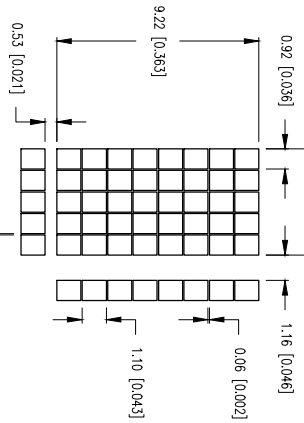
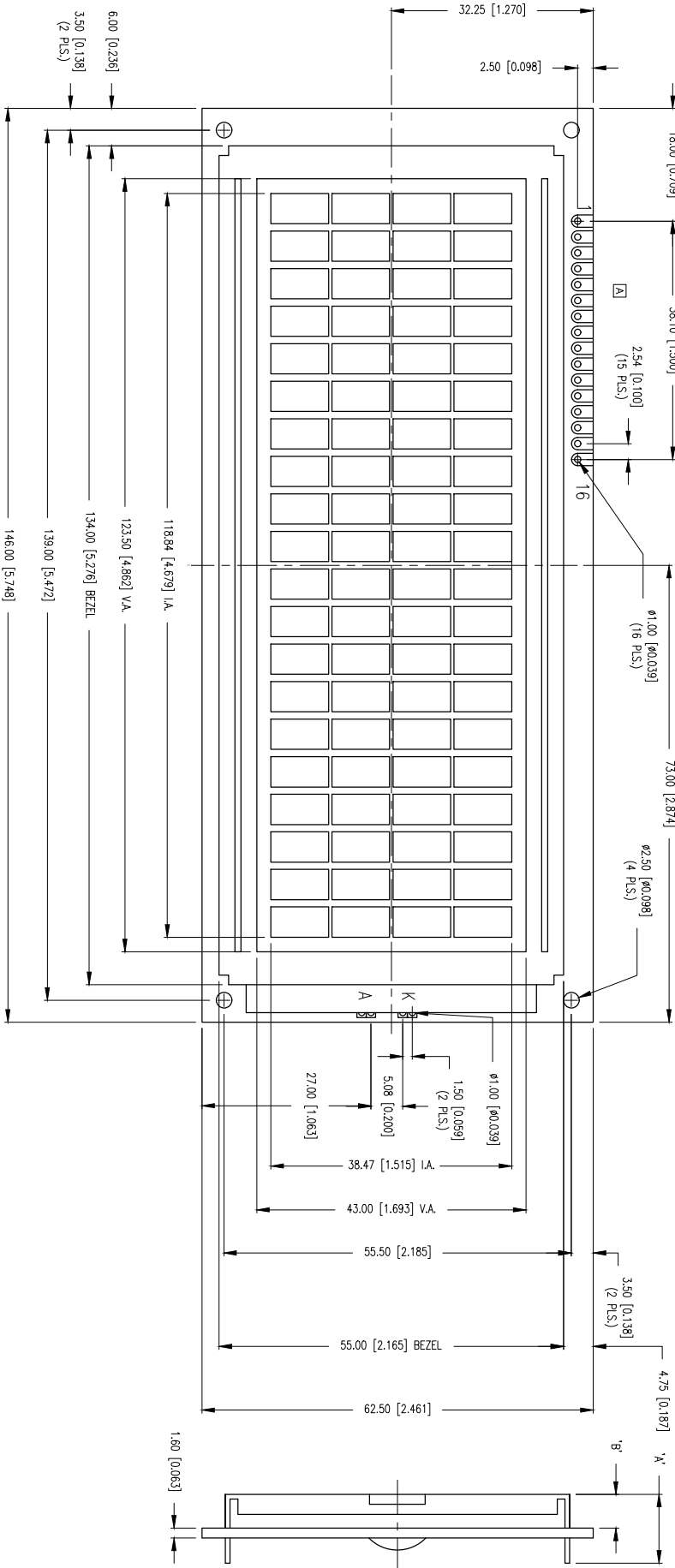


CAUTION: STATIC SENSITIVE DEVICE  
FOLLOW PROPER E.S.D. HANDLING PROCEDURES  
WHEN WORKING WITH THIS PART.

CHARACTER DETAIL



TYPE	DIM.	A	B
WITH BACKLIGHT	13.0	9.0	
NO BACKLIGHT	11.0	5.4	



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

9.22mm CHARACTER HGT, 20 x 4 CHARACTERS, 5x8 DOT MATRIX LCD, REFLECTIVE, STN YELLOW, 1/16 DUTY, 1/5 BIAS.

CONTRAST ADJUSTMENT: MAX CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT \*\*

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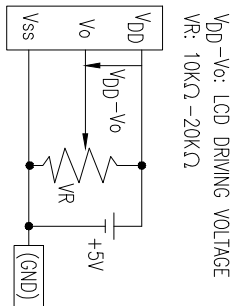
**LUMEX**  
Crediting LED and LCD Solutions Together™

290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
FAX: +1.847.359.6538  
WEB: WWW.LUMEX.COM

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SCALE:		APRD BY:	--
UNIT:	mm [INCH]		

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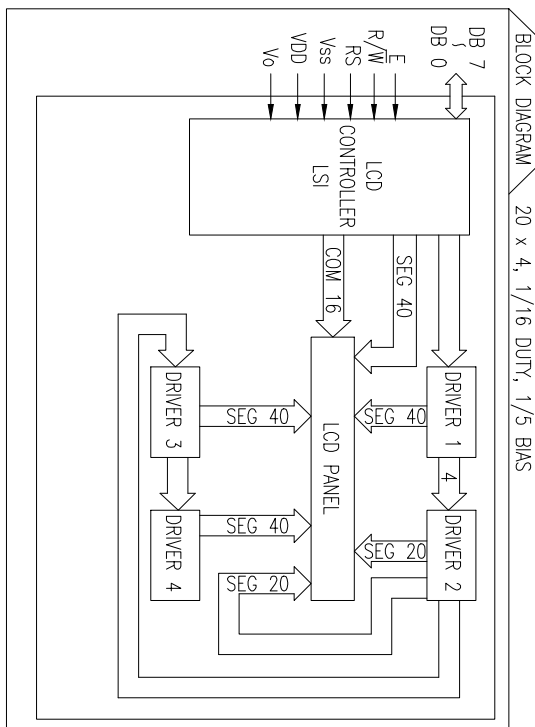
PIN CONFIGURATION			FUNCTION
1	V <sub>SS</sub>	-	GND (0V)
2	V <sub>DD</sub>	-	POWER SUPPLY 5V
3	V <sub>0</sub>	-	FOR LCD DRIVE
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT
5	R/W	H/L	H: DATA READ (MODULE-->MPU) L: DATA WRITE (MODULE<--MPU)
6	E	H,H->L	ENABLE
7~14	DB0~DB7	H/L	DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE.
15			
16			



V<sub>DD</sub>=4.75V to 5.25V, 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	-	1.0	2.2	mA
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	-	V
		V <sub>IL</sub>	-	0	-	0.6
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	-0.205mA	2.4	-	V
		LOW	I <sub>OL</sub> =1.6mA	-	-	0.4

DDRAM ADDRESS	
LINE1:	40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53
LINE2:	00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13
LINE3:	14 15 16 17 18 19 1A 1B 1C 1D 1E 1F 20 21 22 23 24 25 26 27
LINE4:	54 55 56 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63 64 65 66 67



ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE	MIN	MAX
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	T <sub>o</sub> =25°C	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>0</sub>	-	0	4.9	V
INPUT VOLTAGE	V <sub>I</sub>	T <sub>o</sub> =25°C	V <sub>SS</sub>	V <sub>DD</sub>	V
OPERATING TEMPERATURE	T <sub>opr</sub>	LCM-H	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-H	-30	80	°C

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290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
FAX: +1.847.359.6538  
WEB: WWW.LUMEX.COM



9.22mm CHRCR HGT, 20 x 4 CHRCRFS, 5x8 DOT MTRX LCD, REFLECTIVE, STN YELLOW, 1/16 DUTY, 1/5 BIAS.  
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UNIT: mm [INCH]

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Upper Lower 4 bit	LLLL	LLHH	LHLH	LHLL	HLHH	HLHL	HLLH	HLLL	HHHH
0000	0000	0001	0010	0011	0100	0101	0110	0111	1000
0001	0001	0010	0011	0100	0101	0110	0111	1000	1001
0010	0010	0011	0100	0101	0110	0111	1000	1001	1010
0011	0011	0100	0101	0110	0111	1000	1001	1010	1011
0100	0100	0101	0110	0111	1000	1001	1010	1011	1100
0101	0101	0110	0111	1000	1001	1010	1011	1100	1101
0110	0110	0111	1000	1001	1010	1011	1100	1101	1110
0111	0111	1000	1001	1010	1011	1100	1101	1110	1111
1000	1000	1001	1010	1011	1100	1101	1110	1111	1111
1001	1001	1010	1011	1100	1101	1110	1111	1111	1111
1010	1010	1011	1100	1101	1110	1111	1111	1111	1111
1011	1011	1100	1101	1110	1111	1111	1111	1111	1111
1100	1100	1101	1110	1111	1111	1111	1111	1111	1111
1101	1101	1110	1111	1111	1111	1111	1111	1111	1111
1110	1110	1111	1111	1111	1111	1111	1111	1111	1111
1111	1111	1111	1111	1111	1111	1111	1111	1111	1111

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