



SG12832B (128 DOTS X 32 DOTS)

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FEATURES

- ◆ BUILT-IN CONTROLLER (HT1670 OR EQUIVALENT)
- ◆ +5 V POWER SUPPLY
- ◆ 1/32 DUTY CYCLE
- ◆ 8-BIT PARALLEL INTERFACE
- ◆ 4.2 V LED FORWARD VOLTAGE

MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	73.0 x 37.0 x 10.8	mm
Viewing Area (W x H)	63.0 x 17.7	mm
Active Area (W x H)	58.84 x 14.68	mm
Dot Size (W x H)	0.42 x 0.42	mm
Dot Pitch (W x H)	0.46 x 0.46	mm

INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	Vss	0V	Power Supply Ground
2	VDD	5V	Power Supply Voltage
3	LIGHT	4.1V	LED Power Supply (+)
4	/CS	L	Chip Singal
5	/WR	L	Write Singal
6	/RD	L	Read Singal
7~10	DB0~DB3	H/L	Data Bus Line
11	/CLOCK	L	Time base or watchdog timer overflow flag
12	BZ+	-	2kHz Or 4 kHz Tone Frequency Output Pair .
13	BZ-	-	2kHz Or 4 kHz Tone Frequency Output Pair .

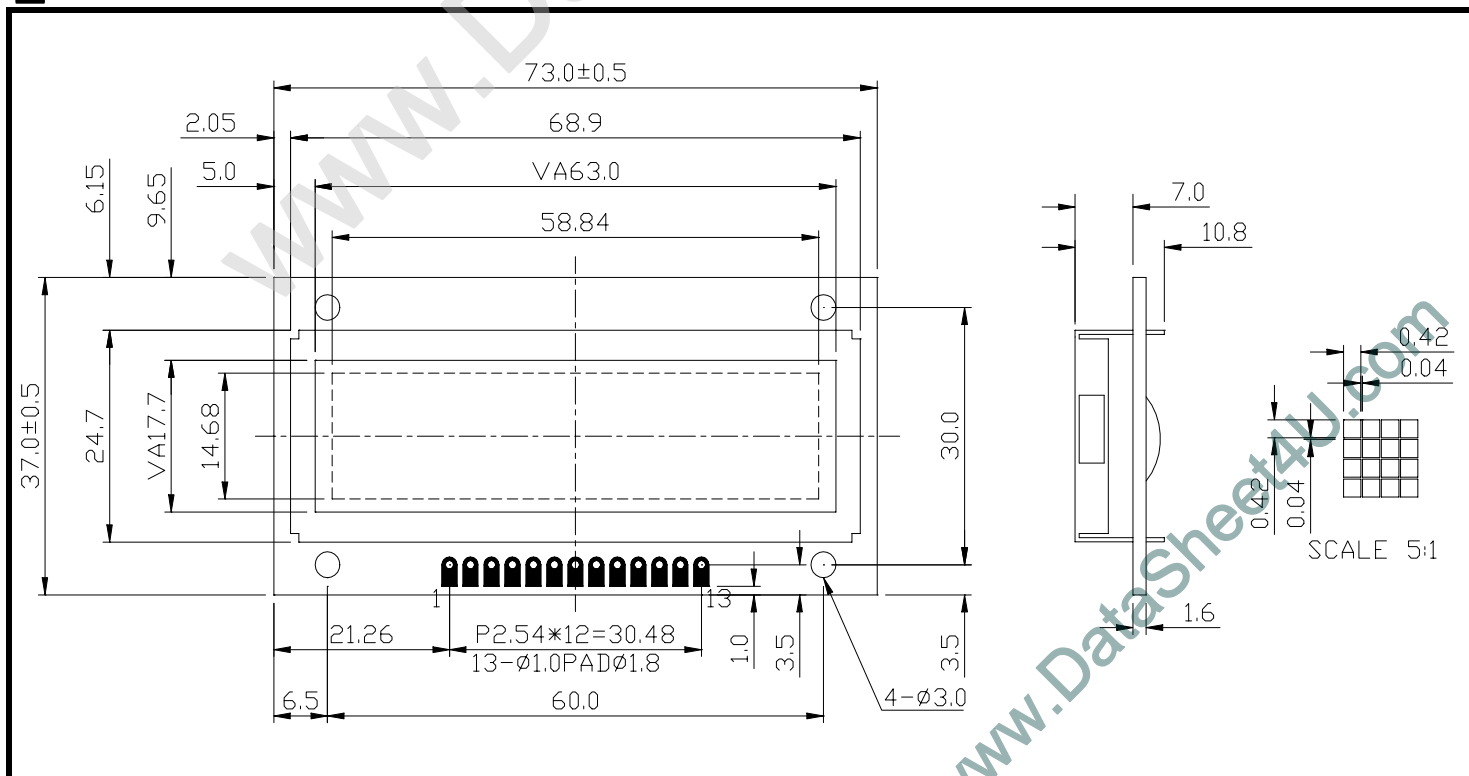
ABSOLUTE MAXIMUM RATINGS

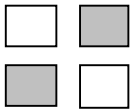
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	VDD-Vss	0	-	7	V
Supply Voltage For LCD Drive	VDD-Vo	0	-	12	V
Input Voltage	Vi	Vss	-	VDD	V

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°C	4.4	4.8	5.2	V
Supply Current		IDD	VDD=5V	-	3	4.5	mA
Input	"HIGH" Level	VIH	-	2.2	-	VDD	V
Voltage	"LOW" Level	VIL	-	-	-	0.6	V
Output	"HIGH" Level	VOH	-	2.4	-	-	V
Voltage	"LOW" Level	VOL	-	-	-	0.4	V

EXTERNAL DIMENSIONS

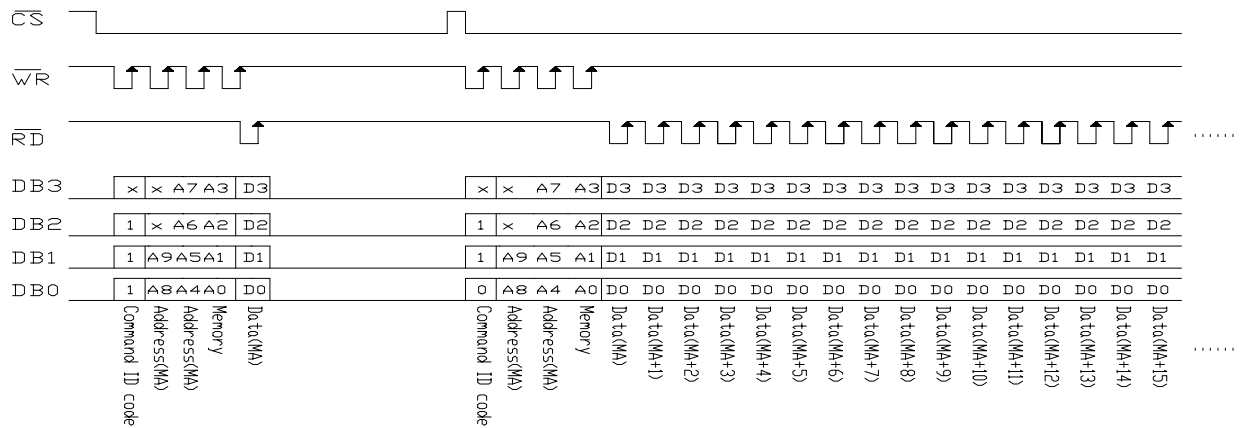




SG12832B (8 CHARACTERS X 2 LINES)

TIMING CHARACTERISTICS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT.
4-Bit Interface Reset Pulse Width	/CS	-	250	-	ns
/WR Input Pulse Width	Write	1.67	-	-	us
/RD Input Pulse Width	Read	3.34	-	-	us
Rise/Fall Time Serial Data Clock Width	t_R, t_F	-	120	-	ns
Setup Time for DATA to WR , RD Clock Width	t_{su}	-	120	-	ns
Hold Time for DATA to WR , RD Clock Width	t_h	-	120	-	ns
Setup Time for CS to WR , RD Clock Width	t_{su1}	-	100	-	ns
Hold Time for CS to WR , RD Clock Width	t_{h1}	-	100	-	ns



BLOCK DIAGRAM

