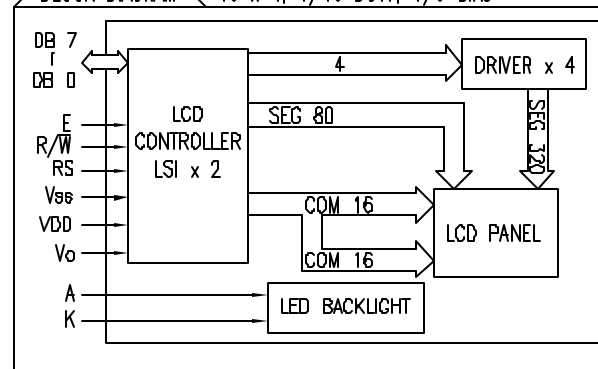
PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1~8	DB0~DB7	H/L	DATA BUS—SOFTWARE SELECTABLE 4 OR 8 BIT MODE.	
9	E1	H,H→L	ENABLE 1	
10	R/ $\overline{W}$	H/L	H: DATA READ (MODULE→MPU) L: DATA WRITE (MODULE←MPU)	
11	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT	
12	V _o	—	POWER SUPPLY	FOR LCD DRIVE
13	V _{ss}	—		GND (0V)
14	V _{DD}	—		5V
15	E2	H,H→L	ENABLE 2	
16	—	—	NO CONNECTION	
	A	—	ANODE FOR BACKLIGHT	
	K	—	CATHODE FOR BACKLIGHT	

V_{DD}-V_o: LCD DRIVING VOLTAGE
VR: 10KΩ-20KΩ



BLOCK DIAGRAM 40 x 4, 1/16 DUTY, 1/5 BIAS



ELECTRICAL CHARACTERISTICS

V_{DD}=4.7V to 5.3V, T_A=25°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	—	4.0	10.0	mA
INPUT VOLTAGE	HIGH	V _{IH}	—	2.2	—	V _{DD} 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	—	—	4.2	4.6 V
	CURRENT	I _f	—	—	500	— mA
	POWER CONSUMPTION	P _D	—	—	2100	— mW
	LUMINOUS	L	I _f =500mA	70	—	— cd/m ²
	COLOR	—	—	—	565	— 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°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°C	V _{ss}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}		-20	70	°C
STORAGE TEMPERATURE	T _{stg}		-30	85	°C

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