



# SG320240L ( 320 DOTS X 240 DOTS )

## FEATURES

- ◆ RECOMMENDED CONTROLLER  
(HD64646/MSM6225/SED1335)
- ◆ +5 V POWER SUPPLY
- ◆ 1/240 DUTY CYCLE
- ◆ EDGE LIGHTING TYPE CCFL BACKLIGHT

## INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	DB0	HL	Data Bit1
2	DB1	HL	Data Bit2
3	DB2	HL	Data Bit3
4	DB3	HL	Data Bit4
5	FLM	H	Frame Signal
6	M	HL	Control Signal For AC Driving
7	CL1	H→L	Common Driver Data Shift Signal
8	CL2	H→L	Clock Pulse For Segment Shift Register
9	/DISPOFF	L	Display OFF Active LOW
10	Vss	0V	Power Supply Ground
11	FG	-	For GND
12	VDD	5V	Power Supply Voltage
13	VDD	-	Power Supply Voltage For LCD
14	Vo	-	Contrast Adjustment Voltage

## MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	148.3 x 100.0 x 14.1	mm
Viewing Area (W x H)	107.2 x 78.4	mm
Active Area (W x H)	99.17 x 74.57	mm
Dot Size (W x H)	0.28 x 0.28	mm
Dot Pitch (W x H)	0.31 x 0.31	mm

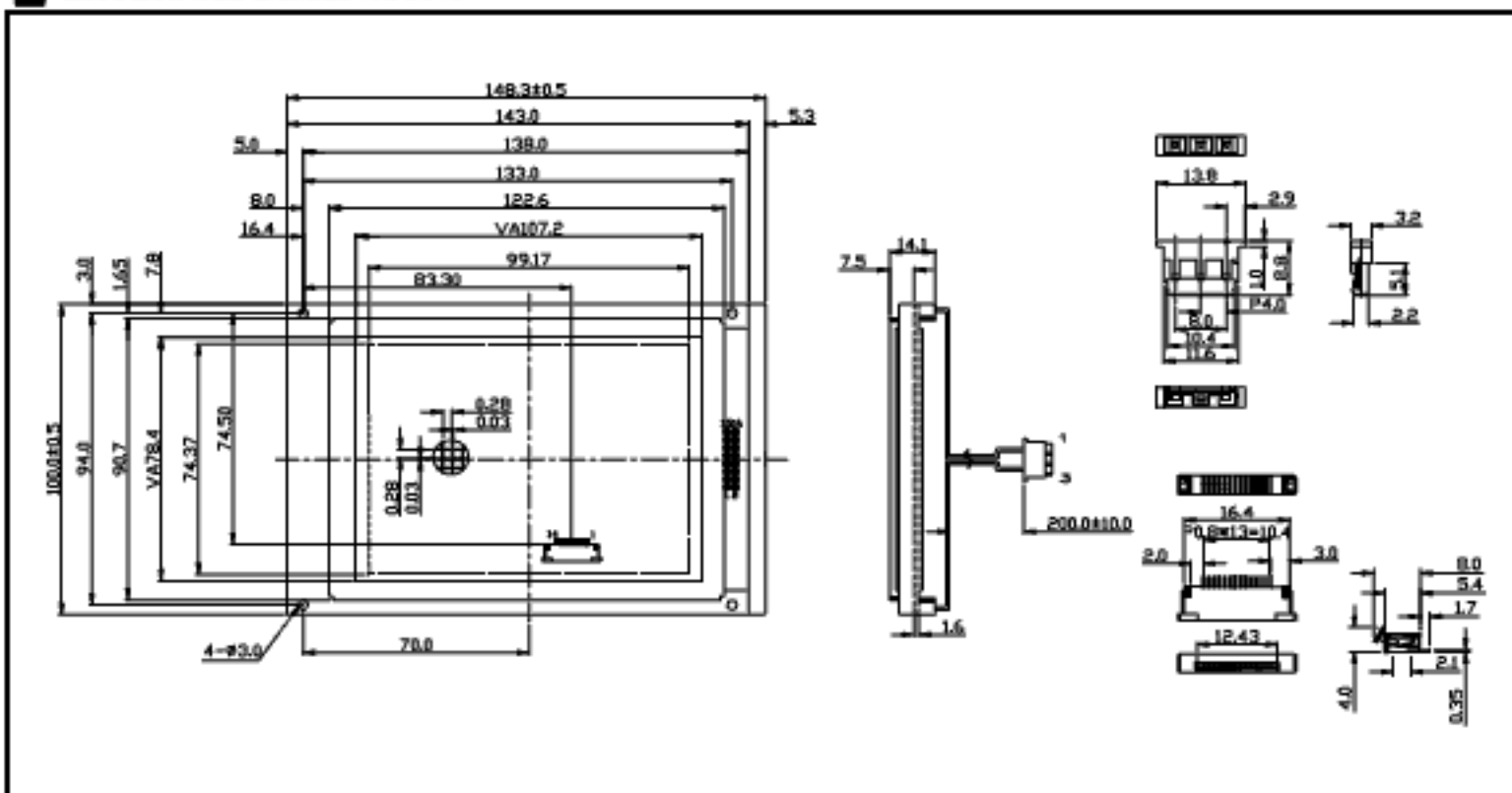
## ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	VDD-Vss	0	-	7	V
Supply Voltage For LCD Drive	VDD-Vo	0	-	30	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	
LCD Supply Voltage	VDD-Vo	VDD=5V Ta=25°C	22.4	23.5	24.3	V	
Supply Current	Ind	VDD=5V	-	16	25	mA	
Input Voltage	"HIGH" Level	Vih	-	2.2	-	VDD	V
	"LOW" Level	Vil	-	-	-	0.6	V
Output Voltage	"HIGH" Level	VoH	-	2.4	-	-	V
	"LOW" Level	Vol	-	-	-	0.4	V

## EXTERNAL DIMENSIONS

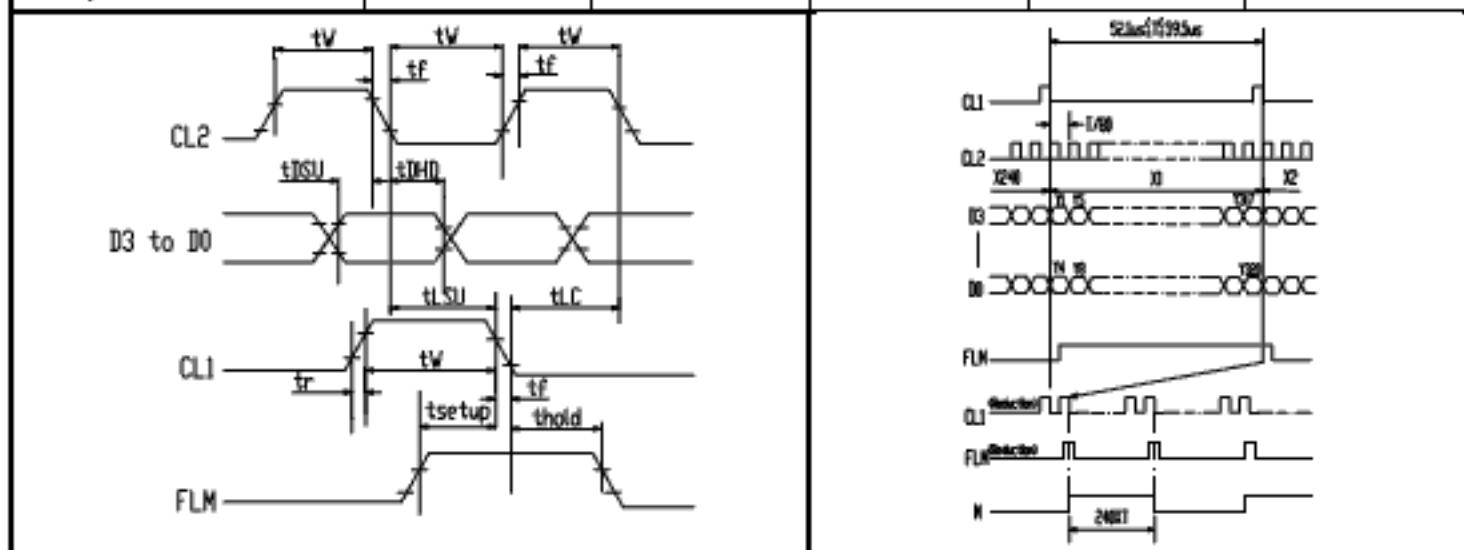




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## TIMING CHARACTERISTICS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT.
Frequency Of Maximum Clock	$f_{CP}$	-	-	8	MHZ
CL1, CL2, Pulse Width	$t_w$	45	-	-	ns
Rise, Fall Time	$t_r, t_f$	-	-	15	ns
Data Setup Time	$t_{DSU}$	20	-	-	ns
Data Hold Time	$t_{DHD}$	20	-	-	ns
CL1 Setup Time	$t_{LSU}$	80	-	-	ns
CL1 → CL2 Time	$t_{LC}$	80	-	-	ns
FLM Setup Time	$t_{setup}$	100	-	-	ns
FLM Hold Time	$t_{hold}$	100	-	-	ns
M Delay Time	$t_{DF}$	-	-	300	ns



## BLOCK DIAGRAM

