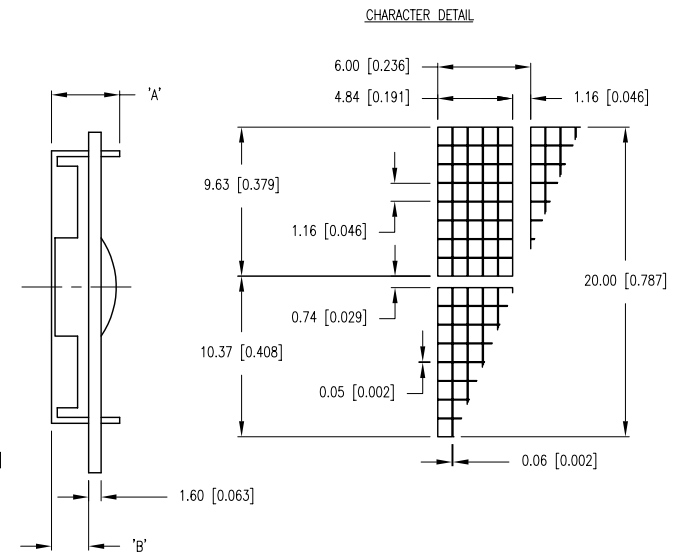
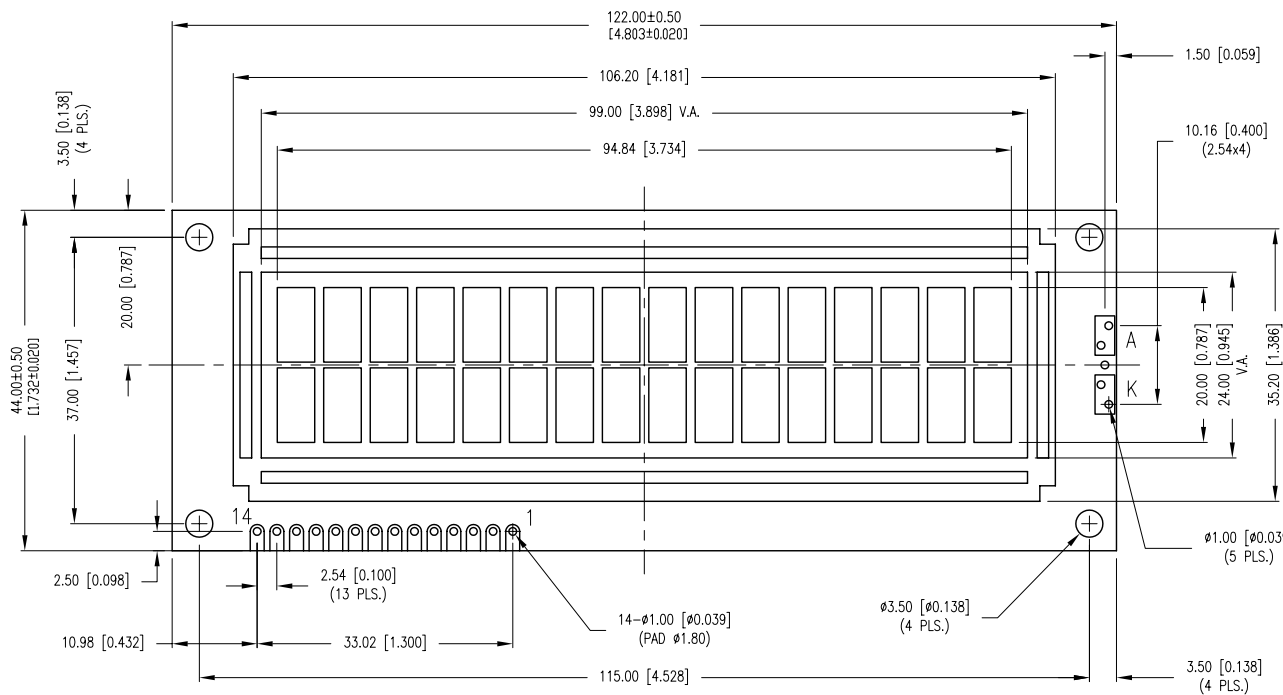


PART NUMBER	LCM-X01602DXX/D	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
10.09.98	E.C.N. #10464.		A

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

TYPE	DIM.	A	B
WITH BACKLIGHT		13.0	9.0
NO BACKLIGHT		8.8	4.8

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 (±0.039), 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.= +DECIMAL PRECISION -0.00

**LUMEX**  
Creating LED and LCD Solutions Together.™

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9.63mm CHARACTER HEIGHT, 16x2 CHARACTERS, 5x8 DOT MATRIX LCD MODULE, 1/16 DUTY, 1/5 BIAS.

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

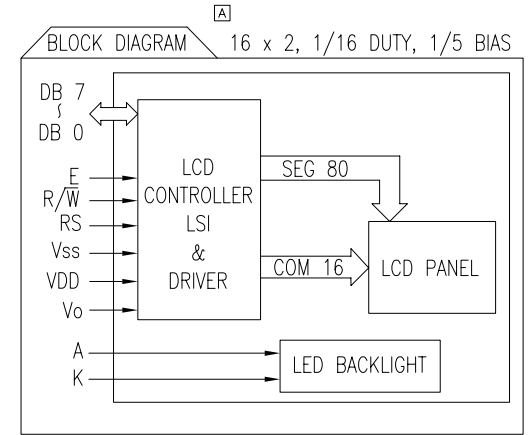
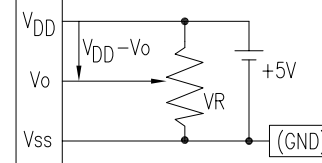
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DATE:	01.28.11	DRAWN BY:	AB
PAGE:	1 OF 2	CHKD BY:	YA
SCALE:	NTS	APRVD BY:	BC
UNIT:	mm [INCH]		Ⓟ

PART NUMBER	LCM-X01602DXX/D	REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS		REV.
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PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	-	POWER SUPPLY GND (0V)
2	V <sub>DD</sub>	-	
3	V <sub>O</sub>	-	
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT
5	R/W	H/L	H: DATA READ (MODULE-->MPU) L: DATA WRITE (MODULE<--MPU)
6	E	H,H->L	ENABLE
7~14	DB0~DB7	H/L	DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE.
15	A	-	ANODE LED BACKLIGHT
16	K	-	CATHODE LED BACKLIGHT

V<sub>DD</sub>-V<sub>O</sub>: LCD DRIVING VOLTAGE  
VR: 10KΩ -20KΩ



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	-	2.0	3.0	mA	
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	4.7	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>	I <sub>f</sub> =220mA	-	4.2	4.6	V
	CURRENT	I <sub>f</sub>	-	-	220	480	mA
	POWER CONSUMPTION	PD	-	-	924	-	mW
	LUMINOUS	L	I <sub>f</sub> =220mA	70	-	-	cd/m <sup>2</sup>
	COLOR	-	-	-	-	-	nm

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

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>	-	4.2V@50°C	4.8@0°C	V
INPUT VOLTAGE	V <sub>r</sub>	T <sub>a</sub> =25°C	V <sub>SS</sub>	V <sub>DD</sub>	V
		LCM-S	0	50	°C
OPERATING TEMPERATURE	T <sub>opr</sub>	LCM-H	-20	70	°C
		LCM-S	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-H	-30	85	°C

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			UNIT: mm [INCH]	(P6)