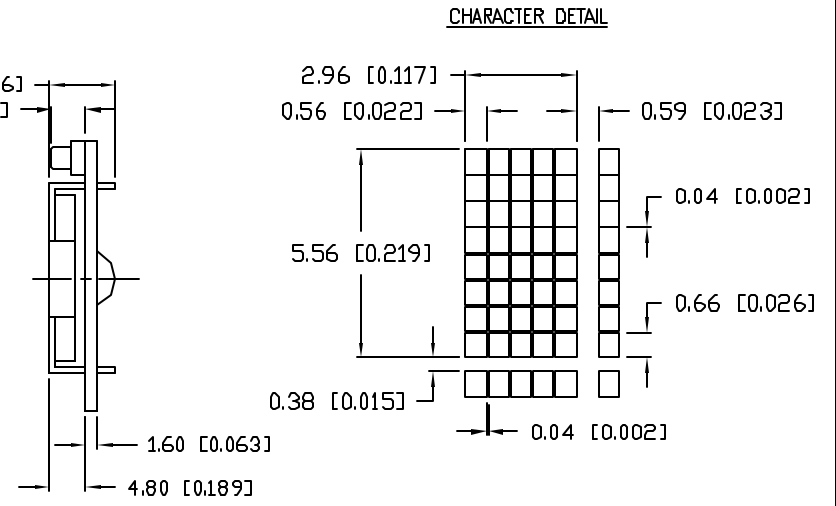
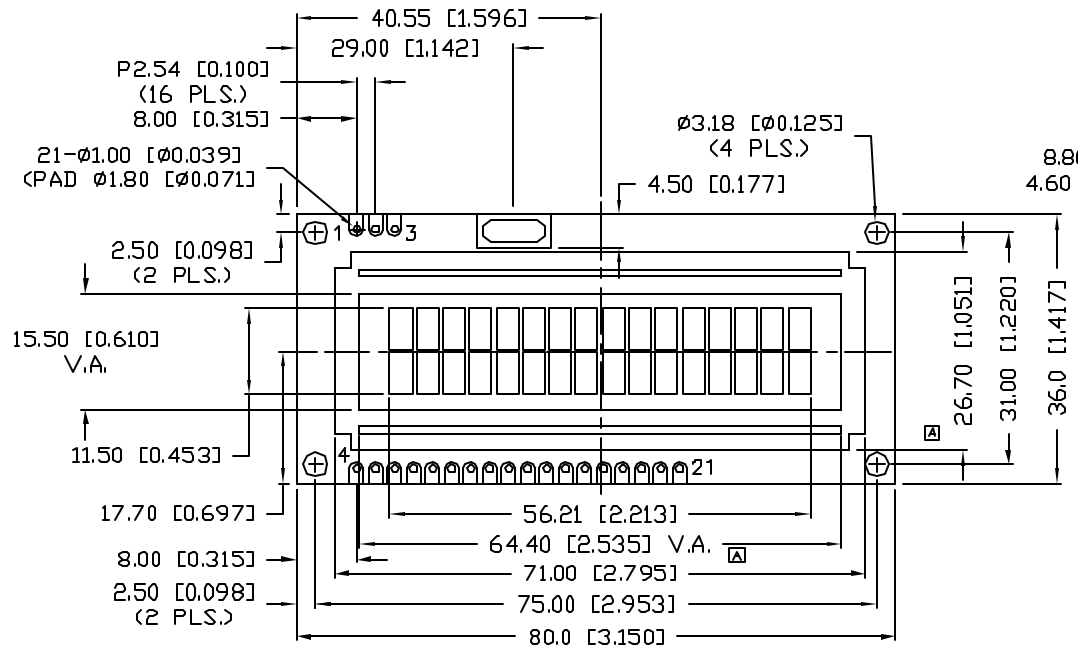
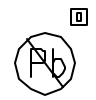


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PART NUMBER		REV.
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REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10677.	11.10.00
B	E.C.N. #10707.	1.17.01
C	E.C.N. #10723.	3.19.01
D	E.C.N. #11148.	02.13.07



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




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\*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

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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

5.56 CHARACTER HEIGHT, 16 x 2 CHARACTERS, LCD MODULE,  
5 x B DOT MATRIX, SERIAL INPUT, STN, REFLECTIVE.

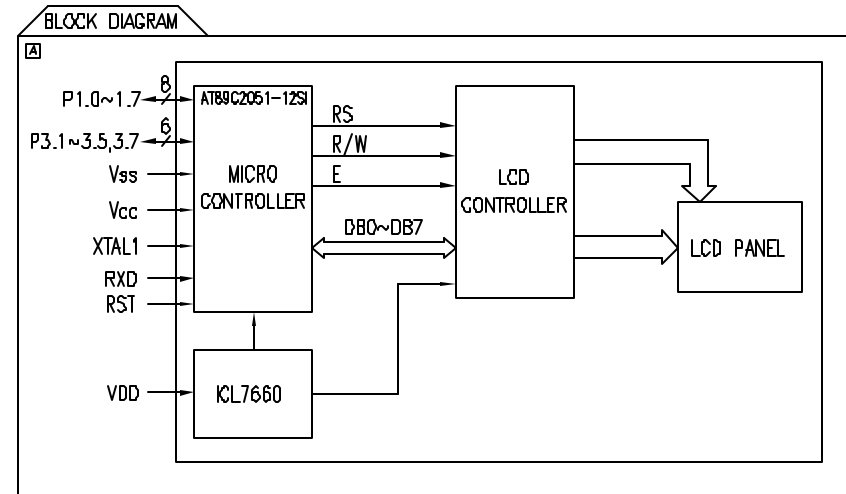
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PIN CONFIGURATION			
PIN NO.	SYMBOL	I/O	FUNCTION
1	Vss	I	POWER SUPPLY GND (0V)
2	VDD	I	
3	RXD	I	
4~11	P1.0~1.7	I/O	8-BIT BIDIRECTIONAL I/O PORT
12~17	P3.1~3.5,3.7	I/O	BIDIRECTIONAL I/O PORT WITH INTERNAL PULLUP
18	XTAL1	I	INPUT TO INVERTING OSCILLATOR AMPLIFIER & INTERNAL CLOCK OPERATING CIRCUIT
19	RST	I	RESET FOR AT89C2051
20	Vss	I	GND (0V)
21	Vcc	I	SUPPLY VOLTAGE FOR AT89C2051

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE	Vcc	-	2.7	-	6.0	V
SUPPLY CURRENT	Icc	ACTIVE MODE 12MHz, Vcc=3V	-	-	5.5	mA
SUPPLY VOLTAGE FOR LCD DRIVE	Vo	Ta=25°C	-	0.8	-	V

ABSOLUTE MAXIMUM RATINGS				
ITEM	SYMBOL	STANDARD VALUE		UNIT
		MIN	MAX	
SUPPLY VOLTAGE	Vcc	-	6.6	V
VOLTAGE ON ANY PIN W/RESPECT TO GND	-	-1.0	+7.0	V
DC OUTPUT CURRENT	Iout	Icc	25.0	mA
OPERATING TEMPERATURE	Topr	-20	70	°C
STORAGE TEMPERATURE	Tstg	-30	85	°C



NOTES:

1. 10K~20K POTENTIOMETER ON PCB TO ADJUST CONTRAST.

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REV.	PART NUMBER
D	LCM-E01602DSR
5.56 CHARACTER HEIGHT, 16 x 2 CHARACTERS, LCD MODULE, 5 x 8 DOT MATRIX, SERIAL INPUT, STN, REFLECTIVE.	

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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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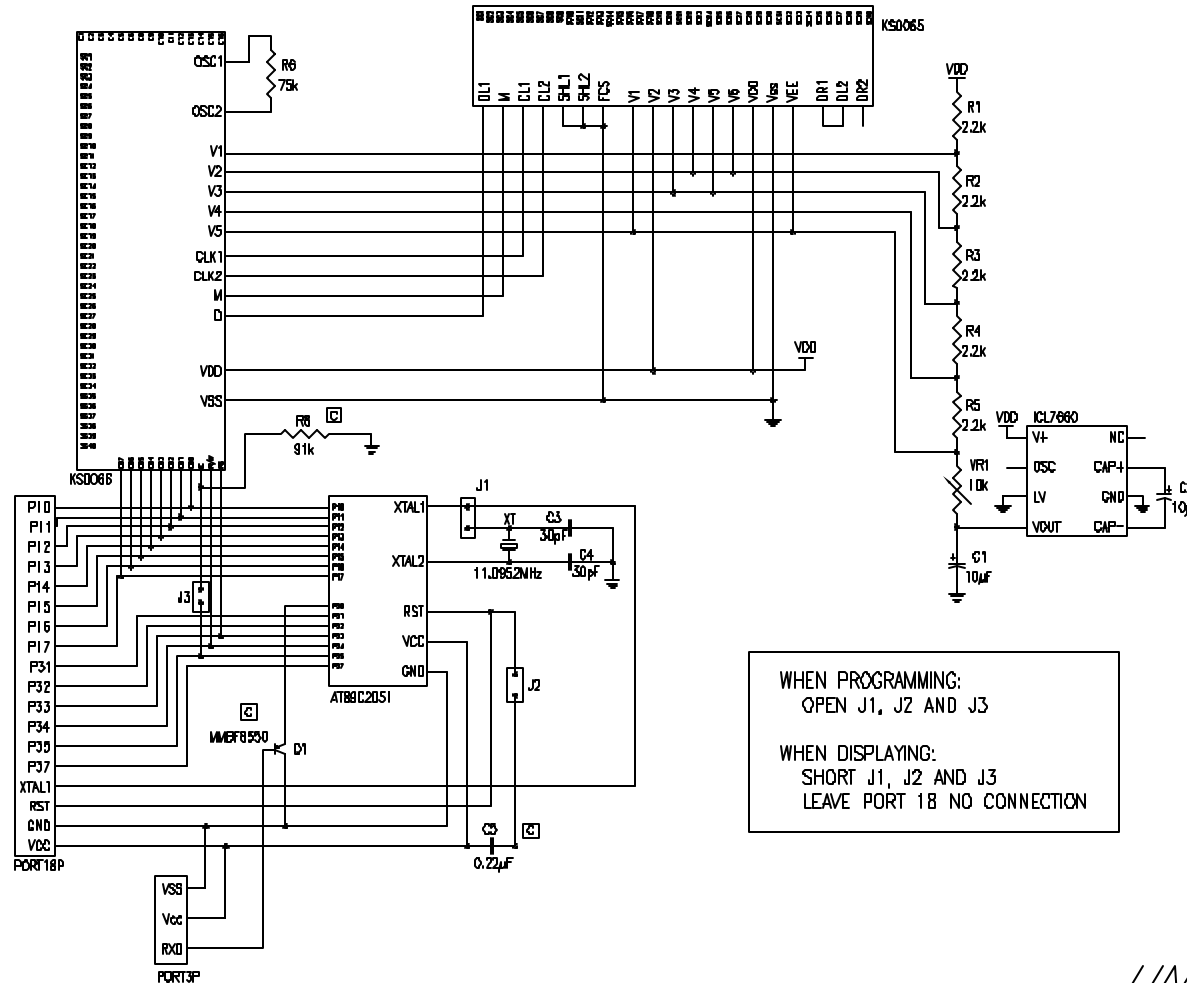
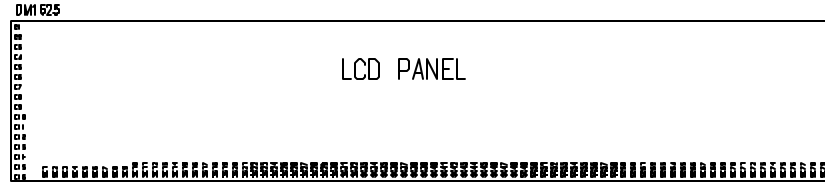
REV.

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DATE

SEE PAGE 1.



WHEN PROGRAMMING:  
OPEN J1, J2 AND J3

WHEN DISPLAYING:  
SHORT J1, J2 AND J3  
LEAVE PORT 18 NO CONNECTION

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