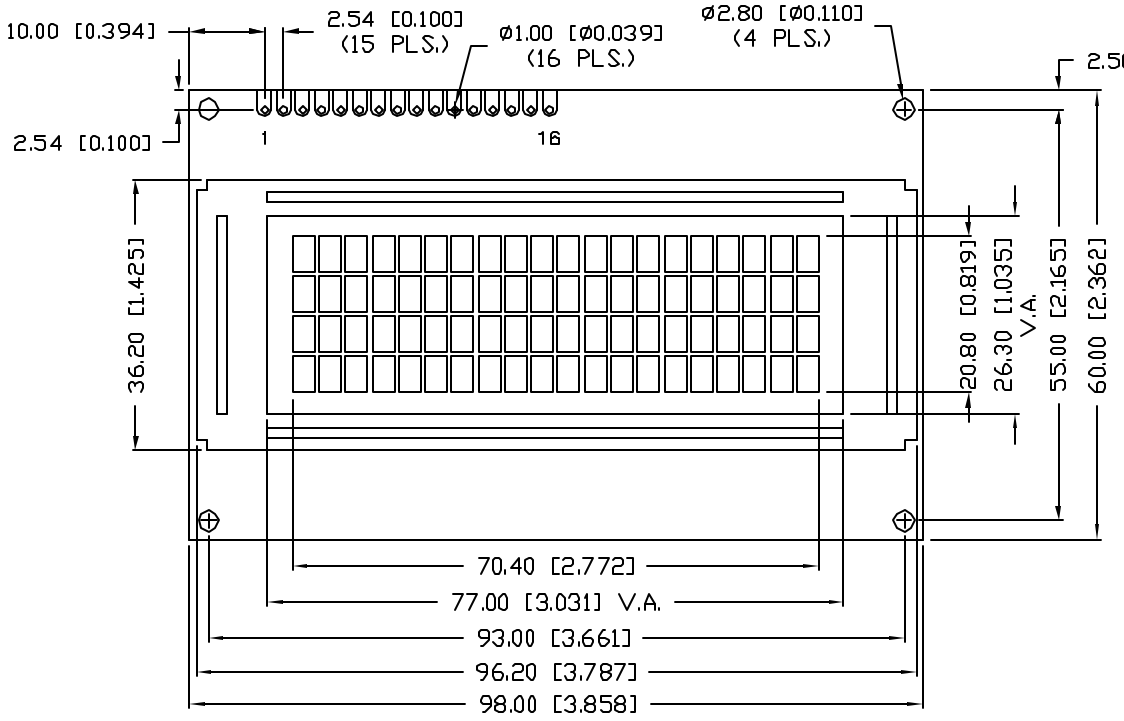
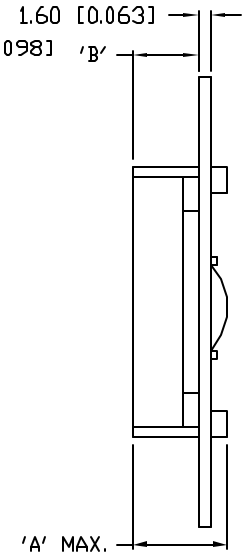
UNCONTROLLED DOCUMENT

PART NUMBER	REV.
LCM-S02004DSF-W	

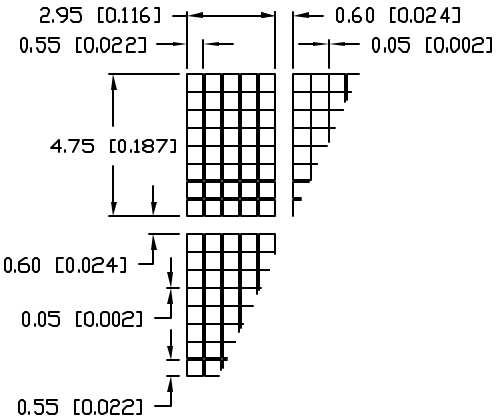
CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.

TYPE DIM.	A	B
WITH BACKLIGHT	12.7	8.7
NO BACKLIGHT	8.8	4.8





CHARACTER DETAIL



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REV.	PART NUMBER
	LCM-S02004DSF-W

4.75mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 20 x 4,
LCD MODULE, 1/16 DUTY, 1/5 BIAS, STN GRAY.
TRANSFLECTIVE, WHITE LED BACKLIGHT.

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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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JC			PAGE: 1 OF 2
			SCALE: N/A

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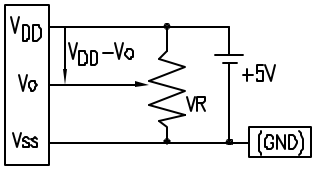
PART NUMBER	REV.
LCM-S02004DSF-W	

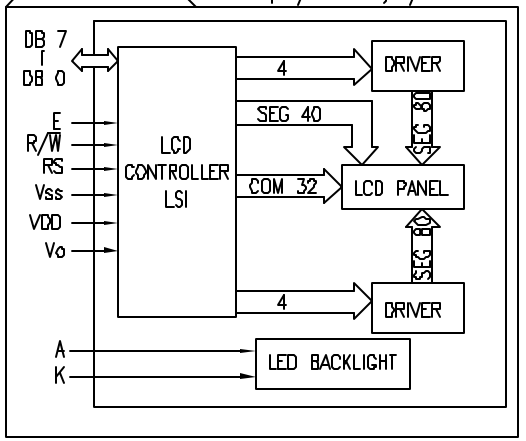
PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	Vss	–	POWER SUPPLY	GND (0V)
2	V_{DD}	–		5V
3	Vo	–		FOR LCD DRIVE
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT	
5	R/$\overline{W}$	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	3.4V	ANODE	LED BACKLIGHT
16	K	GND	CATHODE	LED BACKLIGHT

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



BLOCK DIAGRAM 20 x 4, 1/16 DUTY, 1/5 BIAS



ELECTRICAL CHARACTERISTICS

V_{DD}=4.7V to 5.3V, T_A=25°C

ITEM			SYMBOL	CONDITION	STANDARD VALUE MIN.	TYP.	MAX.	UNIT
SUPPLY VOLTAGE FOR LOGIC			V_{DD}-Vss	–	–	5.0	–	V
SUPPLY CURRENT FOR LOGIC			I_{DD}	V_{DD}=5V	–	3.0	4.0	mA
INPUT VOLTAGE		HIGH	V_{IH}	–	2.2	–	V_{DD}	V
		LOW	V_{IL}	–	0	–	0.6	V
OUTPUT VOLTAGE		HIGH	V_{OH}	I_{OH}=-0.205mA	2.4	–	–	V
		LOW	V_{OL}	I_{OL}=1.6ma	–	–	0.4	V
*LED BACKLIGHT	VOLTAGE		Vf	If=20mA	–	3.4	3.5	V
	CURRENT		If	–	–	20	30	mA
	POWER CONSUMPTION		PD	–	–	68	105	mW
	LUMINOUS		L	If=20mA	30	35	–	cd/m²
	COLOR		WHITE	–	–	–	–	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE MIN	MAX	UNIT
SUPPLY VOLTAGE FOR LOGIC	V_{DD}-Vss	Ta=25°C	-0.3	7	V
SUPPLY VOLTAGE FOR LCD DRIVE	V_{DD}-Vo	–	-0.3	12	V
INPUT VOLTAGE	V_I	Ta=25°C	Vss	V_{DD}	V
OPERATING TEMPERATURE	Topr	LCM-S	0	50	°C
		LCM-H	-20	70	°C
STORAGE TEMPERATURE	Tstg	LCM-S	-20	70	°C
		LCM-H	-30	85	°C

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