

SG12864E (8 CHARACTERS X 4 LINES)

FEATURES

- BUILT-IN CONTROLLER (ST7920 OR EQUIVALENT)
- +5 V POWER SUPPLY
- 1/16 DUTY CYCLE
- 8-BIT PARALLEL INTERFACE

MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	93.0 x 70.0 x 8.8 (12.7 LED)	mm
Viewing Area (W x H)	72.0 x 40.0	mm
Active Area (W x H)	66.52 x 33.24	mm
Dot Size (W x H)	0.48 x 0.48	mm
Dot Pitch (W x H)	0.52 x 0.52	mm

INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	VSS	0V	Supply Ground
2	VDD	5V	Supply Voltage
3	Vo	-	Contrast Adj.
4	RS	H/L	Register Select
5	R/W	H/L	Read/Write
6	E	H→L	Enable Signal
7~14	DB0~DB7	H/L	Data Bus Line
15	A	4.2V	LED Power (+)
16	K	0V	LED Power (-)
17	/RES	L	Reset Signal
18	NC	-	
19	A	4.2V	LED Power (+)
20	K	0V	LED Power (-)

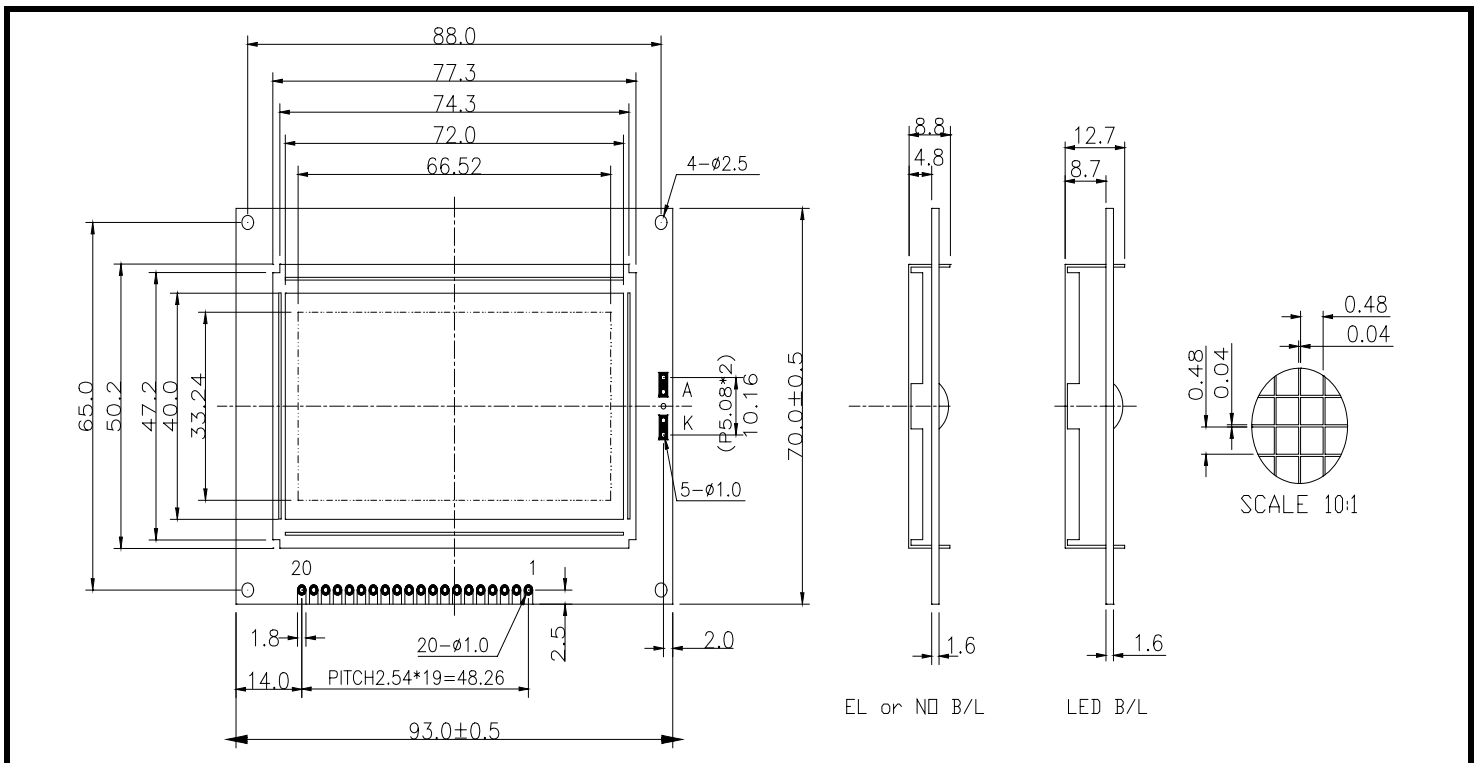
ABSOLUTE MAXIMUM RATINGS

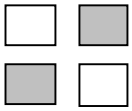
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	VDD-VSS	0	-	7	V
Supply Voltage For LCD Drive	VDD-Vo	0	-	12	V
Input Voltage	VI	VSS	-	VDD	V

ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	VDD-VSS	-	4.5	5	5.5	V
Supply Voltage For LCD	VDD-Vo	VDD=5V Ta=25	4.4	4.8	5.2	V
Supply Current	IDD	VDD=5V	-	2.5	4.5	mA
Input Voltage	"HIGH" Level	V _{IH}	-	2.2	-	V _{DD} V
	"LOW" Level	V _{IL}	-	-	-	0.6 V
Output Voltage	"HIGH" Level	V _{OH}	-	2.4	-	V
	"LOW" Level	V _{OL}	-	-	-	0.4 V

EXTERNAL DIMENSIONS





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TIMING CHARACTERISTICS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT.	FIG
E Cycle Time	t_{CYC}	1000	-	-	ns	1,2
E High Level Width	P_{WEH}	450	-	-	ns	1,2
E Low Level Width	P_{WEL}	450	-	-	ns	1,2
E Rise Time	t_r	-	-	25	ns	1,2
E Fall Time	t_f	-	-	25	ns	1,2
Address Setup Time	t_{AS}	140	-	-	ns	1,2
Address Hold Time	t_{AH}	10	-	-	ns	1,2
Data Setup Time	t_{DSW}	200	-	-	ns	1
Data Delay Time	t_{DDR}	-	-	320	ns	2
Data Hold Time	Write	t_{DHW}	10	-	ns	1
Data Hold Time	Read	t_{DHR}	20	-	ns	2

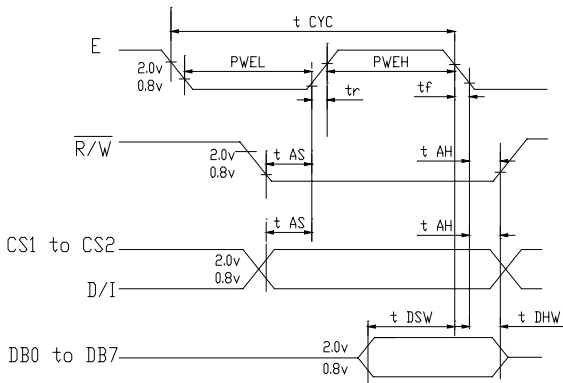


Fig1:CPU Write Timing

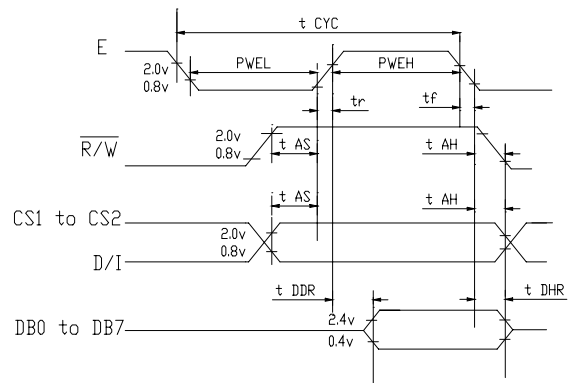


Fig2:CPU Read Timing

BLOCK DIAGRAM

