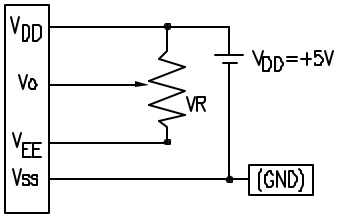
UNCONTROLLED DOCUMENT

SC:1.5	PART NUMBER	REV.
	LCM-S24064GSR	

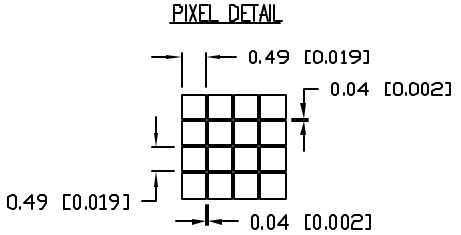
PRELIMINARY IN P/N DIR

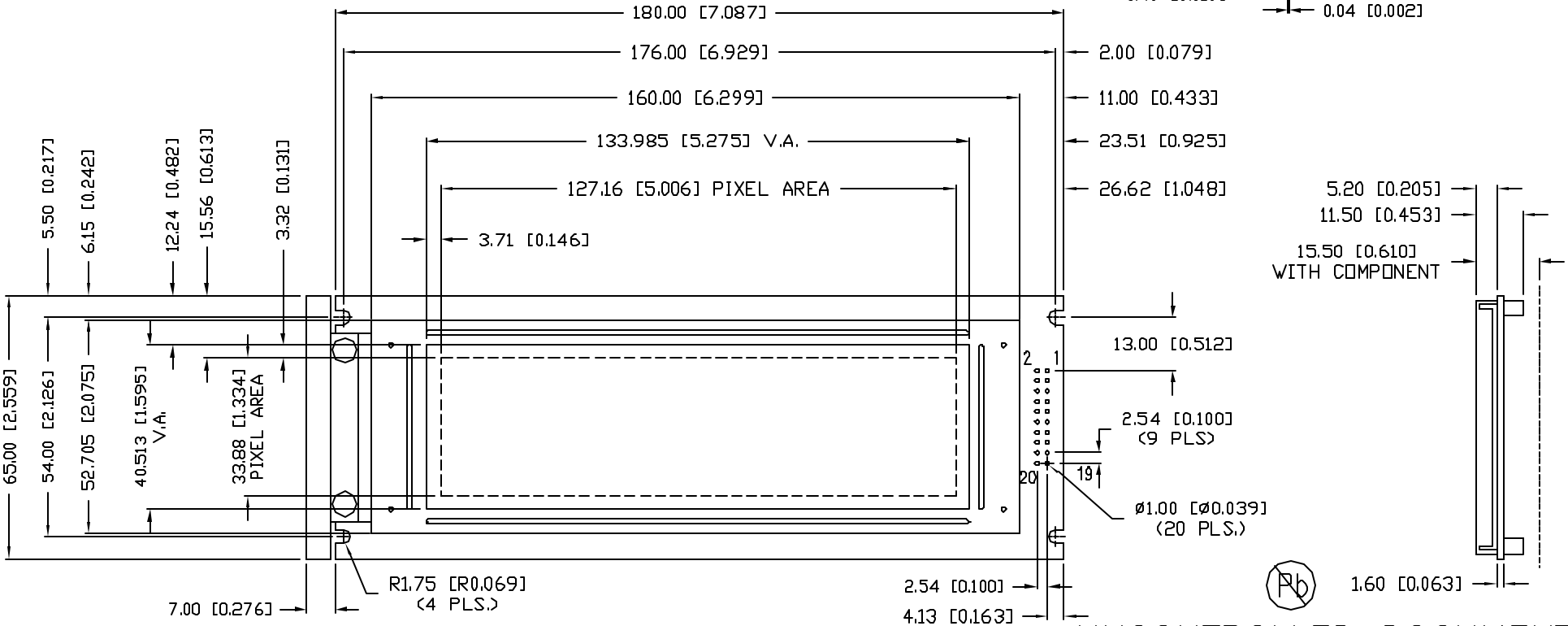
CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.

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



PIXEL DETAIL





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*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	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
	LCM-S24064GSR	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.		
240 x 64 DOT MATRIX GRAPHIC MODULE, 1/64 DUTY, WITH NEGATIVE CHARGE PUMP, STN, REFLECTIVE.		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: 06.20.08 / PAGE: 1 OF 2 / SCALE: N/A

ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY VOLTAGE FOR LOGIC	VDD	Ta=25°C	4.5	5.0	5.5	V
POWER SUPPLY CURRENT FOR LOGIC	IDD	VDD-VSS=5V	-	16.0	25.0	mA
INPUT VOLTAGE	VIH	HIGH LEVEL	2.2	-	VDD	V
INPUT VOLTAGE	VIL	LOW LEVEL	-	-	0.6	V
OUTPUT VOLTAGE	VOH	HIGH LEVEL	2.4	-	-	V
OUTPUT VOLTAGE	VOL	LOW LEVEL	-	-	0.4	V
POWER SUPPLY VOLTAGE FOR LCD DRIVE (0°C TO 50°C)	VDD-Vo	VDD=5V Ta=25°C	12.2	13.6	14.5	V
POWER SUPPLY VOLTAGE FOR LCD DRIVE (-20°C TO +70°C)	VDD-Vo	VDD=5V Ta=25°C	12.6	14.1	14.9	V

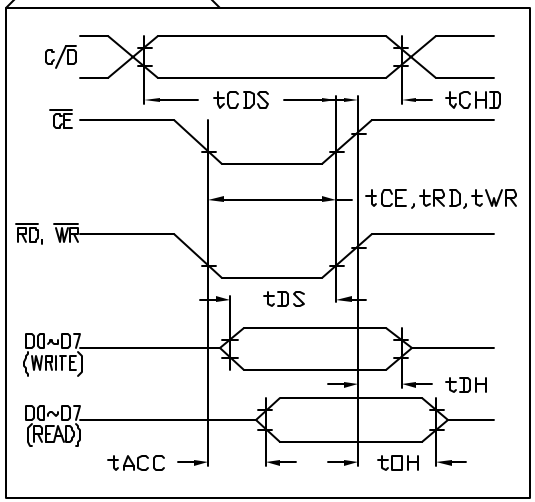
ELECTRIC MAXIMUM RATING

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
POWER SUPPLY FOR LCD DRIVE	VDD-Vo	0	-	22.0	V
POWER SUPPLY FOR LOGIC	VDD-VSS	0	-	7.0	V
INPUT VOLTAGE	VI	VSS	-	VDD	V

TIMING CHARACTERISTICS

PARAMETER	SYMBOL	MIN	MAX	UNIT
C/$\overline{D}$ SETUP TIME	tCDS	100	-	ns
C/$\overline{D}$ HOLD TIME	tCDH	10	-	ns
$\overline{CE}$, $\overline{RD}$, $\overline{WR}$ PULSE WIDTH	tCE, tRD, tWR	80	-	ns
DATA SETUP TIME	tDS	80	-	ns
DATA HOLD TIME	tDH	40	-	ns
ACCESS TIME	tACC	-	150	ns
OUTPUT HOLD TIME	tOH	10	50	ns

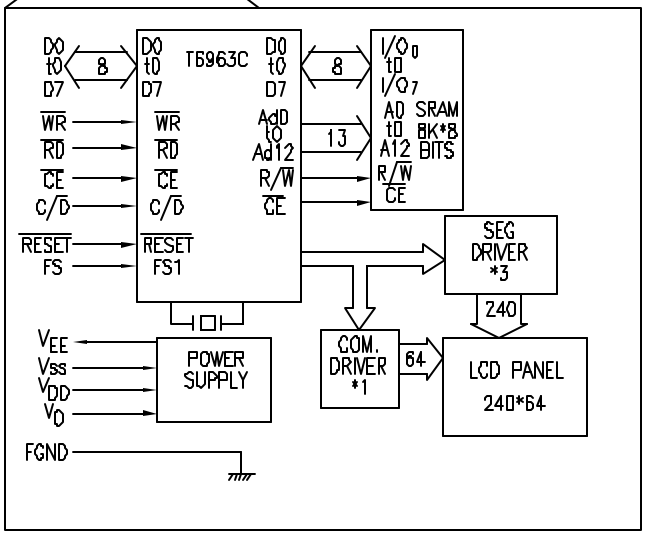
BUS TIMING



PIN CONFIGURATION

PIN #	SYMBOL	LEVEL	FUNCTION
1	FGND	-	FRAME GROUND (CONNECTED TO METAL BEZEL)
2	GND	0V	SIGNAL GROUND
3	VDD	+5V	POWER SUPPLY
4	Vo	-	CONTRAST ADJUSTMENT VOLTAGE
5	$\overline{WR}$	L	DATA WRITE
6	$\overline{RD}$	L	DATA READ
7	$\overline{CE}$	L	CHIP ENABLE
8	C/$\overline{D}$	H/L	$\overline{WR}$="L", C/$\overline{D}$="H": COMMAND WRITE C/$\overline{D}$="L": DATA WRITE $\overline{RD}$="L", C/$\overline{D}$="H": COMMAND READ C/$\overline{D}$="L": DATA READ
9	VEE	-15V	OUTPUT VOTAGE FOR LCD DRIVING
10	$\overline{RESET}$	L	CONTROL RESET (MODULE RESET)
11~18	D0~D7	H/L	DATA BUS
19	FS	H/L	FONT SELECT "H": 6 x 8 PIXEL/FONT "L": 8 x 8 PIXEL/FONT
20	N/C	-	NO CONNECTION

BLOCK DIAGRAM



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