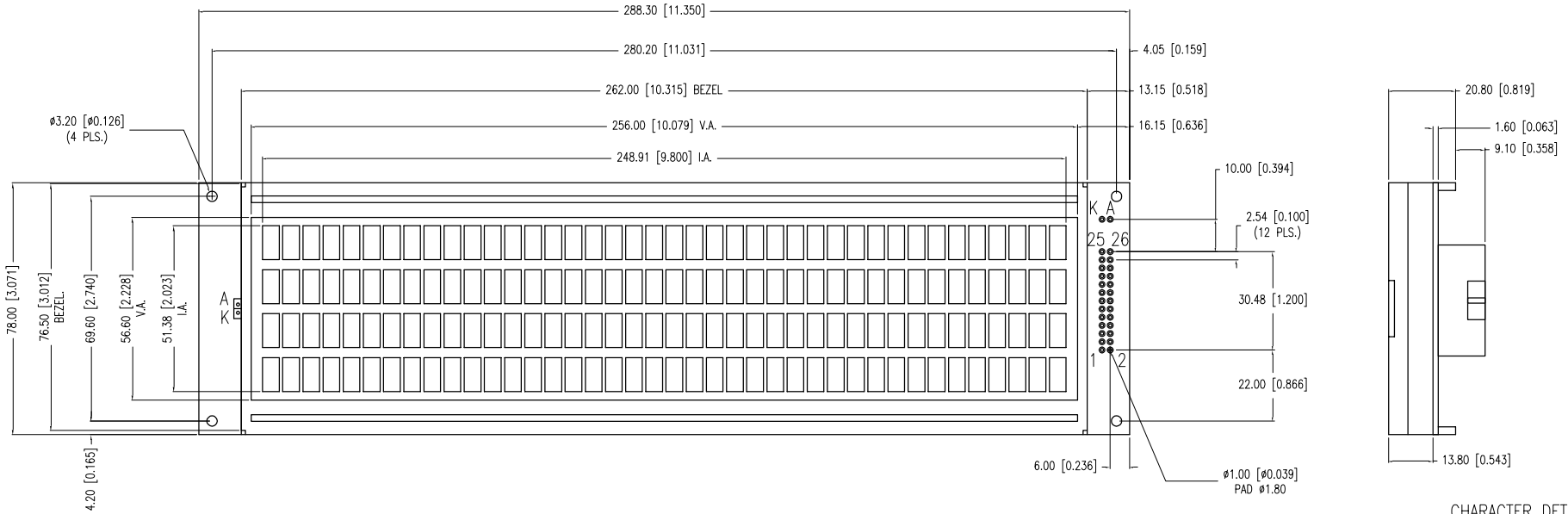
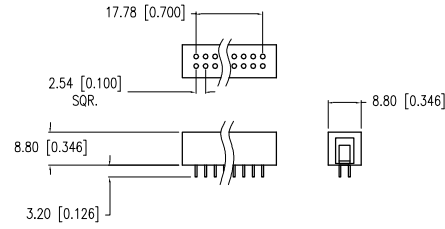


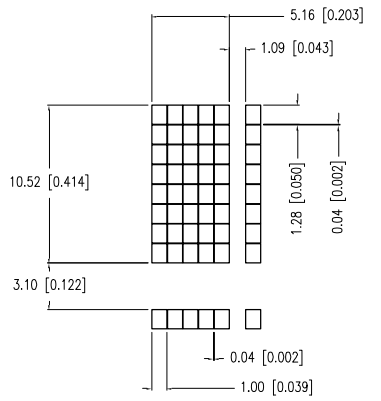
PART NUMBER	LCM-H04004DSF/D12T	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
4.19.07	E.C.N. #11148.		A



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



CHARACTER DETAIL



\*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.= +0.00 -DECIMAL PRECISION UNCONTROLLED DOCUMENT



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10.52mm CHARACTER HEIGHT, 40 x 4 LCD MODULE,STN, WIDE TEMPERATURE, 12:00 VIEW, TRANSFLECTIVE.

\*\*THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.\*\*

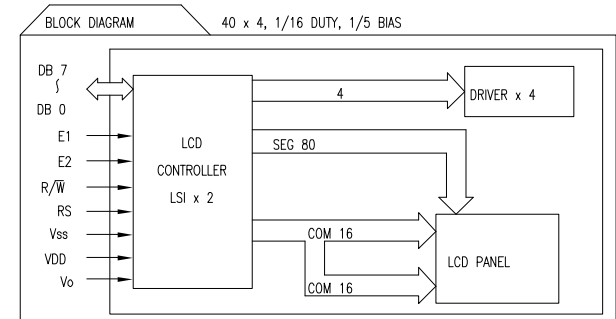
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DATE:	01.01.01	DRAWN BY:	JC
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	N/A	APRVD BY:	YA
UNIT:	mm [INCH]		

PART NUMBER	LCM-H04004DSF/D12T	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
-	SEE PAGE 1.		-

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	$V_D - V_{SS}$	$T_a=25^\circ\text{C}$	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	$V_D - V_o$	-	-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						$V_{DD}=4.5\text{V to }5.5\text{V}, T=25^\circ\text{C}$	
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT	
			MIN.	TYP.	MAX.		
SUPPLY VOLTAGE FOR LOGIC	$V_D - V_{SS}$	-	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	-	$V_{DD}$	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	$I_f$	-	780	1020	mA	
	POWER CONSUMPTION	PD	-	3.3	5	W	
	LUMINOUS	L	$I_f=780\text{mA}$	80	120	$\text{cd/m}^2$	
COLOR	-	-	-	-	-	nm	

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

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SCALE: N/A	APRVD BY: YA
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