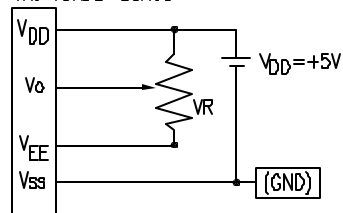


CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.

$V_{DD}-V_o$: LCD DRIVING VOLTAGE

V_R : 10K Ω - 20K Ω

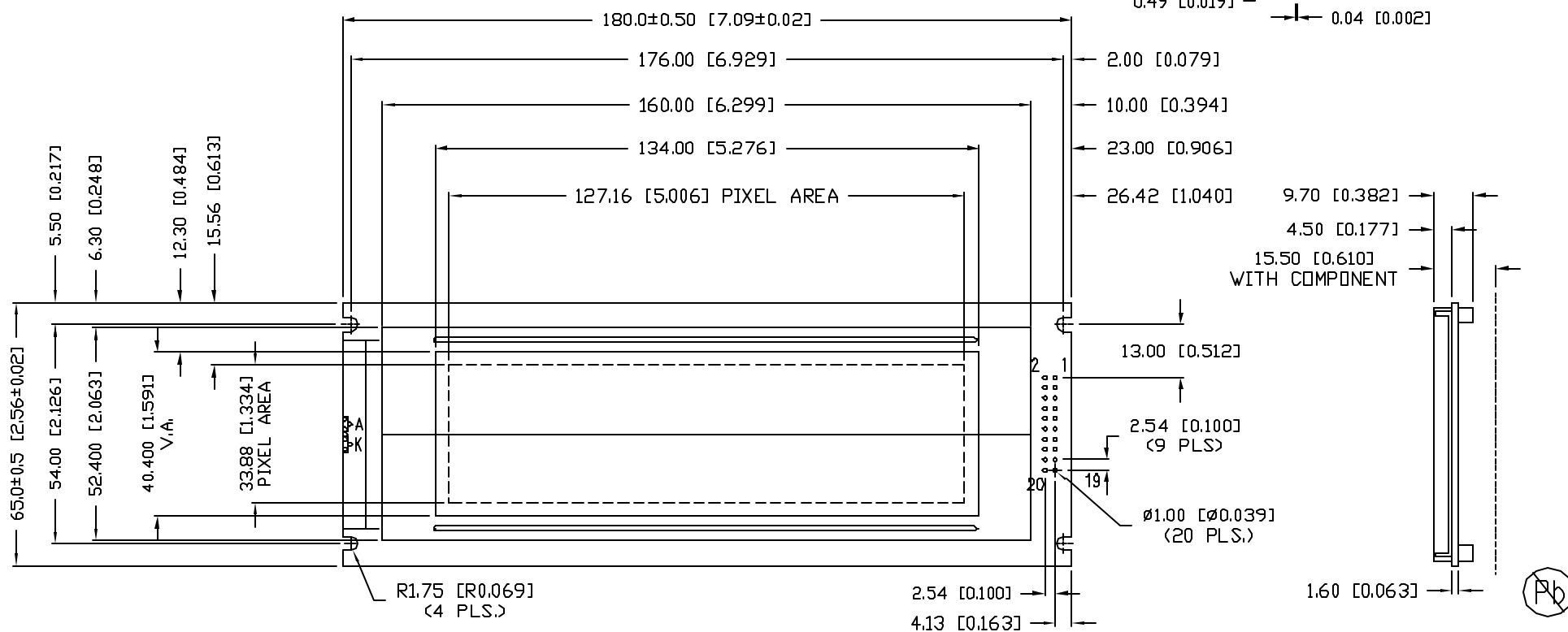
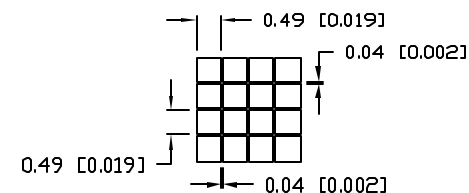


PART NUMBER

LCM-U24064GSF-N

REV.

PIXEL DETAIL



*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±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-U24064GSF-N

240 x 64 DOT MATRIX GRAPHIC MODULE, 1/64 DUTY, STN,
TRANSFLECTIVE, NEGATIVE CHARGE PUMP, ULTRA WIDE
OPERATING TEMPERATURE, GREEN EL BACKLIGHT.

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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.



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PAGE: 1 OF 2

SCALE: N/A

JIN

ELECTRIC MAXIMUM RATING

ITEM	SYMBOL	MIN	MAX	UNIT
POWER SUPPLY FOR LCD DRIVE	VDD-V ₀	0	24	V
POWER SUPPLY FOR LOGIC	VDD-VSS	-0.3	5.5	V
INPUT VOLTAGE	V _I	-0.3	VDD	V
OPERATING TEMP.	T _{op}	-30	+80	°C
STORAGE TEMP.	T _{st}	-35	+85	°C
POWER SUPPLY FOR EL BACKLIGHT	V _{el}	-	150	Vrms
	F _{el}	-	1.0	KHz

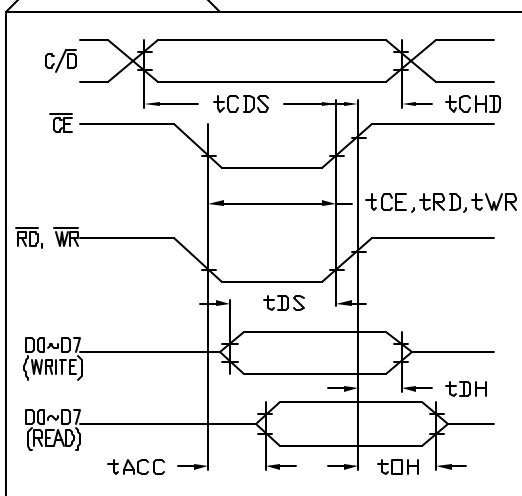
TIMING CHARACTERISTICS

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

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
	V _{IL}	LOW LEVEL	-	-	0.6	V
POWER SUPPLY VOLTAGE FOR LCD DRIVE	VDD-V ₀	VDD=5V T _a =25°C	10.8	12.2	13.1	V
EL BACKLIGHT VOLTAGE	V _{el}	F _{el} = 400Hz	-	4.2	4.6	Vrms
EL BACKLIGHT CURRENT	I _{el}	V _{el} = 100V	-	3.7	-	mA _{rms}

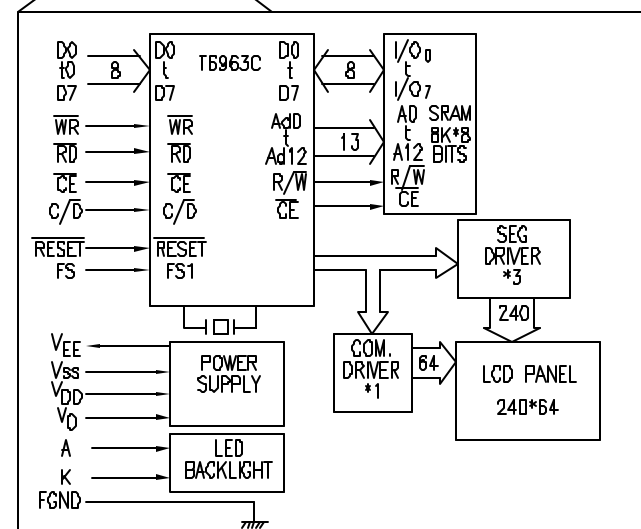
BUS TIMING



PIN CONFIGURATION

PIN #	SYMBOL	LEVEL	FUNCTION
1	FGND	-	FRAME GROUND (CONNECTED TO METAL BEZEL)
2	VSS	0V	POWER SUPPLY GROUND
3	VDD	+5V	POWER SUPPLY
4	V ₀	-	CONTRAST ADJUSTMENT VOLTAGE
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	VEE	-15V	OUTPUT VOLTAGE FOR LCD DRIVING
10	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



UNCONTROLLED DOCUMENT

REV.

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