

UNCONTROLLED DOCUMENT

PART NUMBER
LCM-H24064GSF/B-Y

REV.

A

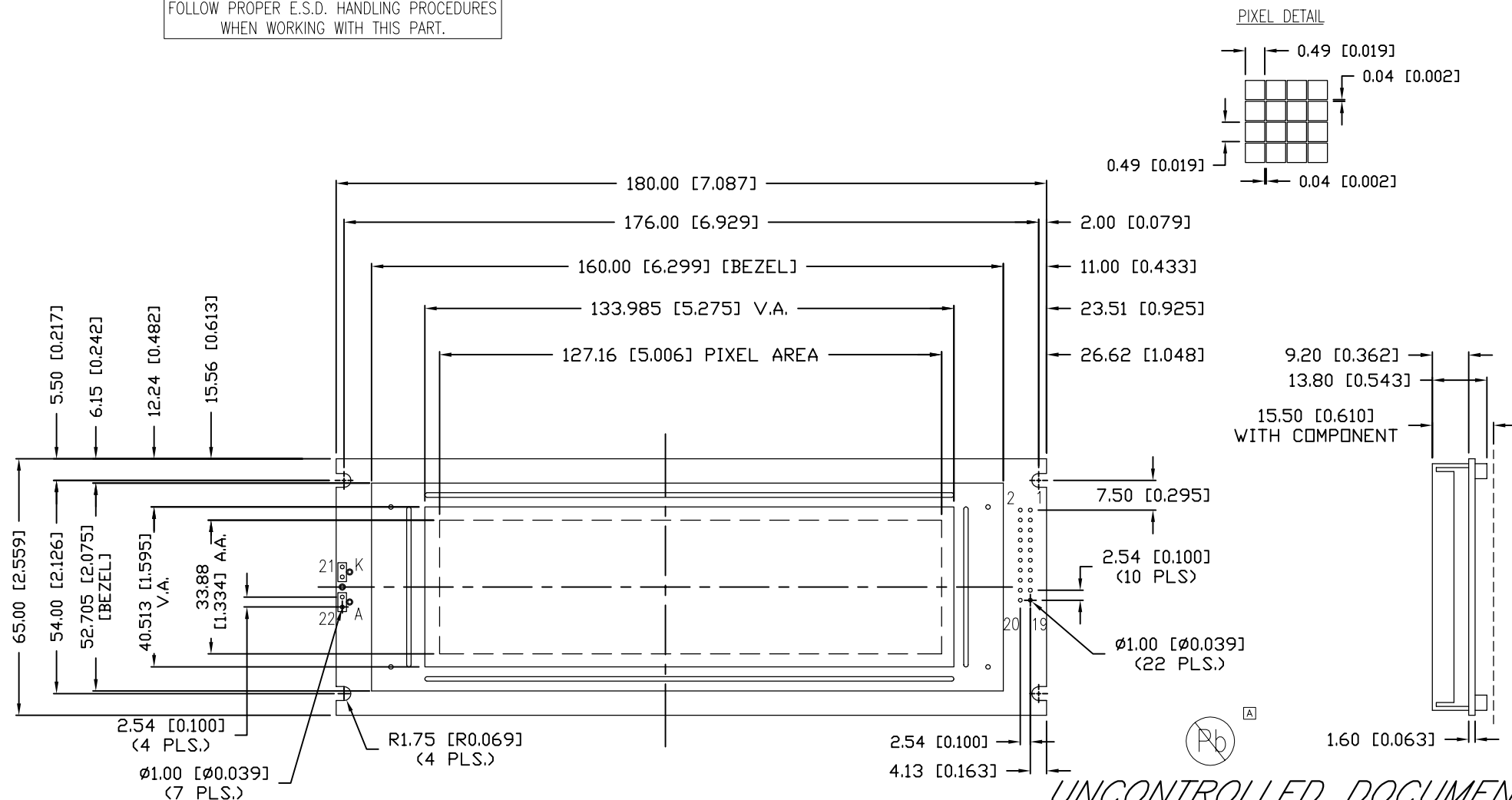
REV. E.C.N. NUMBER AND REVISION COMMENTS

DATE

A E.C.N. #11148.

4.20.07

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



*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

UNCONTROLLED DOCUMENT

REV.

PART NUMBER

A

LCM-H24064GSF/B-Y

240 x 64 DOT MATRIX GRAPHIC LCD MODULE, STN YELLOW,
TRANSFLECTIVE, -20°C TO +70°C OP. TEMP.,
1/64 DUTY, 1/9 BIAS, LED BACKLIGHT.

CONFIDENTIAL INFORMATION

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.

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.

LUMEX
Creating LED and LCD Solutions Together™

290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw

DRAWN BY:

JC

CHECKED BY:

JD

APPROVED BY:

JD

DATE: 2.2.04

PAGE: 1 OF 2

SCALE: N/A

ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
POWER SUPPLY VOLTAGE FOR LOGIC	VDD	T _a =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	V _{IH}	HIGH LEVEL	2.2	—	VDD	V
INPUT VOLTAGE	V _{IL}	LOW LEVEL	—	—	0.6	V
OUTPUT VOLTAGE	V _{OH}	HIGH LEVEL	2.4	—	—	V
OUTPUT VOLTAGE	V _{OL}	LOW LEVEL	—	—	0.4	V
POWER SUPPLY VOLTAGE FOR LCD DRIVE (0°C TO 50°C)	VDD-V _o	VDD=5V T _a =25°C	12.2	13.6	14.5	V
POWER SUPPLY VOLTAGE FOR LCD DRIVE (-20°C TO +70°C)	VDD-V _o	VDD=5V T _a =25°C	12.6	14.1	14.9	V
LED BACKLIGHT VOLTAGE	V _f	I _f = 690	—	4.2	4.6	V
LED BACKLIGHT INTENSITY	I _v	I _f = 690	120	180	—	cd/m ²
LED POWER DISSIPATION	PAD	I _f = 690	—	—	5	W

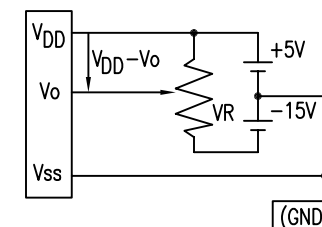
ELECTRIC MAXIMUM RATING

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
POWER SUPPLY FOR LCD DRIVE	VDD-V _o	0	—	20.0	V
POWER SUPPLY FOR LOGIC	VDD-VSS	0	—	7.0	V
INPUT VOLTAGE	V _I	VSS	—	VDD	V

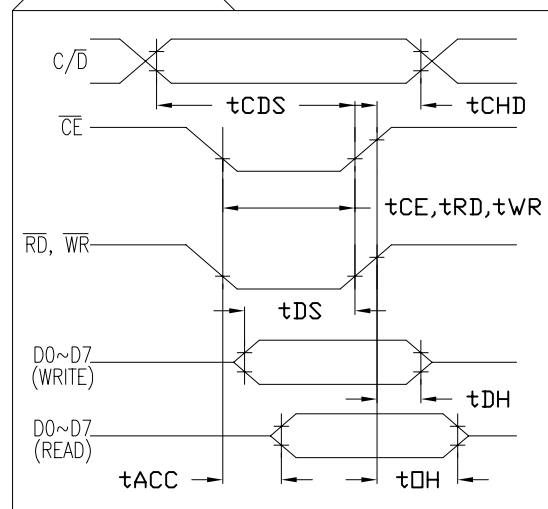
TIMING CHARACTERISTICS

PARAMETER	SYMBOL	MIN	MAX	UNIT
C/D SETUP TIME	t _{CDS}	100	—	ns
C/D HOLD TIME	t _{CDH}	10	—	ns
CE, RD, WR PULSE WIDTH	t _{CE} , t _{RD} , t _{WR}	80	—	ns
DATA SETUP TIME	t _{DS}	80	—	ns
DATA HOLD TIME	t _{DH}	40	—	ns
ACCESS TIME	t _{ACC}	—	150	ns
OUTPUT HOLD TIME	t _{OH}	10	50	ns

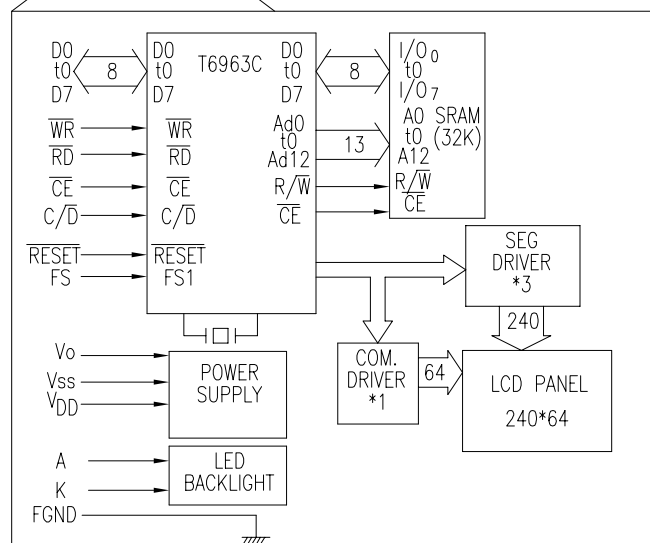
VDD-V_o: LCD DRIVING VOLTAGE
VR: 10KΩ-20KΩ



BUS TIMING



BLOCK DIAGRAM



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	V _o	—	POWER SUPPLY FOR LCD DRIVE.
5	WR	L	DATA WRITE
6	RD	L	DATA READ
7	CE	L	CHIP ENABLE
8	C/D	H/L	WR="L", C/D="H": COMMAND WRITE C/D="L": DATA WRITE RD="L", C/D="H": COMMAND READ C/D="L": DATA READ
9	N/C	—	NO CONNECTION
10	RESET	L	CONTROL RESET (MODULE RESET)
11~18	DO~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
21	K	—	LED BACKLIGHT CATHODE
22	A	—	LED BACKLIGHT ANODE, 4.2V

CONFIDENTIAL INFORMATION

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.

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.



290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw