

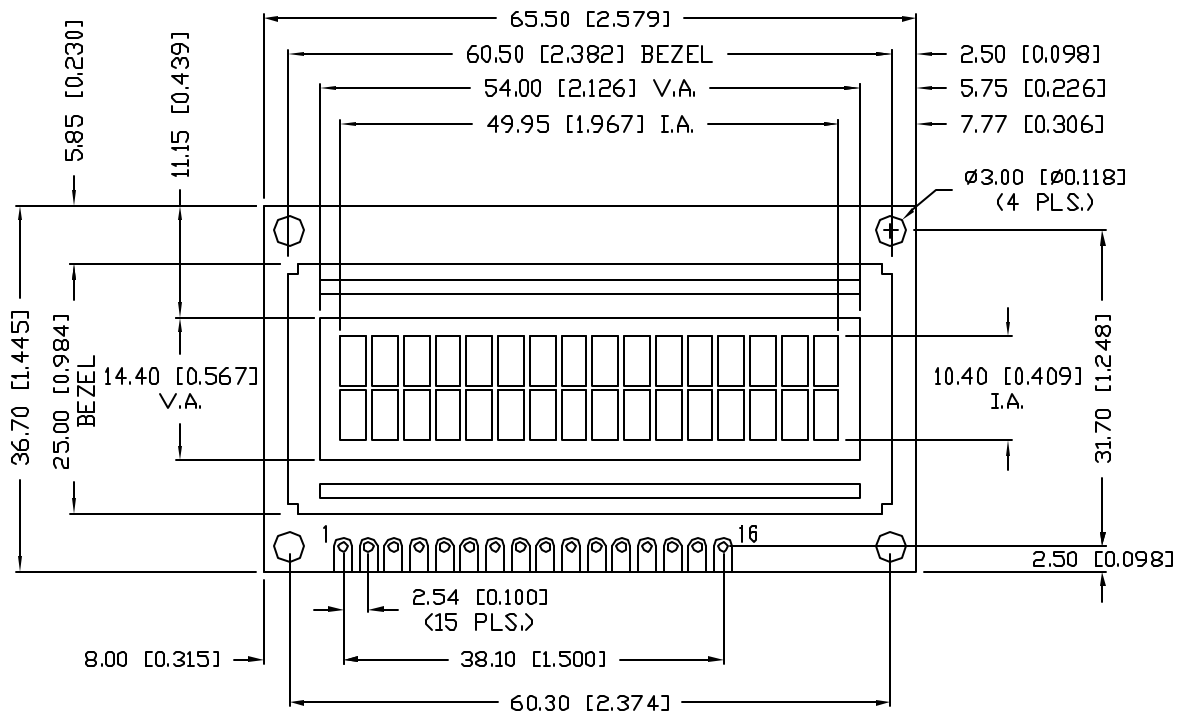
UNCONTROLLED DOCUMENT

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

PART NUMBER

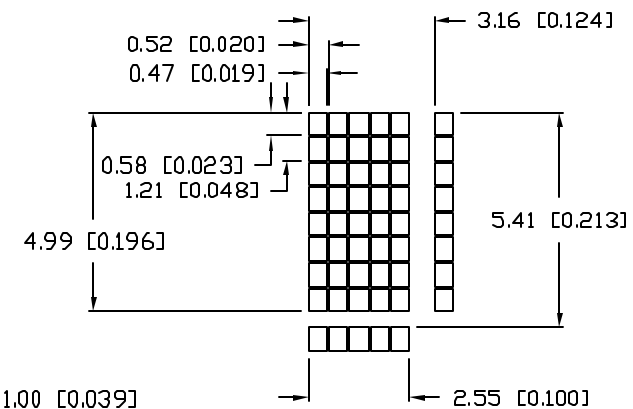
LCM-X01602DXX/N

REV.



TYPE	DIM.	A	B
WITH BACKLIGHT		12.7	8.8
NO BACKLIGHT		8.9	4.8

PIXEL DETAIL



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

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X $\pm$ 1 (± 0.039), X.X $\pm$ 0.5 (± 0.020), X.XX $\pm$ 0.25 (± 0.010), X.XXX $\pm$ 0.127 (± 0.005). LEAD SIZE $\pm$ 0.05 (± 0.002), LEAD LENGTH $\pm$ 0.75 (± 0.030). MN=+DECIMAL PRECISION MAX.=+0.00
-0.00
-DECIMAL PRECISION

REV.

PART NUMBER

LCM-X01602DXX/N

16 x 2 CHARACTER LCD MODULE, 1/16 DUTY.
4.99mm CHARACTER HEIGHT. 5 x 8 DOT MATRIX.

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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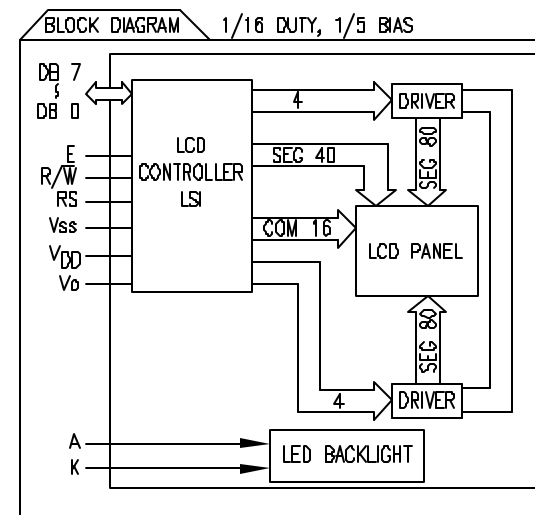
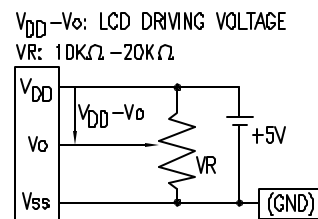
APPROVED BY:

DATE: 8.26.03

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SCALE: N/A

PIN CONFIGURATION				
PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	V _{SS}	-	POWER SUPPLY	GND (0V)
2	V _{DD}	-		5V
3	V _O	-		FOR LCD DRIVE
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



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	-	5.2	10.8	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	-	150	-	mA
	POWER CONSUMPTION	PD	-	630	-	mW
	LUMINOUS	L	I _f =150mA	70	-	cd/m ²
	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 _{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-S	0	50	°C
		LCM-H	-20	70	°C
		LCM-S	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-H	-30	85	°C

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