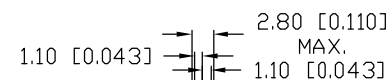
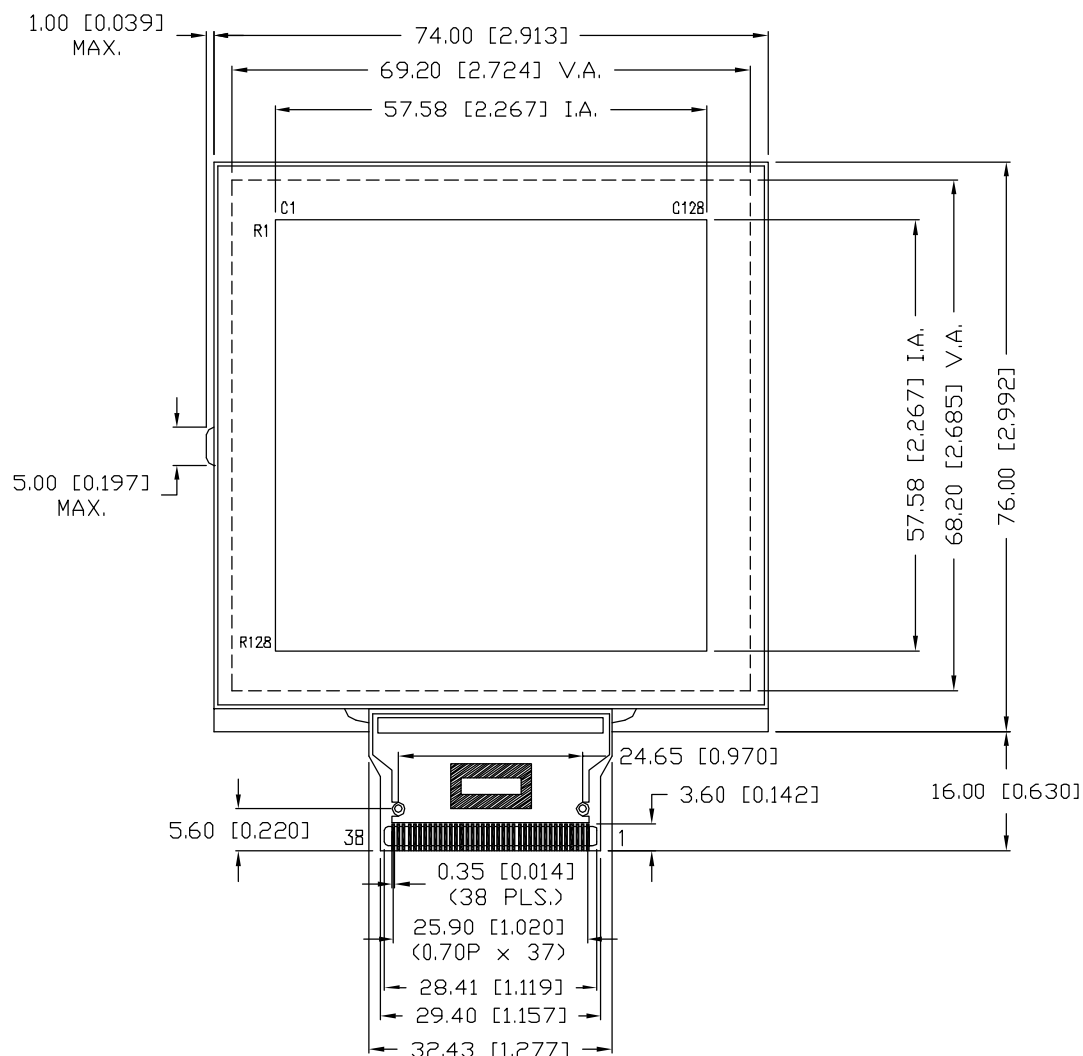


UNCONTROLLED DOCUMENT

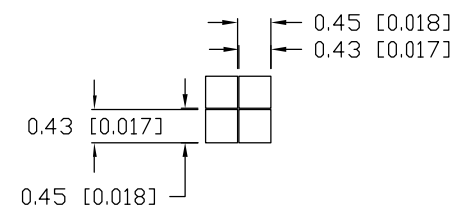
PART NUMBER

LCM-S128128TBWR

REV.



PIXEL DETAIL



EPOXY
EPOXY
REINFORCEMENT TAPE
IC (S6B0741)

*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 -0.00 MAX.= +0.00 -DECIMAL PRECISION

REV.

PART NUMBER

LCM-S128128TBWR

128 x 128 GRAPHIC LCD MODULE, TAB, FSTN, REFLECTIVE,
VLCD = 12.5V, 1/12 BIAS, SERIAL OR PARALLEL INTERFACE,
1/128 DUTY, 6:00 VIEW, 0°C TO +50°C OPERATING TEMP.

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RELIABILITY NOTE

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DATE: 8.6.03

PAGE: 1 OF 2

SCALE: N/A

PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION
1	NC	-	NO SIGNAL
2	PS0	H/L	PARALLEL/SERIAL DATA INPUT SELECT INPUT
3	PS1	H/L	MICROPROCESSOR INTERFACE SELECT INPUT PIN PS0=H, PS1=H: 6800-SERIES PARALLEL MPU INTERFACE PS0=H, PS1=L: 8080-SERIES PARALLEL MPU INTERFACE PS0=L, PS1=H: 4-PIN-SPI MPU INTERFACE PS0=L, PS1=L: 3-PIN-SPI MPU INTERFACE
4	CSB	H/L	CHIP SELECT INPUT (DATA/INSTRUCTION I/O IS ENABLED WHEN CSB IS L)
5	RESETB	H/L	RESET INPUT PIN (WHEN RESETB IS L, INITIALIZATION IS EXECUTED)
6	RS	H/L	REGISTER SELECT INPUT PINS RS=H:D0-7 ARE DISPLAY DATA; RS=L, D0-7 ARE CONTROL DATA
7	RW-WR	H/L	READ/WRITE EXECUTION CONTROL PIN
8	E-RD	H/L	READ/WRITE EXECUTION CONTROL PIN
9	DB0	H/L	DATA BIT 0
10	DB1	H/L	DATA BIT 1
11	DB2	H/L	DATA BIT 2
12	DB3	H/L	DATA BIT 3
13	DB4	H/L	DATA BIT 4
14	DB5	H/L	DATA BIT 5
15	DB6	H/L	DATA BIT 6
16	DB7	H/L	DATA BIT 7
17	VDD	H/L	POWER SUPPLY
18	VCI	OV	VOLTAGE CONVERTOR INPUT VOLTAGE PIN
19	VSS	-	GROUND
20	VOUT	-	VOLTAGE CONVERTOR INPUT/OUTPUT PIN
21	C5+	-	CAPACITOR 5 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
22	C3+	-	CAPACITOR 3 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
23	C1-	-	CAPACITOR 1 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
24	C1+	-	CAPACITOR 1 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
25	C2+	-	CAPACITOR 2 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
26	C2-	-	CAPACITOR 2 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
27	C4+	-	CAPACITOR 4 POSITIVE CONNECTION PIN FOR VOLTAGE CONVERTOR
28	REF	H/L	SELECTS THE EXTERNAL VREF VOLTAGE VIA THE VEXT PIN REF=H: USING THE INTERNAL VREF, REF=L: USING THE EXTERNAL VREF
29	VEXT	H/L	EXTERNALLY INPUT REFERENCE VOLTAGE FOR THE INTERNAL VOLTAGE REGULATOR, IT IS VALID ONLY WHEN REF IS L, WHEN USING INTERNAL VOLTAGE REGULATOR, CONNECT TO VDD, VSS OR OPEN THIS PIN
30	INTRS	H/L	INTERNAL RESISTOR SELECT PIN
31	V4	-	BIAS VOLTAGE
32	V3	-	BIAS VOLTAGE
33	V2	-	BIAS VOLTAGE
34	V1	-	BIAS VOLTAGE
35	V0	-	T.B.A
36	VR	-	V0 VOLTAGE ADJUSTMENT PIN
37	OSC1	-	WHEN USING INTERNAL CLOCK OSCILLATOR, CONNECT A RESISTOR BETWEEN OSC1 AND VDD
38	NC	-	NO SIGNAL

ELECTRICAL CHARACTERISTICS

VDD=3.0 ± 0.25V Ta=25°C

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE (LOGIC)	V _{DD}	V _{DD} -V _{SS}	2.85	3.0	3.15	V
SUPPLY VOLTAGE (LCD DRIVE)	V _O	-	4.0	-	15.0	V
INPUT VOLTAGE	HIGH	V _{IH}	V _{DD} =3.0V	0.8*V _{DD}	-	V _{DD}
	LOW	V _{IL}	V _{DD} =3.0V	V _{SS}	-	0.2*V _{DD}
SUPPLY CURRENT	I _{DD}	V _{DD} -V _{SS}	-	-	300	uA

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE RANGE	V _{DD} -V _{SS}	Ta=25°C	-0.3	7.0	V
LCD DRIVING VOLTAGE	V _O	Ta=25°C	-	17.0	V
OPERATING TEMPERATURE	T _{opr}	-	0	50	°C
STORAGE TEMPERATURE	T _{stg}	-	-20	70	°C

NOTES:

- FOR TIMING DIAGRAM AND INTERFACE OPTIONS, PLEASE REFER TO S6B0741 FOR DETAILS.

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