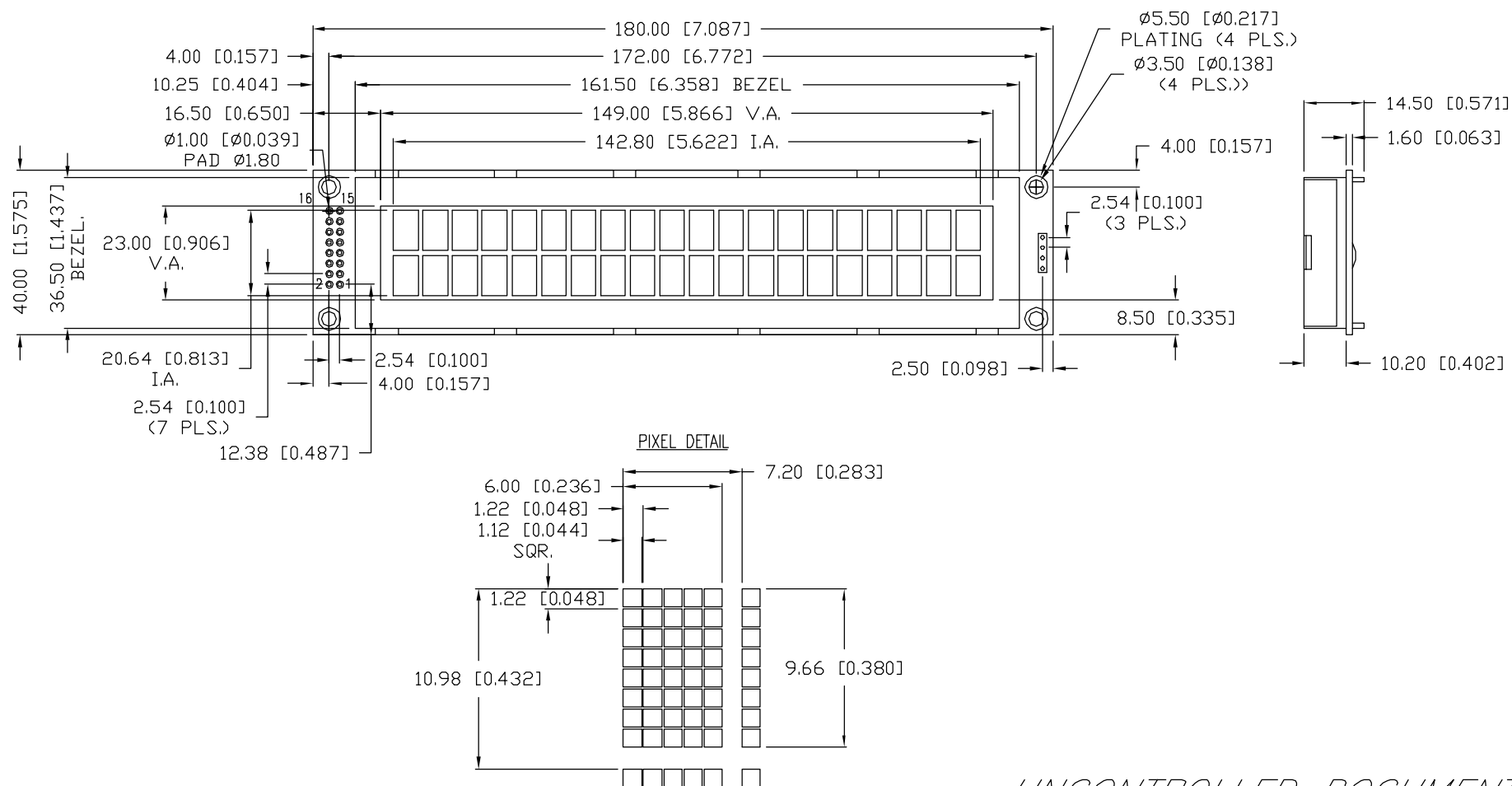




*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION MAX= +0.00 -DECIMAL PRECISION

REV.

PART NUMBER

LCM-X02002DXX/C

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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.



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9.66mm LARGE CHARACTER, 20 x 2 LCD MODULE,
LED BACKLIGHT, TRANSFLECTIVE, 1/16 DUTY.

DRAWN BY:

CT

CHECKED BY:

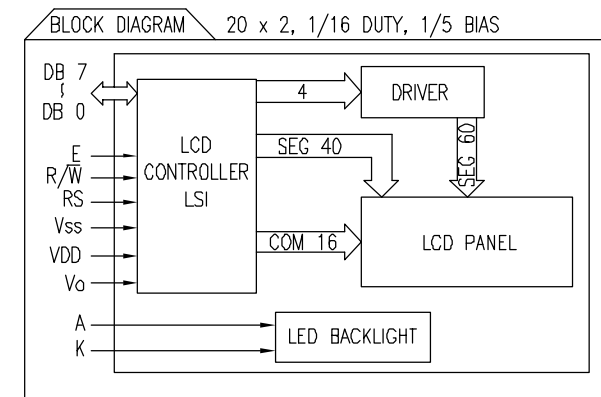
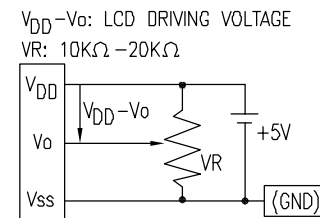
APPROVED BY:

DATE: 4.24.03

PAGE: 1 OF 2

SCALE: N/A

PIN CONFIGURATION				
PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	V _{SS}	—	POWER SUPPLY	GND (0V)
2	V _{DD}	—		5V
3	V _O	—		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	A	—	ANODE	LED BACKLIGHT
16	K	—	CATHODE	LED BACKLIGHT



ELECTRICAL CHARACTERISTICS		V _{DD} =5.0V, T _A =25°C				
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	—	MIN.	TYP.	MAX.	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	T _a =-20°C	—	7.0	—	V
		T _a =25°C	—	6.2	—	
		T _a =70°C	—	5.8	—	
SUPPLY CURRENT FOR LOGIC	I _{DD}	V _{DD} =5V	—	2.0	3.0	mA
INPUT VOLTAGE	HIGH	V _{IH}	—	2.2	—	V _{DD}
	LOW	V _{IL}	—	0	—	0.6
OUTPUT VOLTAGE	HIGH	V _{OH}	—	2.4	—	V
	LOW	V _{OL}	—	—	—	0.4
*LED BACKLIGHT	VOLTAGE	V _f	If=400mA	—	4.2	4.5
	CURRENT	I _f	—	—	400	500
	POWER CONSUMPTION	PD	—	—	1.89	—
	LUMINOUS	L	If=400mA	—	140	—
	COLOR	—	—	—	570	—

*ONLY APPLIES TO MODULES WITH BACKLIGHT

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ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =25°C	2.7	5.5	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	—	5.8	7.0	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	LCM-S	0	50	°C
		LCM-H	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-S	-20	70	°C
		LCM-H	-30	85	°C

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