

UNCONTROLLED DOCUMENT

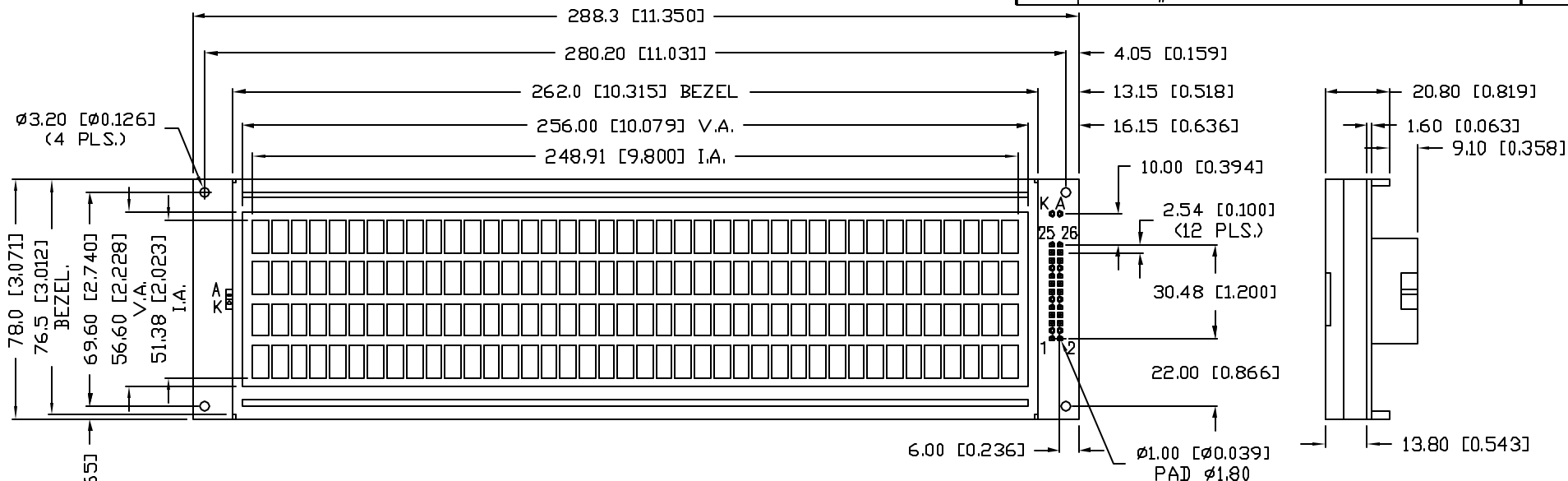
PART NUMBER

LCM-H04004DSF/D12T

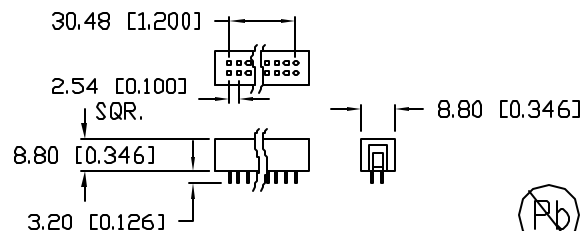
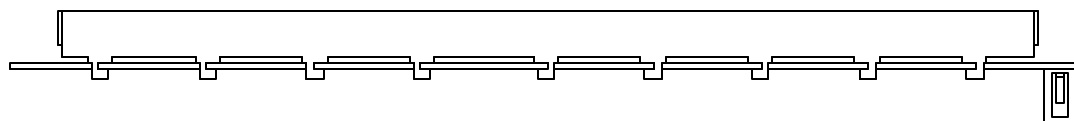
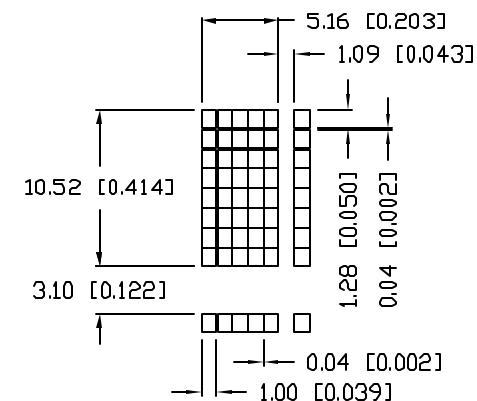
REV.

A

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	4.19.07



CHARACTER DETAIL



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

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.030), 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=+0.001 (±0.001) DECIMAL PRECISION MAX=+0.00 (±0.00) DECIMAL PRECISION

REV.

PART NUMBER

A

LCM-H04004DSF/D12T

10.52mm CHARACTER HEIGHT, 40 x 4 LCD MODULE.

STN, WIDE TEMPERATURE, 12:00 VIEW, TRANSFLECTIVE,

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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DATE: 4.24.03

JC

PAGE: 1 OF 2

SCALE: N/A

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	$V_{DD}-V_{SS}$	$T_A=25^{\circ}\text{C}$	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	$V_{DD}-V_o$	-	-0.3	12.0	V
INPUT VOLTAGE	V_I	$T_A=25^{\circ}\text{C}$	-0.3	V_{DD}	V
OPERATING TEMPERATURE	T_{opr}	LCM-H	-20	70	$^{\circ}\text{C}$
STORAGE TEMPERATURE	T_{stg}	LCM-H	-30	85	$^{\circ}\text{C}$

PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	A	-	BACKLIGHT ANODE
2	K	-	BACKLIGHT CATHODE
3	E2	-	ENABLE 2
4	V_o	-	CONTRAST ADJUSTMENT
5	R/W	H/L	H: DATA READ L: DATA WRITE
6	N/C	-	NO CONNECTION
7	RS	-	REGISTER SELECT
8	V_{SS}	-	GROUND
9	E1	-	ENABLE 1
10	V_{SS}	-	GROUND
11	DB0	-	DATA BIT
12	V_{SS}	-	GROUND
13	DB1	-	DATA BIT
14	V_{SS}	-	GROUND
15	DB2	-	DATA BIT
16	V_{SS}	-	GROUND
17	DB3	-	DATA BIT
18	V_{SS}	-	GROUND
19	DB4	-	DATA BIT
20	V_{SS}	-	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

ELECTRICAL CHARACTERISTICS

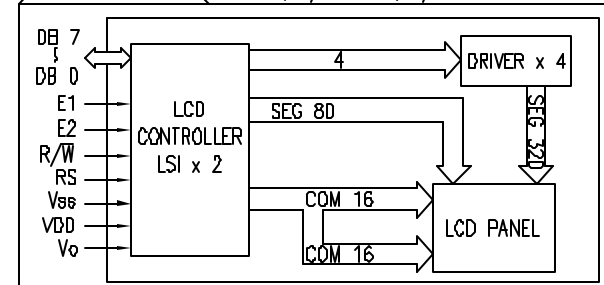
 $V_{DD}=4.5\text{V to }5.5\text{V}$, $T_A=25^{\circ}\text{C}$

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	$V_{DD}-V_{SS}$	-	4.5	5.0	5.5	V
SUPPLY CURRENT FOR LOGIC	I_{DD}	$V_{DD}=5\text{V}$	-	6.0	10.0	mA
INPUT VOLTAGE	HIGH	V_{IH}	-	2.2	-	V_{DD}
	LOW	V_{IL}	-	0	-	0.6
OUTPUT VOLTAGE	HIGH	V_{OH}	-	2.4	-	V
	LOW	V_{OL}	-	-	0.4	V
*LED BACKLIGHT	VOLTAGE	V_f	$I_f=780\text{mA}$	-	4.2	4.6
	CURRENT	I_f	-	-	780	1020
	POWER CONSUMPTION	PD	-	-	3.3	5
	LUMINOUS	L	$I_f=780\text{mA}$	80	120	-
	COLOR	-	-	-	-	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

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LCM-H04004DSF/D12T		A
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BLOCK DIAGRAM 40 x 4, 1/16 DUTY, 1/5 BIAS



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