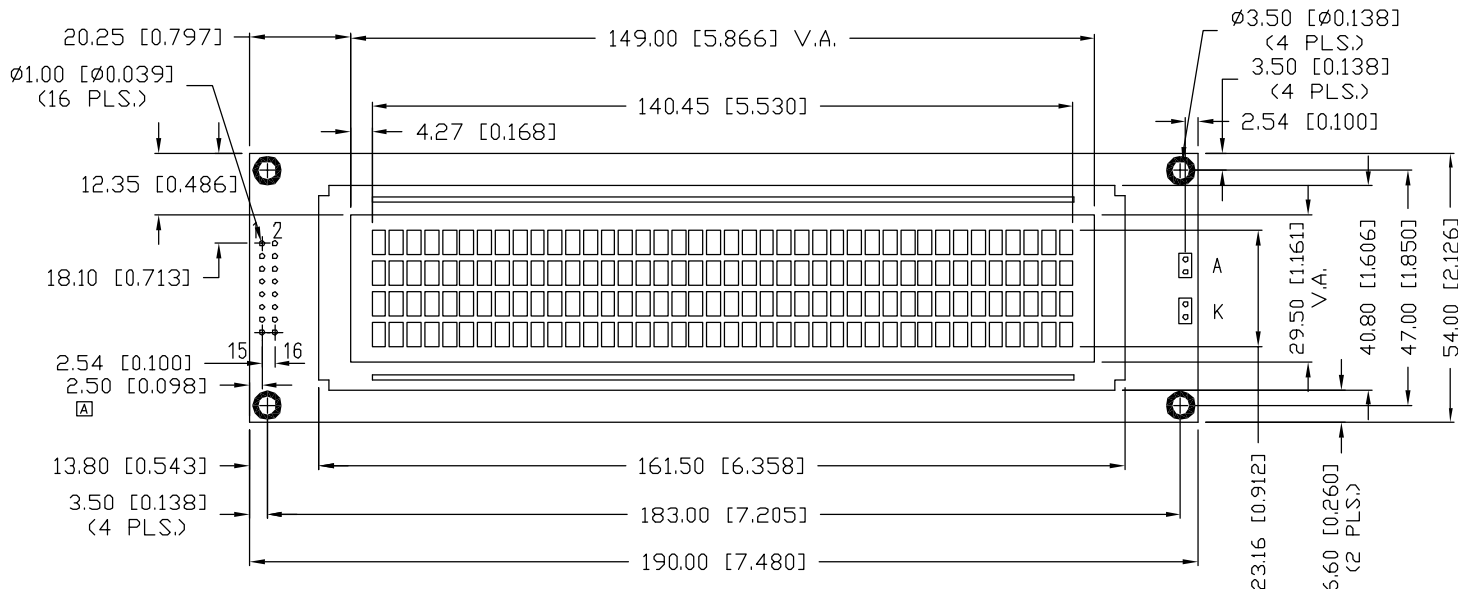
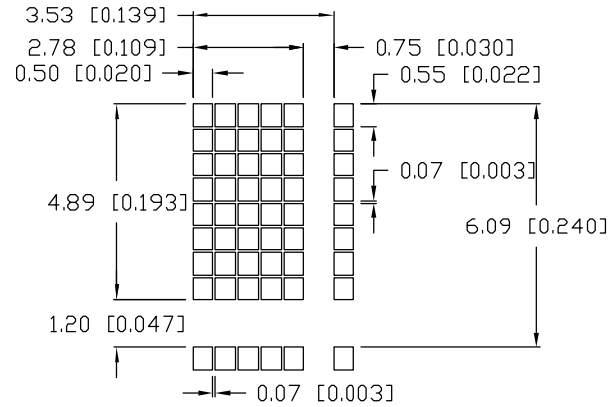


PART NUMBER		REV.
LCM-X04004DXX		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10BRDR. & 10999.	6.10.03

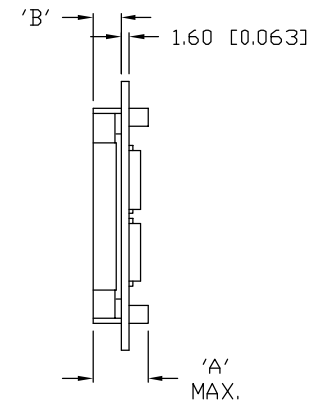
P/N PREFIX/SUFFIX TABLE		
LCM-X	DX	DESCRIPTION
STANDARD	S	SR STN, REFLECTIVE
		SF STN, TRANSFLECTIVE(W/ BACKLIGHT)
HIGH TEMP.	H	TR TN, REFLECTIVE
		TF TN, TRANSFLECTIVE(W/ BACKLIGHT)

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

CHARACTER DETAIL



TYPE	DIM.	A	B
WITH BACKLIGHT		14.5	9.3
NO BACKLIGHT		10	4.9



\*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 MAX= +0.00 -DECIMAL PRECISION

REV.	PART NUMBER
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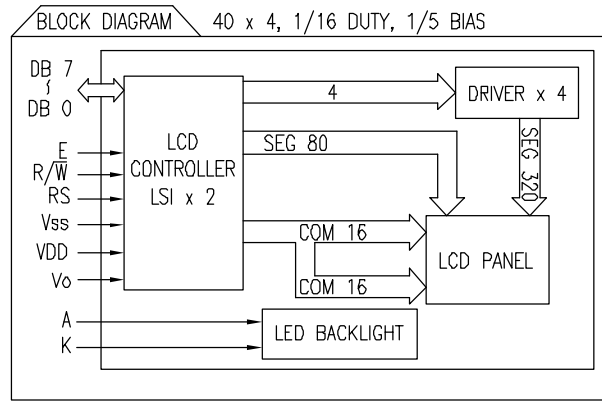
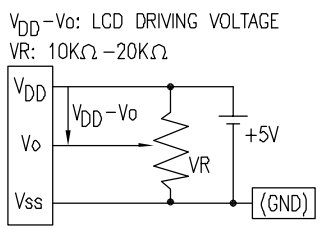
4.89mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX,  
40 x 4 LCD CHARACTER MODULE, 1/16 DUTY, 1/5 BIAS.

**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.

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
CT			9.10.98
			PAGE: 1 OF 2
			SCALE: N/A

PART NUMBER		REV.
LCM-X04004DXX		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
	SEE PAGE 1.	

PIN CONFIGURATION				
PIN NO.	SYMBOL	LEVEL	FUNCTION	
1~8	DB7~DB0	H/L	DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE.	
9	E1	H,H->L	ENABLE 1	
10	R/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	Vo	-	FOR LCD DRIVE	
13	Vss	-	POWER SUPPLY	
14	VDD	-		GND (0V)
				5V
15	E2	H,H->L	ENABLE 2	
16	-	-	NO CONNECTION	
	A	-	ANODE FOR BACKLIGHT	
	K	-	CATHODE FOR BACKLIGHT	



ELECTRICAL CHARACTERISTICS		V <sub>DD</sub> =4.7V to 5.3V, T <sub>A</sub> =25°C				
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	-	-	5.0	-	V
SUPPLY CURRENT FOR LOGIC	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	4.0	10.0	mA
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub> V
	LOW	V <sub>IL</sub>	-	0	-	0.6 V
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	-	2.4	-	V
	LOW	V <sub>OL</sub>	-	-	0.4	V
*LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	-	4.2	4.6	V
	CURRENT	I <sub>f</sub>	-	500	-	mA
	POWER CONSUMPTION	PD	-	2100	-	mW
	LUMINOUS	L	I <sub>f</sub> =500mA	70	-	cd/m <sup>2</sup>
	COLOR	-	-	-	-	nm

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	T <sub>a</sub> =25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>o</sub>	-	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V <sub>I</sub>	T <sub>a</sub> =25°C	V <sub>SS</sub>	V <sub>DD</sub>	V
OPERATING TEMPERATURE	T <sub>opr</sub>	LCM-S	0	50	°C
		LCM-H	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-S	-20	70	°C
		LCM-H	-30	85	°C

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

\*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

REV.	PART NUMBER
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