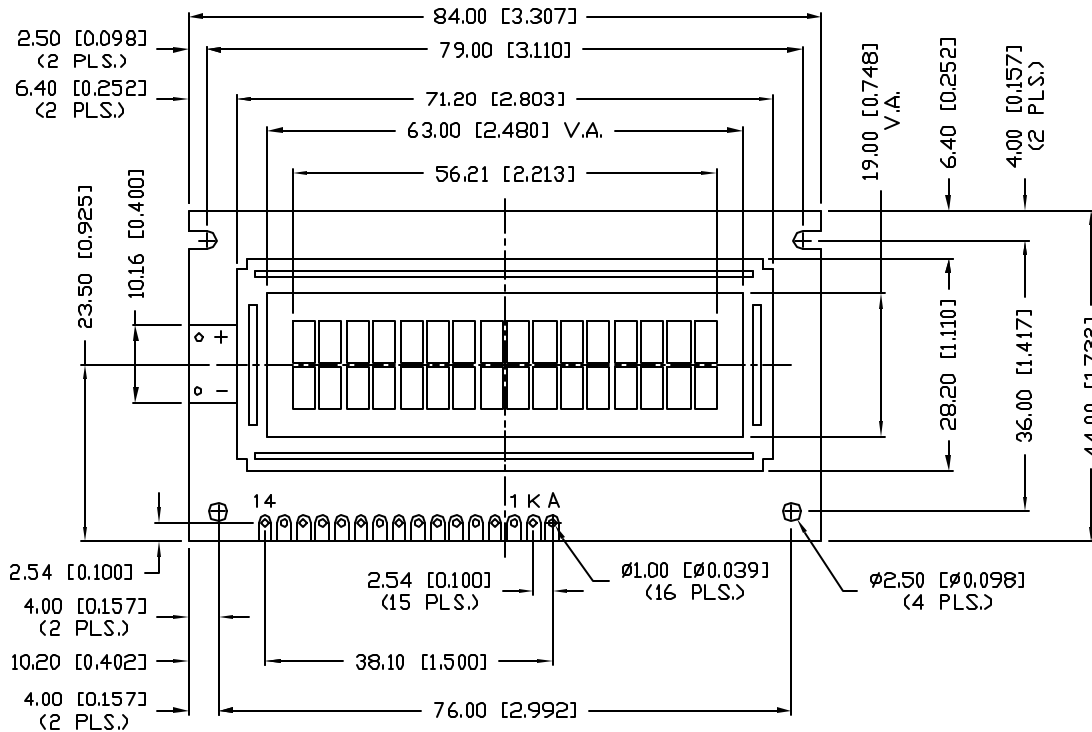


UNCONTROLLED DOCUMENT

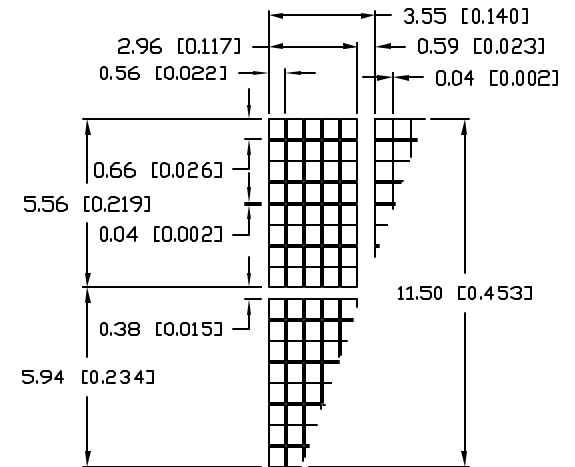
P/N PREFIX/SUFFIX TABLE		
LCM-X	DXX	DESCRIPTION
STANDARD	SR	STN, REFLECTIVE
	SF	STN, TRANSFLECTIVE(W/ BACKLIGHT)
HIGH TEMP.	TR	TN, REFLECTIVE
	TF	TN, TRANSFLECTIVE(W/ BACKLIGHT)

PART NUMBER		REV.
LCM-X01602DXX/G-Y		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10464./	10-9-98

TYPE	DIM.	A	B
WITH BACKLIGHT	12.7	8.1	
NO BACKLIGHT	8.1	4.1	



CHARACTER DETAIL



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

UNCONTROLLED DOCUMENT

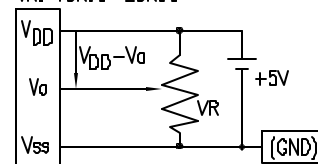
*UNLESS OTHERWISE SPECIFIED TOLERANCE IS $\pm 0.25\text{mm}$ ($\pm 0.010"$)

REV. A	PART NUMBER LCM-X01602DXX/G-Y	CONFIDENTIAL INFORMATION THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES. 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.	LUMEX INCORPORATED 290 E. HELLEN ROAD PALATINE, ILLINOIS 60067 PHONE: 1-847-359-2790 WEB: HTTP://WWW.LUMEX.COM
5.56mm TALL, 5 x 8 DOT MATRIX, 16 x 2 CHARACTER LCD MODULE, STN YELLOW, 1/16 DUTY, 1/5 BIAS.		DRAWN BY: SA/BC	CHECKED BY: APPROVED BY: DATE: 7-20-98 PAGE: 1 OF 2 SCALE: N/A

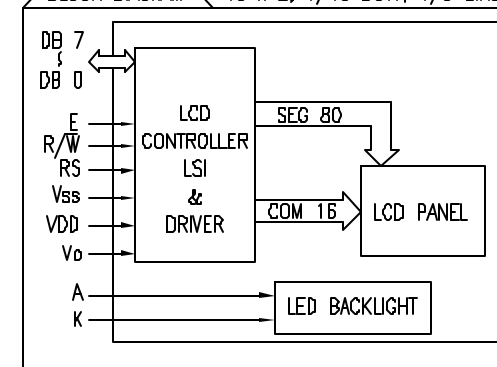
PART NUMBER		REV.
LCM-X01602DXX/G-Y		A
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
	SEE PAGE #1./	

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	-	POWER SUPPLY
2	V _{DD}	-	
3	V _O	-	
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.
A	A	-	ANODE
K	K	-	CATHODE

V_{DD}-V_O: LCD DRIVING VOLTAGE
VR: 10KΩ-20KΩ



BLOCK DIAGRAM 16 x 2, 1/16 DUTY, 1/5 BIAS



ELECTRICAL CHARACTERISTICS		□ V _{DD} =4.7V to 5.3V, T _A =25°C				
ITEM		SYMBOL	CONDITION	STANDARD VALUE		
				MIN.	TYP.	MAX.
SUPPLY VOLTAGE FOR LOGIC		V _{DD} -V _{SS}	-	-	5.0	-
SUPPLY CURRENT FOR LOGIC		I _{DD}	V _{DD} =5V	-	2.0	3.0
INPUT VOLTAGE	HIGH	V _{IH}	-	2.2	-	4.7
	LOW	V _{IL}	-	0	-	0.6
OUTPUT VOLTAGE	HIGH	V _{OH}	-	2.4	-	-
	LOW	V _{OL}	-	-	-	0.4
*LED BACKLIGHT	VOLTAGE	V _f	I _f =160mA	-	4.2	4.6
	CURRENT	I _f	-	-	160	-
	POWER CONSUMPTION	P _D	-	-	660	-
	LUMINOUS	L	I _f =160mA	70	-	-
COLOR		-	-	-	-	-

*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
				-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-S	-	-20	70	°C
				-30	85	°C

*UNLESS OTHERWISE SPECIFIED TOLERANCE IS ±0.25mm (±0.010")

REV. A	PART NUMBER LCM-X01602DXX/G-Y	CONFIDENTIAL INFORMATION THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES. 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.		LUMEX INCORPORATED 290 E. HELLEN ROAD PALATINE, ILLINOIS 60067 PHONE: 1-847-359-2790 WEB: HTTP://WWW.LUMEX.COM
5.56mm TALL, 5 x 8 DOT MATRIX, 16 x 2 CHARACTER LCD MODULE, STN YELLOW, 1/16 DUTY, 1/5 BIAS.		DRAWN BY: SA/BC	CHECKED BY:	APPROVED BY:
		DATE: 7-20-98		PAGE: 2 OF 2
		SCALE: N/A		