

UNCONTROLLED DOCUMENT

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

PART NUMBER

LCM-H04004DSR/D1T

REV.

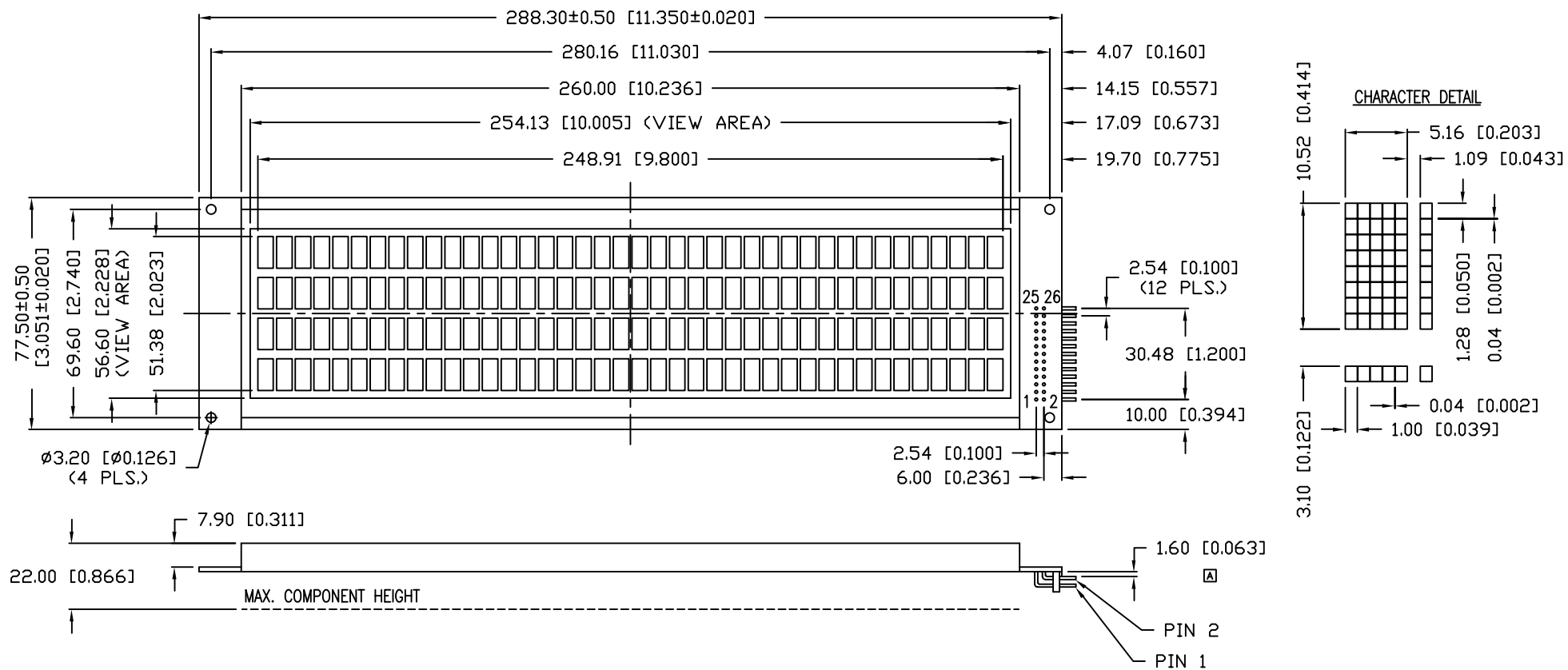
A

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

A	E.C.N. #10575.
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12.15.99



*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.=^{+DECIMAL PRECISION}_{-0.00} MAX.=^{+DECIMAL PRECISION}_{-0.00}

REV.

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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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10.52mm CHARACTER HEIGHT, 40 x 4 LCD MODULE,
STN, WIDE TEMPERATURE, TOP VIEW, REFLECTIVE,
TEMP. COMPENSATION CIRCUIT, NEGATIVE CHARGE PUMP.

DRAWN BY:

CHECKED BY:

APPROVED BY:

DATE: 8.4.99

CT

PAGE: 1 OF 2
SCALE: N/A

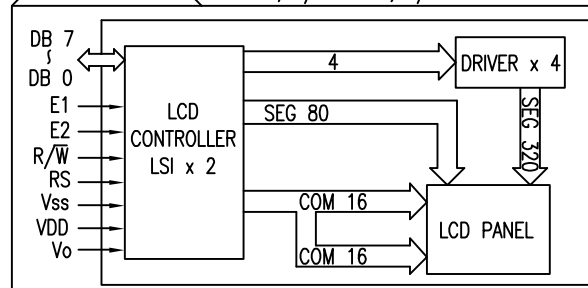
PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	N/C	—	NO CONNECTION
2	V BIAS	—	(INTERNAL)
3	E2	—	ENABLE 2
4	Vo	—	CONTRAST ADJUSTMENT
5	R/W	H/L	H: DATA READ L: DATA WRITE
6	KEY	—	(PIN REMOVED)
7	RS	—	REGISTER SELECT
8	Vss	—	GROUND
9	E1	—	ENABLE 1
10	Vss	—	GROUND
11	DB0	—	DATA BIT
12	Vss	—	GROUND
13	DB1	—	DATA BIT
14	Vss	—	GROUND
15	DB2	—	DATA BIT
16	Vss	—	GROUND
17	DB3	—	DATA BIT
18	Vss	—	GROUND
19	DB4	—	DATA BIT
20	Vss	—	GROUND
21	DB5	—	DATA BIT
22	V _{DD}	—	+5VDC— PARALLEL WITH PIN 24
23	DB6	—	DATA BIT
24	V _{DD}	—	+5VDC— PARALLEL WITH PIN 22
25	DB7	—	DATA BIT
26	N/C	—	NO CONNECTION

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}	LCM-H	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-H	-30	85	°C

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	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

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