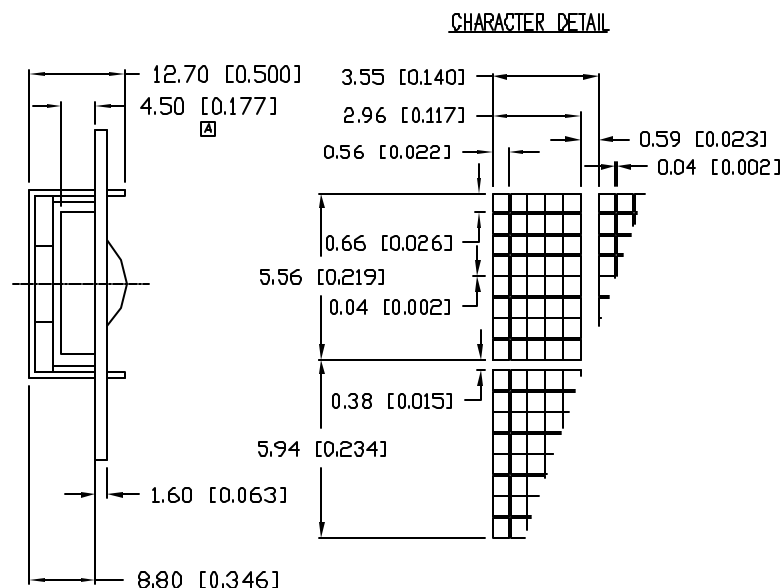
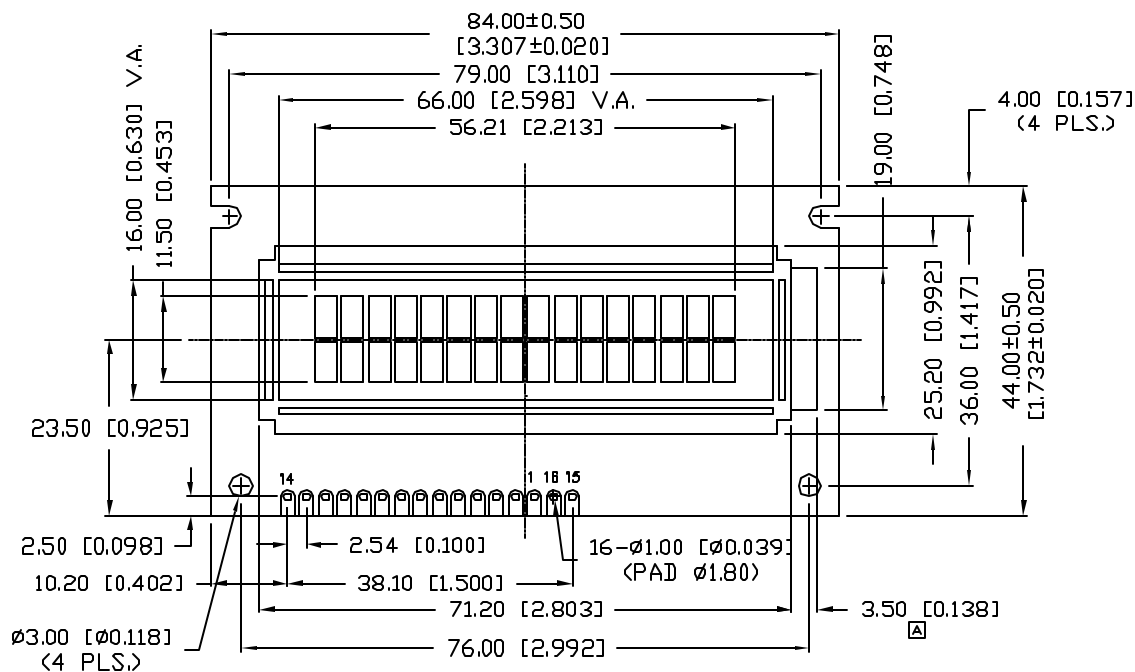


UNCONTROLLED DOCUMENT

PART NUMBER		REV.
LCM-H01602DSN/IWL		B
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10964.	3.7.03
B	E.C.N. #11148.	4.18.07



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



UNCONTROLLED DOCUMENT

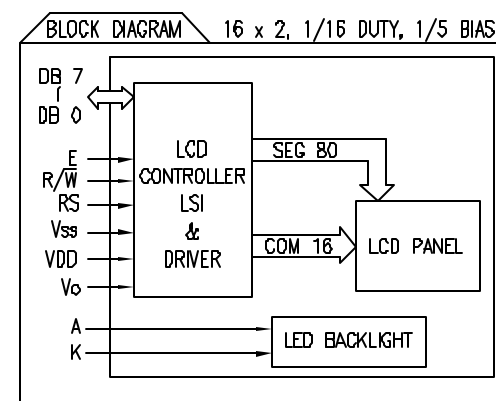
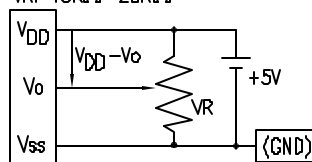
*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

REV.	PART NUMBER	CONFIDENTIAL INFORMATION		LUMEX		290 E. HELEN ROAD PALATINE, IL 60067-6976 PHONE: +1.847.359.2790 US WEB: www.lumex.com TW WEB: www.lumex.com.tw	
B	LCM-H01602DSN/IWL	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.					
16 x 2 CHARACTERS LCD MODULE, STN, TRANSMISSIVE, NEGATIVE IMAGE, ONE CHIP WHITE LED BACKLIGHT, WIDE OPERATING TEMP.		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.		DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE: 11.11.02 PAGE: 1 OF 2 SCALE: N/A
				JC			

PART NUMBER		REV.
LCM-H01602DSN/IWL		B
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 (DV) 5V FOR LCD DRIVE
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
16	K	-	CATHODE

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



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	—	2.0	3.0	mA
INPUT VOLTAGE	HIGH	V _{IH}	—	2.2	—	4.7	V	
	LOW	V _{IL}	—	0	—	0.6	V	
OUTPUT VOLTAGE	HIGH	V _{OH}	—	2.4	—	—	V	
	LOW	V _{OL}	—	—	—	0.4	V	
*LED BACKLIGHT	VOLTAGE		V _f	I _f =15mA	3.4	3.5	3.6	V
	CURRENT		I _f	—	10	15	20	mA
	POWER CONSUMPTION		P _D	I _f =15mA	—	53	—	mW
	COLOR		—	WHITE	—	—	—	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =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	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	85	°C

*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	CONFIDENTIAL INFORMATION		LUMEX		290 E. HELEN ROAD PALATINE, IL 60067-6976 PHONE: +1.847.359.2790 US WEB: www.lumex.com TW WEB: www.lumex.com.tw	
B	LCM-H01602DSN/IWL	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.		DRAWN BY: JC	
16 x 2 CHARACTERS LCD MODULE, STN, TRANSMISSIVE, NEGATIVE IMAGE, ONE CHIP WHITE LED BACKLIGHT, WIDE OPERATING TEMP.				CHECKED BY:		APPROVED BY:	
						DATE: 11.11.02	
						PAGE: 2 OF 2	
						SCALE: N/A	