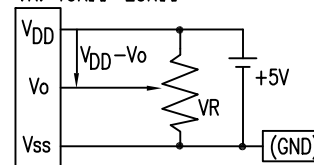


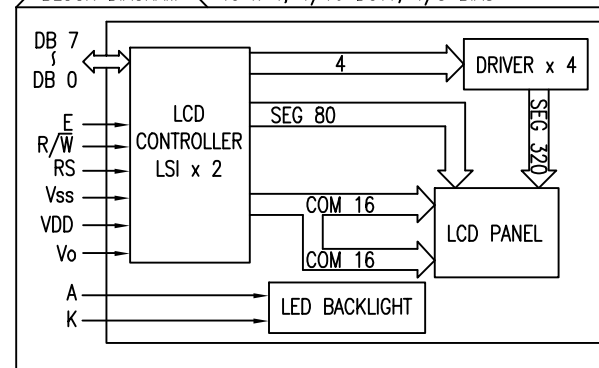
PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1~8	DB0~DB7	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	V _o	—	POWER SUPPLY	FOR LCD DRIVE
13	V _{ss}	—		GND (0V)
14	V _{DD}	—		5V
15	E2	H,H→L	ENABLE 2	
16	—	—	NO CONNECTION	
	A	—	ANODE FOR BACKLIGHT	
	K	—	CATHODE FOR BACKLIGHT	

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



BLOCK DIAGRAM 40 x 4, 1/16 DUTY, 1/5 BIAS



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	—	4.0	10.0	mA
INPUT VOLTAGE	HIGH LOW	V _{IH}	—	2.2	—	V _{DD}
		V _{IL}	—	0	—	0.6 V
OUTPUT VOLTAGE	HIGH LOW	V _{OH}	—	2.4	—	V
		V _{OL}	—	—	0.4	V
*LED BACKLIGHT	VOLTAGE	V _f	—	—	4.2	4.6 V
	CURRENT	I _f	—	—	500	mA
	POWER CONSUMPTION	PD	—	—	2100	mW
	LUMINOUS	L	I _f =500mA	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}	Ta=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	Ta=25°C	V _{ss}	V _{DD}	V
OPERATING TEMPERATURE	Topr	LCM-S	0	50	°C
		LCM-H	-20	70	°C
STORAGE TEMPERATURE	Tstg	LCM-S	-20	70	°C
		LCM-H	-30	85	°C

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

REV.

PART NUMBER

LCM-X04004DXX

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

DRAWN BY: CHECKED BY: APPROVED BY: DATE: 9-10-98

PAGE: 2 OF 2

SCALE: N/A

SA/BC

4.89mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX,

40 x 4 LCD CHARACTER MODULE, 1/16 DUTY, 1/5 BIAS.