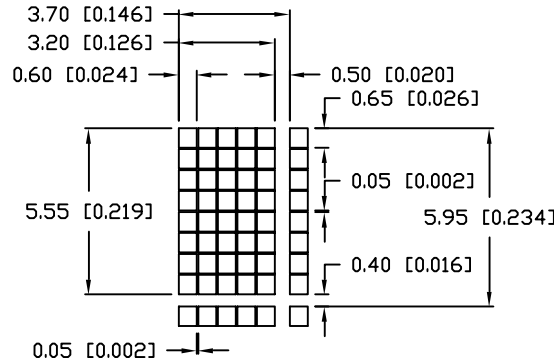
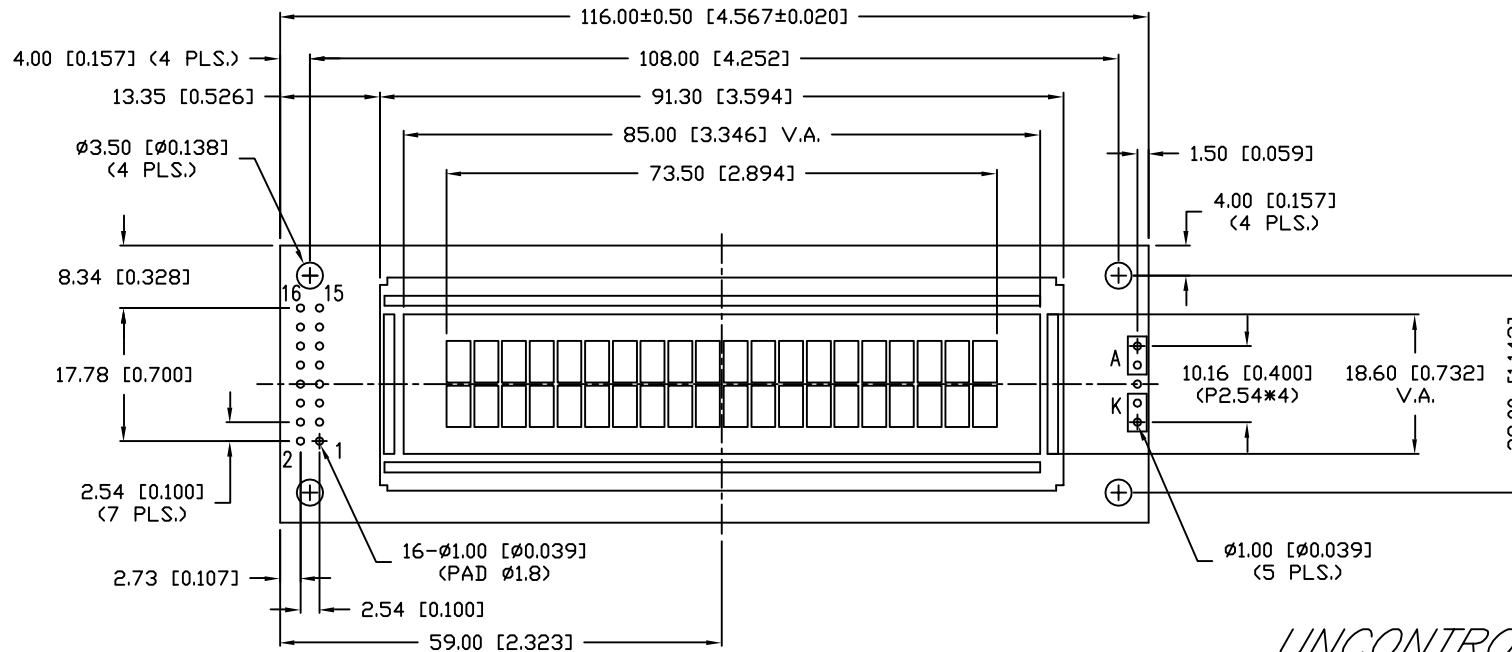


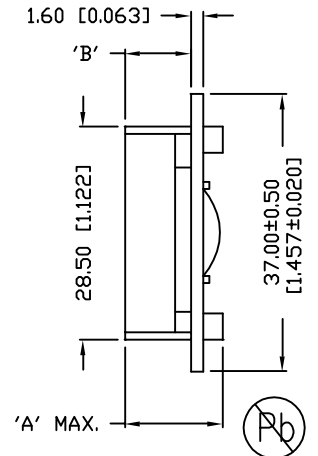
CHARACTER DETAIL



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



TYPE	DIM.	A	B
WITH BACKLIGHT	12.7	8.8	
NO BACKLIGHT	8.9	4.8	



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UNCONTROLLED DOCUMENT

REV.	PART NUMBER
	LCM-S02002DSF-S5

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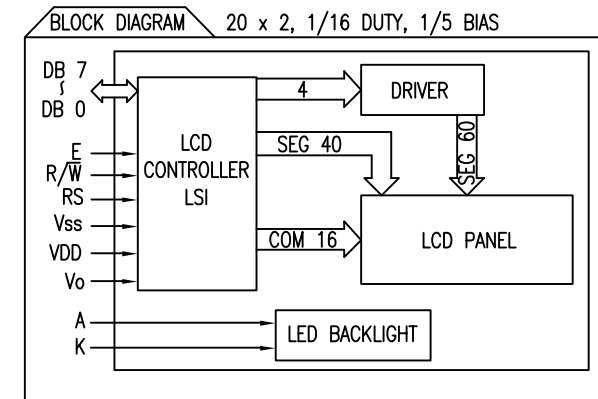
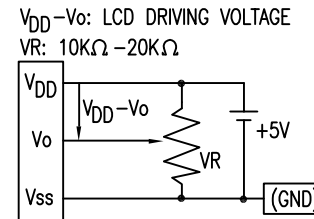
290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
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5.55mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX,  
20 x 2 LCD MODULE, 1/16 DUTY, 1/5 IAS,  
EUROPEAN FONT IC.

**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: JN	CHECKED BY:	APPROVED BY:	DATE: 9.17.07
			PAGE: 1 OF 4
			SCALE: N/A

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>SS</sub>	-	POWER SUPPLY GND (0V) 5V FOR LCD DRIVE
2	V <sub>DD</sub>	-	
3	V <sub>O</sub>	-	
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 <sub>DD</sub> =4.7V to 5.3V, T <sub>A</sub> =25°C					
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT	
			MIN.	TYP.	MAX.		
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	-	-	5.0	-	V	
SUPPLY CURRENT FOR LOGIC	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	2.0	3.0	mA	
INPUT VOLTAGE	HIGH	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub> V	
	LOW	V <sub>IL</sub>	-	0	-	0.6 V	
OUTPUT VOLTAGE	HIGH	V <sub>OH</sub>	-	2.4	-	V	
	LOW	V <sub>OL</sub>	-	-	0.4	V	
*LED BACKLIGHT	VOLTAGE	V <sub>f</sub>	I <sub>f</sub> =210mA	-	4.2	4.6	V
	CURRENT	I <sub>f</sub>	-	-	210	-	mA
	POWER CONSUMPTION	PD	-	-	882	-	mW
	LUMINOUS	L	I <sub>f</sub> =210mA	70	-	-	cd/m <sup>2</sup>
	COLOR	-	-	-	-	-	nm

\*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V <sub>DD</sub> -V <sub>SS</sub>	T <sub>a</sub> =25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V <sub>DD</sub> -V <sub>O</sub>	-	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V <sub>I</sub>	T <sub>a</sub> =25°C	V <sub>SS</sub>	V <sub>DD</sub>	V
		LCM-S	0	50	°C
OPERATING TEMPERATURE	T <sub>opr</sub>	LCM-H	-20	70	°C
		LCM-S	-20	70	°C
STORAGE TEMPERATURE	T <sub>stg</sub>	LCM-H	-30	85	°C
		LCM-S	-20	70	°C


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5.55mm CHARACTER HEIGHT, 5 x 8 DOT MATRIX, 20 x 2 LCD MODULE, 1/16 DUTY, 1/5 IAS, EUROPEAN FONT IC.		DRAWN BY: JN CHECKED BY: APPROVED BY:	DATE: 9.17.07 PAGE: 2 OF 4 SCALE: N/A

UPPER 4 BIT 4 BIT LOWER	LLLL	LLLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL				0	1	2	3	4	5	6	7	8	9	A	B	C
LLLH			!	1	A	Q	3	4	0	E	I	L	T	U	V	W
LLHL			"	2	B	R	5	6	U	1	U	B	'	3	0	
LLHH			#	3	C	S	C	E	U	1	T	B	'	3	8	
LHLL			\$	4	D	T	T	0	E	1	L	F	'	3	0	
LHLH			%	5	E	U	W	U	E	1	L	4	'	3	0	
LHHL			&	6	F	V	V	U	0	N	T	0	'	3	0	
LHHH			'	7	G	W	9	W	0	N	0	0	'	3	0	


TABLE CONTINUED  
→

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UPPER 4 BIT LOWER	LLLL	LLLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
HLLL			0	1	2	3	4	5	6	7	8	9	A	B	C	D
HLLH			E	F	G	H	I	J	K	L	M	N	O	P	Q	R
HLHL			S	T	U	V	W	X	Y	Z	[	]	{	}	~	^
HLHH			+	=	<	>	?	@	#	\$	%	&	*	(	)	~
HHLL			~	^	^	^	^	^	^	^	^	^	^	^	^	^
HHLH			^	^	^	^	^	^	^	^	^	^	^	^	^	^
HHHL			^	^	^	^	^	^	^	^	^	^	^	^	^	^
HHHH			^	^	^	^	^	^	^	^	^	^	^	^	^	^

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

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