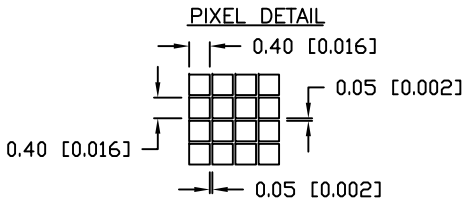
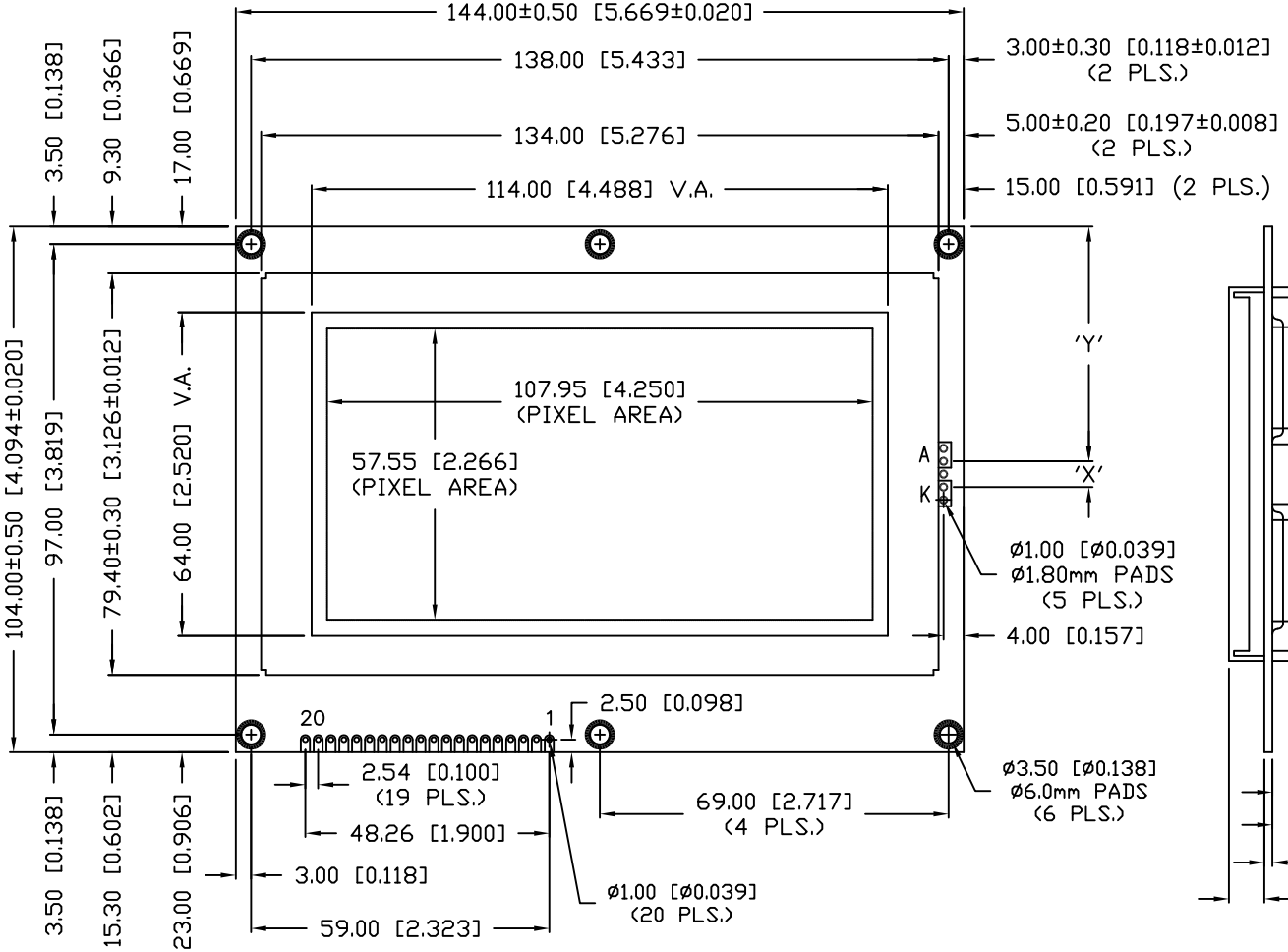
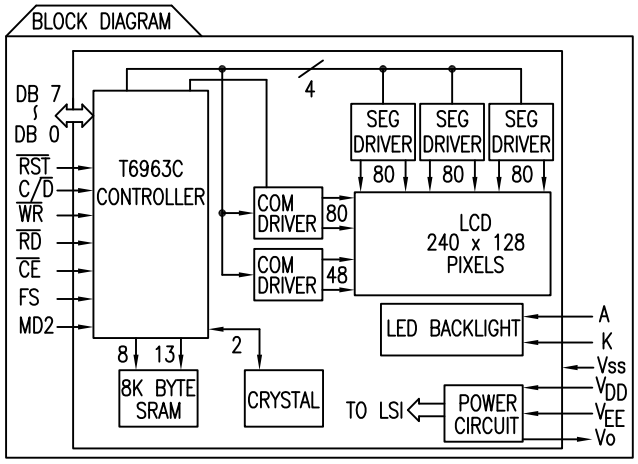
UNCONTROLLED DOCUMENT

PART NUMBER	REV.
LCM–H240128GSN–1W	A

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	4.20.07







TYPE DIM.	A	B*	B**	X	Y
REFLECTIVE OR EL	5.2	3.5	8.4	15.24	41.38
LED	10	3.5	8.4	5.08	46.46
CCFL	10	3.5	8.4	–	–

B*: WITHOUT NV+TC.
B**: WITH NV+TC.
NV–NEGATIVE VOLTAGE SUPPLY
TC–TEMPERATURE COMPENSATION

[A]

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

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REV.	PART NUMBER
A	LCM–H240128GSN–1W

240 x 128 DOT MATRIX GRAPHIC MODULE, STN BLUE, NEGATIVE IMAGE, TRANMISIVE, WHITE LED BACKLIGHT, HIGH OPERATING TEMP, 1/128 DUTY, 12:00 VIEW.

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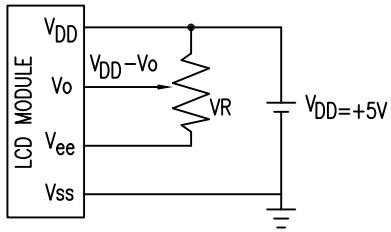
PART NUMBER	REV.
LCM-H240128GSN-1W	A

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	SEE PAGE #1	

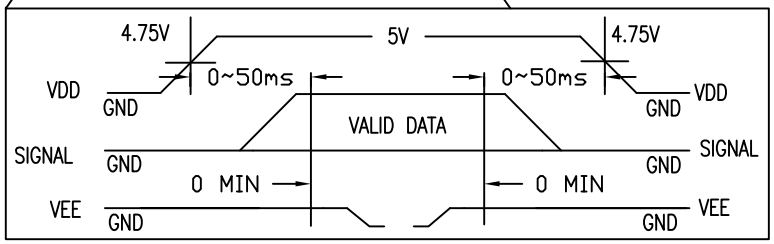
ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	MAX.	UNIT
POWER SUPPLY FOR LOGIC	V_{DD}-Vss	0	6.5	V
POWER SUPPLY FOR LCD DRIVING	V_{DD}-V_{EE}	0	22.0	V
INPUT VOLTAGE	V_I	Vss	V_{DD}	V
STATIC ELECTRICITY			100	V

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



TIMING OF POWER SUPPLY AND INTERFACE SIGNAL



PIN CONFIGURATION

PIN #	SYMBOL	LEVEL	FUNCTION
1	Vss	–	GROUND (0V)
2	V_{DD}	–	POWER SUPPLY FOR LOGIC CIRCUIT
3	Vo	–	OPERATING VOLTAGE FOR LCD DRIVING
4	C/$\overline{D}$	H/L	$\overline{WR}$="L", C/$\overline{D}$="H": COMMAND WRITE, "L": DATA WRITE $\overline{RD}$="L", C/$\overline{D}$="H": STATUS READ, "L": DATA READ
5	$\overline{RD}$	L	DATA READ
6	$\overline{WR}$	L	DATA WRITE
7~14	DB0~DB7	H/L	DATA BUS LINE
15	$\overline{CE}$	L	CHIP ENABLE
16	$\overline{RST}$	L	RESET
17	Vee	–	POWER SUPPLY FOR LCD DRIVING
18	MD2	H/L	COLUMNS SELECT: "H": 32 COLUMNS, "L": 40 COLUMNS
19	FS	H/L	FONT SELECT: "H": 6*8 PIXEL/FONT, "L": 8*8 PIXEL/FONT
20	N.C.	–	
	A	–	POWER SUPPLY FOR LED BACKLIGHT (ANODE)
	K	–	POWER SUPPLY FOR LED BACKLIGHT (CATHODE)

OPTO-ELECTRICAL CHARACTERISTICS

ITEM			SYMBOL	STANDARD VALUE MIN.	TYP.	MAX.	UNIT
POWER SUPPLY VOLTAGE FOR LOGIC			V_{DD}-Vss	+4.75	+5.0	+5.25	V
NEGATIVE POWER SUPPLY VOLTAGE FOR LCD DRIVE			V_{EE}-Vss	-15.5	-16.0	-16.5	V
INPUT VOLTAGE: NOTE (1)		H LEVEL	V_{IH}	2.2	–	–	V
		L LEVEL	V_{IL}	0	–	0.8	V
OUTPUT VOLTAGE: NOTE (2)		H LEVEL	V_{OH}	2.4	–	V_{DD}	V
		L LEVEL	V_{OL}	0	–	0.4	V
POWER SUPPLY CURRENT FOR LOGIC: NOTE (4)			I_{DD}	–	12.0	–	mA
POWER SUPPLY CURRENT FOR LCD DRIVE: NOTE (4)			I_{EE}	–	5.0	–	mA
RECOMMENDED LCD DRIVING VOLTAGE: (NOTE 3)		Ta=0°C	V_{DD}-Vo	–	+19.4	–	V
		Ta=25°C	Φ=10°C	–	+18.5	–	V
		Ta=50°C	Φ=0°C	–	+16.2	–	V
CLOCK OSCILLATION FREQUENCY			fosc	–	5	–	MHZ
L15 *LED BACKLIGHT	VOLTAGE	If=160mA	Vf	–	3.4	3.6	V
	CURRENT	–	If	–	160	–	mA
	POWER CUNSUMPTION	–	PD	–	720	–	mW
	BACKLIGHT SURFACE	If=160mA	L	160	200	–	cd/m²
	COLOR (X=0.31,Y=0.32)	–	–	–	550	–	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT
NOTE (1): APPLIED TO TERMINALS: FS, CE, $\overline{WR}$, $\overline{RD}$, C/$\overline{D}$, DB0~DB7, $\overline{RES}$, MD2.
NOTE (2): APPLIED TO TERMINALS: DB0~DB7.
NOTE (3): RECOMMENDED LCD DRIVING VOLTAGE MAY FLUCTUATE ABOUT ±1.0V BY EACH MODULE.
NOTE (4): V_{DD}-Vss=5.0V, V_{DD}-V0=20.6V.

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