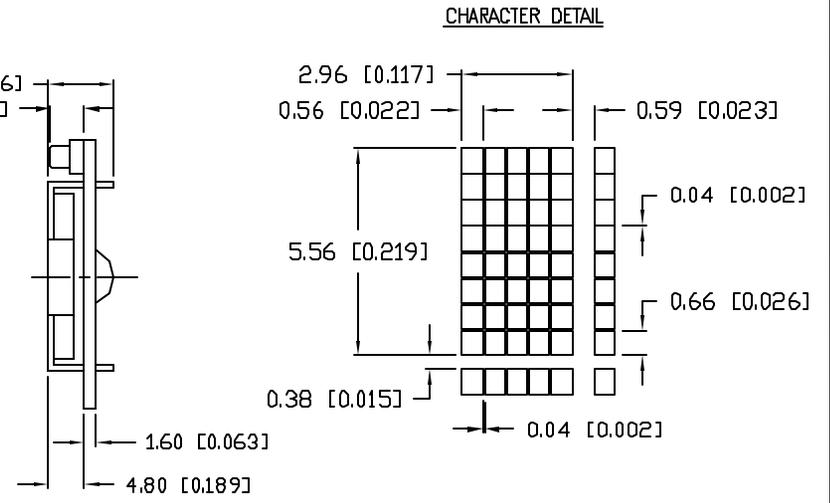
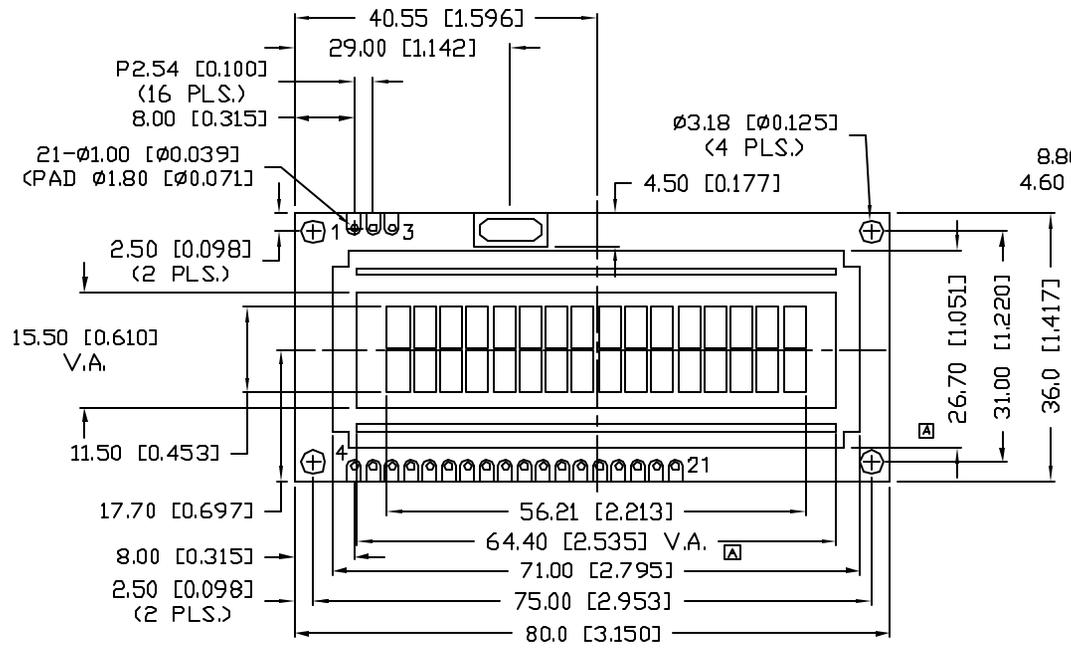


UNCONTROLLED DOCUMENT

PART NUMBER		REV.
LCM-E01602DSR		D
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.



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
D	LCM-E01602DSR

**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.

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.

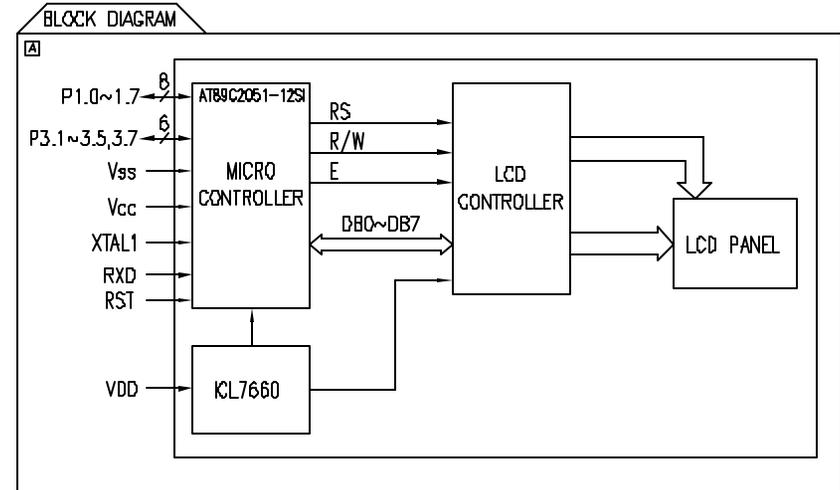
DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
jc			10.12.00
PAGE:		SCALE:	
1 OF 3		N/A	

PART NUMBER		REV.
LCM-E01602DSR		D
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
	SEE PAGE 1.	

PIN CONFIGURATION			
PIN NO.	SYMBOL	I/O	FUNCTION
1	Vss	I	POWER SUPPLY
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	Topt	-20	70	°C
STORAGE TEMPERATURE	Tstg	-30	85	°C



NOTES:

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

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

**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.

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

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE: 10.12.00
jc			PAGE: 2 OF 3
			SCALE: N/A

UNCONTROLLED DOCUMENT

PART NUMBER  
LCM-E01602DSR

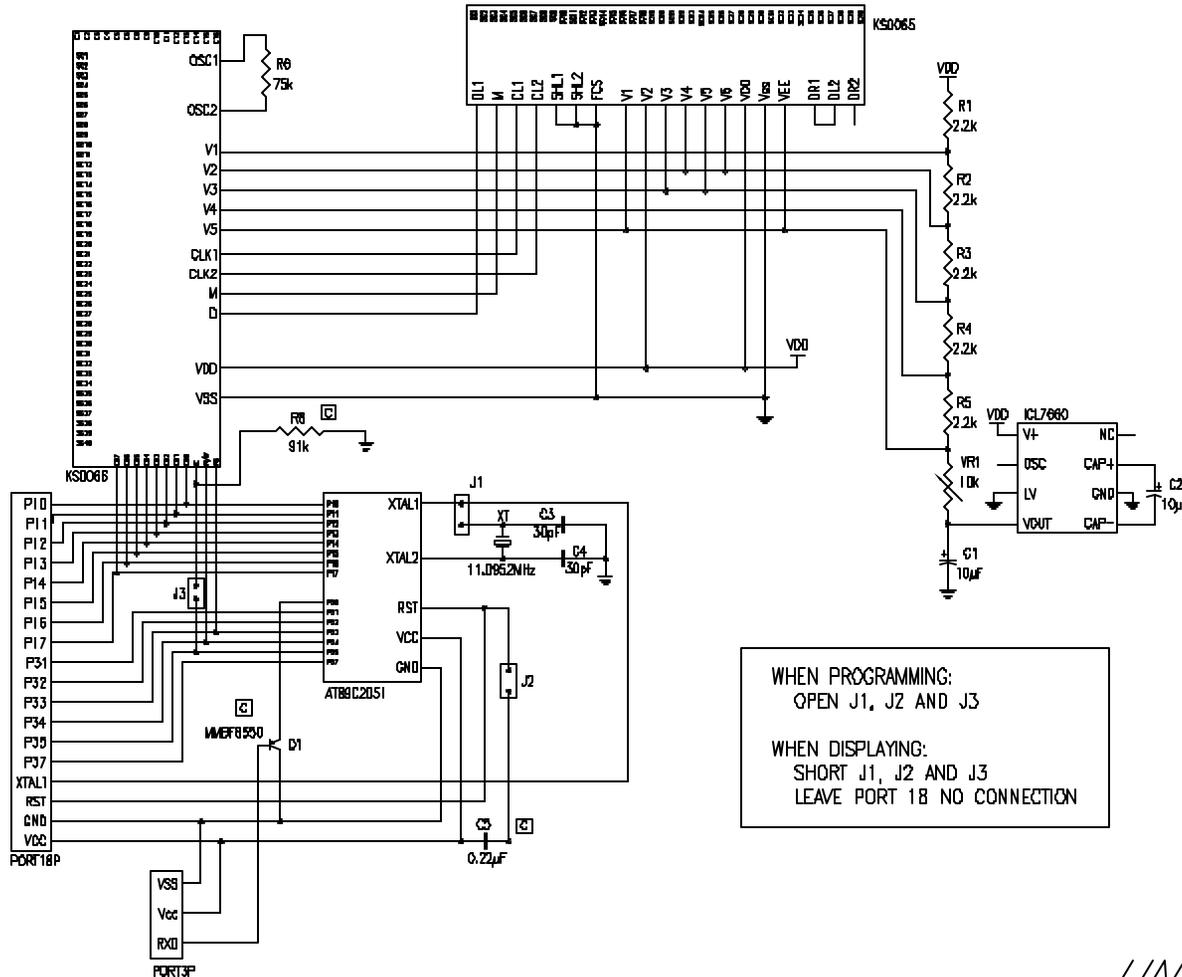
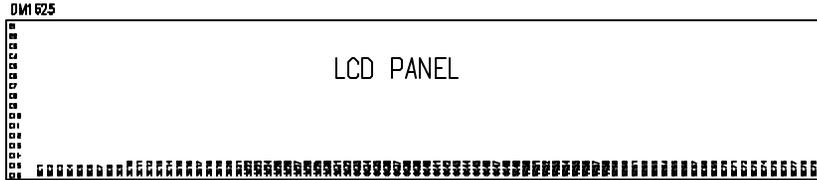
REV.

D

REV. E.C.N. NUMBER AND REVISION COMMENTS

DATE

SEE PAGE 1.



WHEN PROGRAMMING:  
OPEN J1, J2 AND J3

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

UNCONTROLLED DOCUMENT

REV.

D

PART NUMBER

LCM-E01602DSR

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.



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 8 DOT MATRIX, SERIAL INPUT, STN, REFLECTIVE.

DRAWN BY:

JC

CHECKED BY:

APPROVED BY:

DATE: 10.12.00

PAGE: 3 OF 3

SCALE: N/A

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)