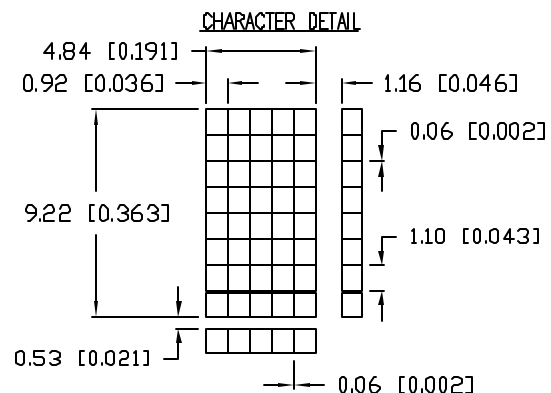


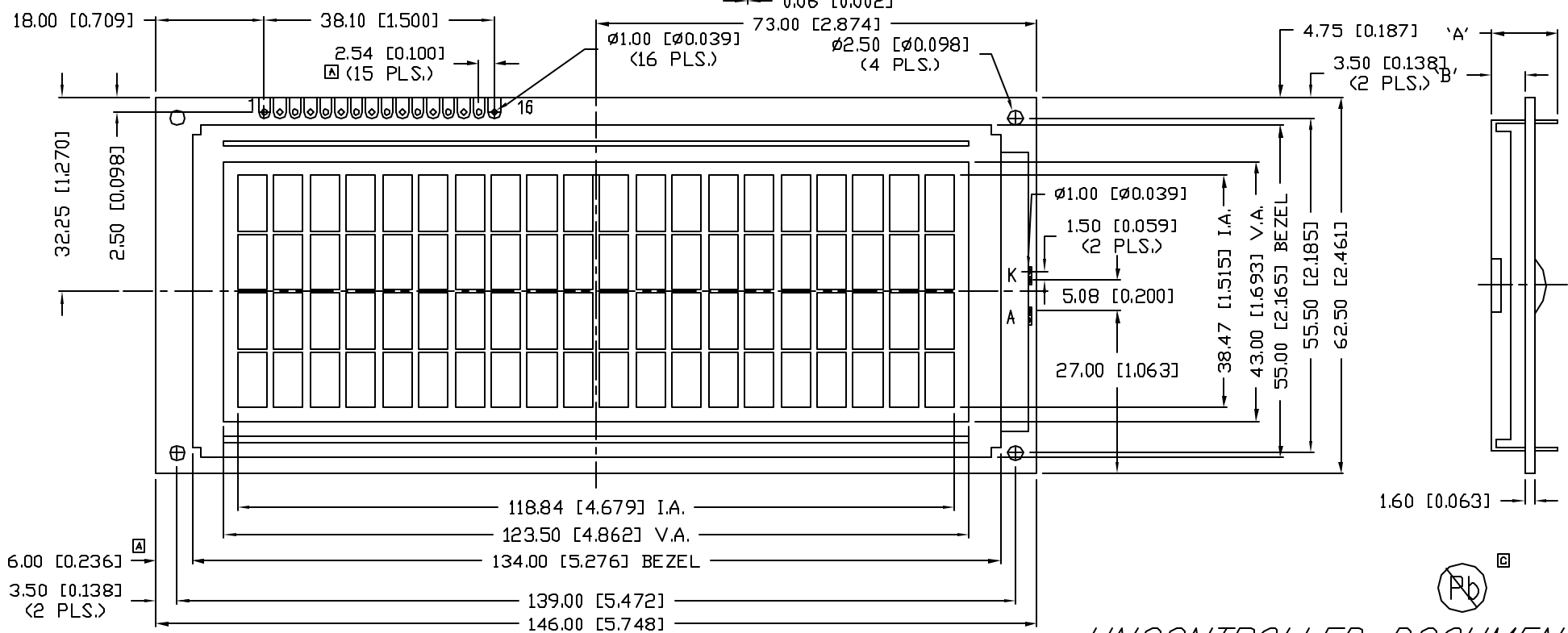
UNCONTROLLED DOCUMENT

PART NUMBER		REV.
LCM-H02004DSF/D-Y		C
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11076.	1.7.04
B	E.C.N. #120305.	12.06.04
C	E.C.N. #11148.	4.19.07

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



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



UNCONTROLLED DOCUMENT

*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.= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

REV.	PART NUMBER
C	LCM-H02004DSF/D-Y
9.22mm CHARACTER HEIGHT, 20 x 4 CHARACTERS, 5 x 8 DOT MATRIX LCD MODULE, STN YELLOW, 1/16 DUTY, 1/5 BIAS.	

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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.

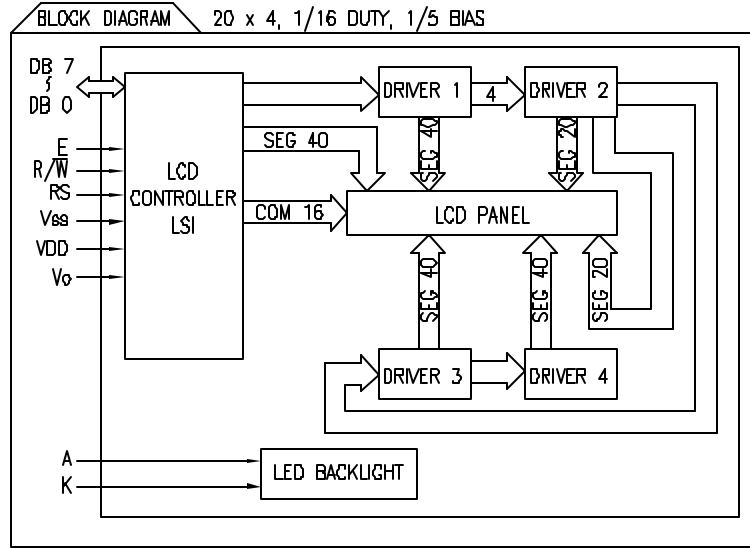
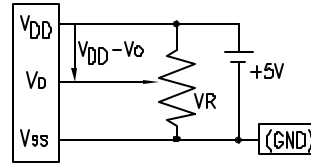
290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw

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jc			5.15.03
		PAGE:	1 OF 2
		SCALE:	N/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 GND (0V)
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.
15	A	-	ANODE LED BACKLIGHT
16	K	-	CATHODE LED BACKLIGHT

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



ELECTRICAL CHARACTERISTICS		V _{DD} =4.75V to 5.25V, 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	-	1.0	2.2	mA
INPUT VOLTAGE	HIGH	V _{IH}	-	2.2	-	V _{DD}
	LOW	V _{IL}	-	0	-	0.6
OUTPUT VOLTAGE	HIGH	V _{OH}	I _{OH} =-0.205mA	2.4	-	-
	LOW	V _{OL}	I _{OL} =1.6mA	-	-	0.4
*LED BACKLIGHT	VOLTAGE	V _f	I _f =550mA	-	4.2	4.5
	CURRENT	I _f	-	-	550	600
	POWER CONSUMPTION	P _D	-	-	2310	-
	LUMINOUS	L	I _f =550mA	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	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	-	0	4.9	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	LCM-H	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-H	-30	80	°C

CDRAM ADDRESS																				
LINE1:	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13
LINE2:	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F	50	51	52	53
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

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REV. C	PART NUMBER LCM-H02004DSF/D-Y
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PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
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