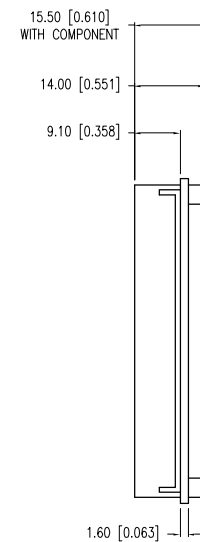CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.
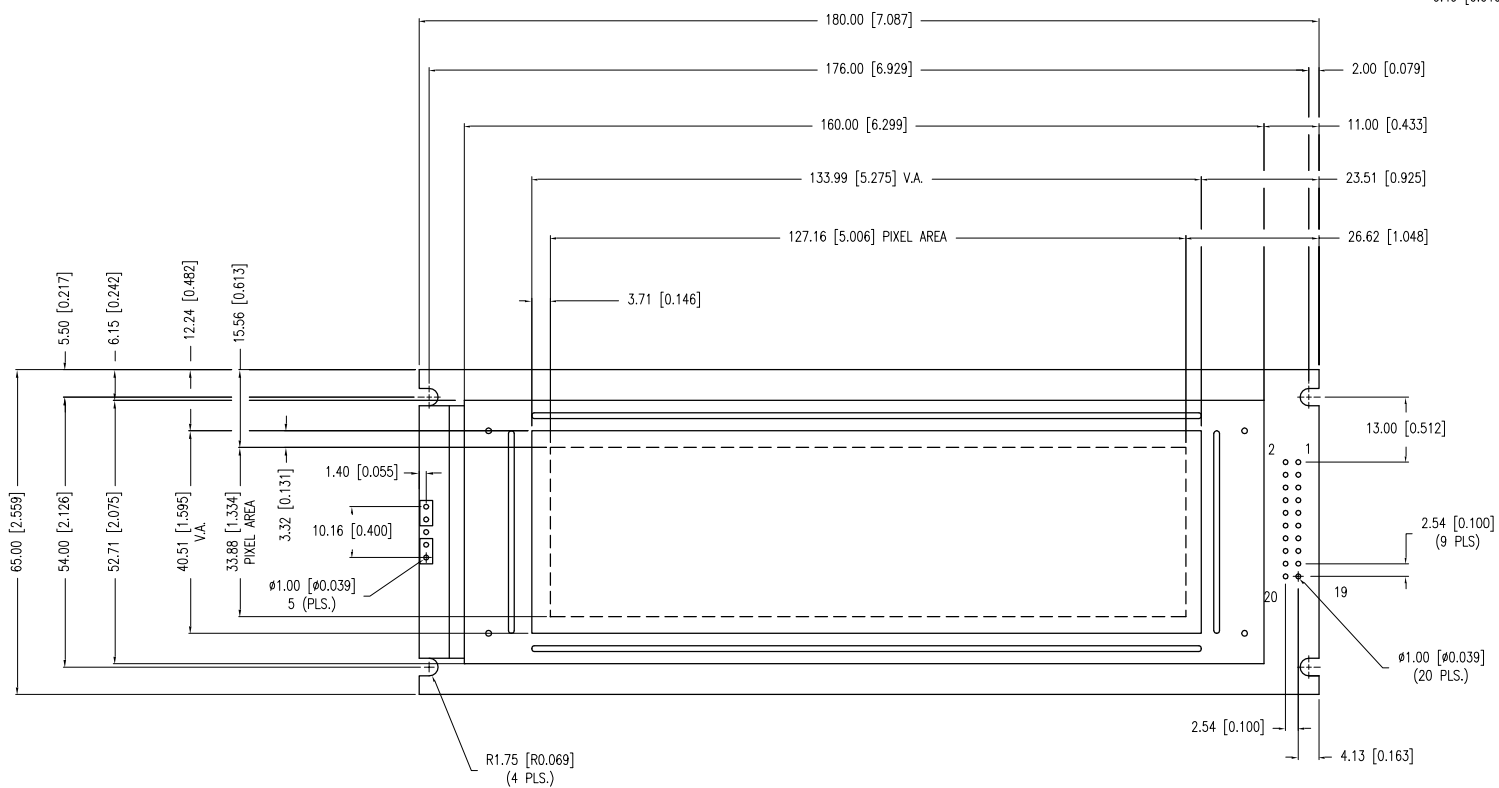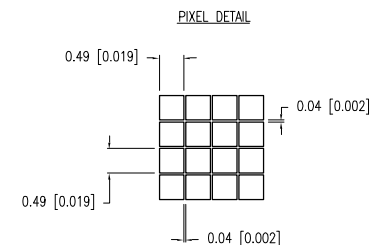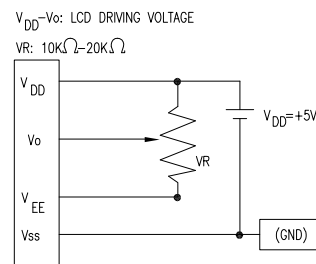
V_{DD}—Vo: LCD DRIVING VOLTAGE

VR: 10KΩ—20KΩ

V_{DD}
Vo
V_{EE}
Vss

V_{DD}=+5V

VR

(GND)

PIXEL DETAIL

0.49 [0.019]
0.04 [0.002]
0.49 [0.019]
0.04 [0.002]

180.00 [7.087]
176.00 [6.929]
160.00 [6.299]
133.99 [5.275] V.A.
127.16 [5.006] PIXEL AREA
3.71 [0.146]

2.00 [0.079]
11.00 [0.433]
23.51 [0.925]
26.62 [1.048]

15.50 [0.610]
WITH COMPONENT

14.00 [0.551]
9.10 [0.358]

5.50 [0.217]
6.15 [0.242]
12.24 [0.482]
15.56 [0.613]

65.00 [2.559]
54.00 [2.126]
52.71 [2.075]
40.51 [1.595] V.A.
33.88 [1.334] PIXEL AREA

1.40 [0.055]
3.32 [0.131]
10.16 [0.400]

ø1.00 [ø0.039]
5 (PLS.)

2
1

13.00 [0.512]

2.54 [0.100]
(9 PLS)

20
19

ø1.00 [ø0.039]
(20 PLS.)

2.54 [0.100]
4.13 [0.163]

R1.75 [R0.069]
(4 PLS.)

1.60 [0.063]

LUMEX®
Creating LED and LCD Solutions Together™

290 E. HELEN ROAD
PALATINE, IL 60067—6976
PHONE: +1.847.359.2790
FAX: +1.847.359.6538
WEB: WWW.LUMEX.COM

240 x 64 DOT MATRIX GRAPHIC MOD., 1/64 DUTY, W/ NEGATIVE CHARGE PUMP, STN, TRANSFLECTIVE, LED BKLT.

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.

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.

DATE:	06.01.10	DRAWN BY:	JH
PAGE:	1 OF 2	CHKD BY:	BC
SCALE:	N/A	APRVD BY:	KF
UNIT:	mm [INCH]		

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
LED BACKLIGHT VOLTAGE	Vf	If= 690	–	4.2	4.6	V
LED BACKLIGHT INTENSITY	Iv	If= 690	120	180	–	cd/m^2
LED POWER DISSIPATION	PAD	If= 990	–	–	5	W

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	t_{CDS}	100	–	ns
C/$\overline{D}$ HOLD TIME	t_{CDH}	10	–	ns
$\overline{CE}$, $\overline{RD}$, $\overline{WR}$ 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

BUS TIMING
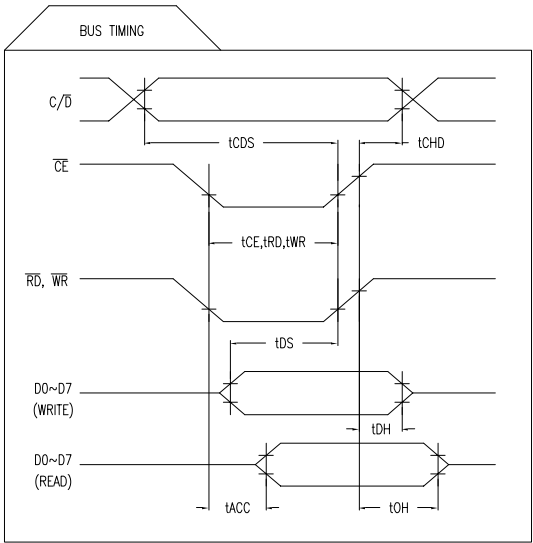
PIN CONFIGURATION

PIN #	SYMBOL	LEVEL	FUNCTION
1	FGND	–	FRAME GROUND (CONNECTED TO METAL BEZEL)
2	GND	0V	SIGNAL GROUND
3	V$_{DD}$	+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	V$_{EE}$	-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

*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.= $^{+0.00}_{-DECIMAL\ PRECISION}$

240 x 64 DOT MATRIX GRAPHIC MOD., 1/64 DUTY, W/ NEGATIVE CHARGE PUMP, STN, TRANSFLECTIVE, LED BKLT.

DATE:	06.01.10	DRAWN BY:	JH
PAGE:	2 OF 2	CHKD BY:	BC
SCALE:	N/A	APRVD BY:	KF
UNIT:	mm [INCH]		

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Lumex](#):
  [LCM-H24064GSF](#)