CHINA DISPLAY TECHNOLOGY CO., LTD.

深圳市新深辉显示技术有限公司

SPECIFICATION

Product No.: **SVM320240BSGWJ-3**

Customer: _____

Issue Date: **November 11, 2006**

CHINA DISPLAY TECH.		
APPROVED	CHECKED	PREPARED

Block 513,4,5,6th Floor Bagualing Industrial Area
Shenzhen , China Post Code : 518029
TEL: 0086-755-25843635
FAX: 0086-755-82262915

CHINA DISPLAY TECHNOLOGY CO., LTD.

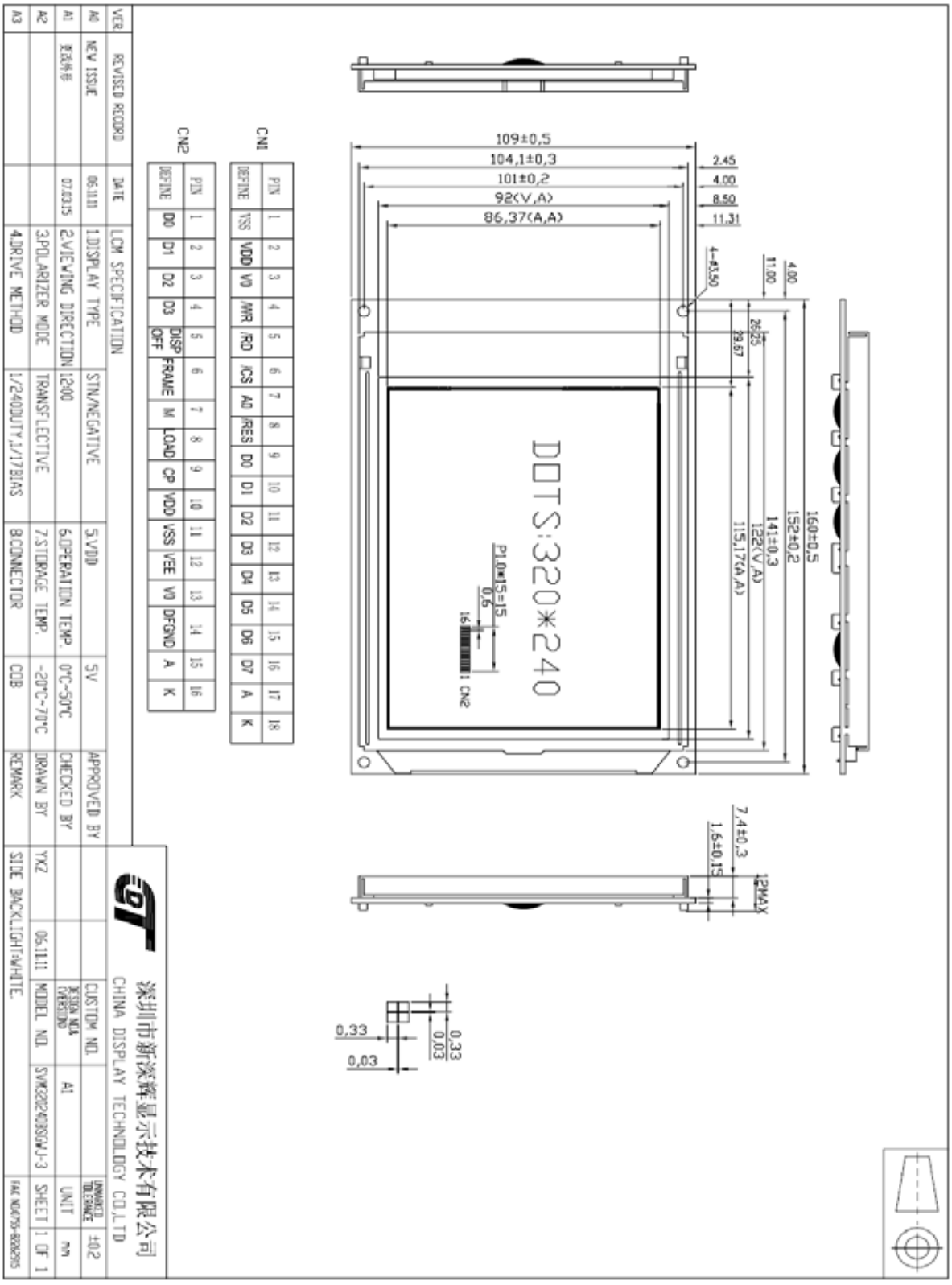
Data	Sheet No.	Summary
06.11.11	A	NEW

Table Of Contents

1 General Description

Item	Standard Value	Unit
Display Format	Graphic 320x240Dot-matrix	
LCD Driving Method	1/240 Duty ,1/17Bias	
Viewing Direction	12 O'clock	
Power Supply Voltage	5.0	V
Dimensional Outline (W*H*D)	160*109*12.0	mm
Viewing Area (W*H)	122*92	mm
Active Area (W*H)	115.17*86.37	mm
Dots Size (W*H)	0.30*0.30	mm
Dots Pitch (W*H)	0.33*0.33	mm
Backlight Type & Color	LED , White	
Display Mode	Negative, Blue	
Driver IC	RA8835, KS0086	
Operation Temperature	T_{OPL} = 0, T_{OPH} =50	℃
Storage Temperature	T_{STL} = -20, T_{STH} = 70	℃

2 Mechanical Diagram



3 I/O Terminal

3.1 CN1 (RA8835 Controller)

Pin No	Symbol	Description	
1	VSS	GND	
2	VDD	Supply voltage for logic	
3	V0	Supply voltage for LCD Contrast adjustment	
4	WR\	Write Signal	
5	RD\	Read Signal	
6	CS\	Chip select Signal	
7	A0	Data Type Selection	
8	RES\	Reset Signal	
9	DB0	Data BUS	
10	DB1	Data BUS	
11	DB2	Data BUS	
12	DB3	Data BUS	
13	DB4	Data BUS	
14	DB5	Data BUS	
15	DB6	Data BUS	
16	DB7	Data BUS	
17	A	Positive for Backlight	
18	K	Negative for Backlight	

3.2 CN2 (No Controller)

Pin No.	Symbol	Description	
1	D0	Data BUS	
2	D1	Data BUS	
3	D2	Data BUS	
4	D3	Data BUS	
5	DISP OFF	H:Display ON; L:Display OFF	
6	FRAME	Frame signal	
7	M	Alternater for LCD driver	
8	LOAD	Data latch signal	
9	CP	Clock signal for shifting serial data	
10	VDD	Power supply(+5V)	
11	VSS	Logic ground	
12	VEE	Power supply for LCD(-23V)	
13	V0	Variable voltage for LCD	
14	DFGND	Frame ground	
15	A	Positive for backlight(+5V)	
16	K	Negative for backlight	

3.3 LED Backlight Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	**V_F**	**IF=120mA White**	**2.9**	**3.1**	**3.4**	**V**
Luminous Intensity	**I_V**	**IF=120mA White**	**160**	**--**	**--**	**cd/m^2**
Spectrum Radiation	**$\Delta\lambda$**	**IF=120mA White**	**--**	**--**	**--**	**nm**
Reverse Current	**IR**	**VR=3.1V White**	**--**	**--**	**100**	**uA**

Note: Measured at the bared LED backlight unit.

LED MAXIMUM OPERATING RANGE

Item	Symbel	Conditions	Rating	Unit
Absolute maximum forward current	Ifm		250	mA
Peak forward current	Ifp	1 msec plus 10% cycle	600	mA
Reverse voltage	Vr		5	V
Power dissipation	Ps		1100	mW
Operating Temperature Range	Topr		-20~+70	ºC
Storage Temperature Range	Tstg		-30~+80	ºC

4 CODE DESCRIPTION

Class	Command	Code											Hex	Command Description	Command Read Parameters	
		$\overline{RD}$	$\overline{WR}$	A0	D7	D6	D5	D4	D3	D2	D1	D0			No. of Bytes	Section
System control	SYSTEM SET	1	0	1	0	1	0	0	0	0	0	0	40	Initialize device and display	8	8.2.1
	SLEEP IN	1	0	1	0	1	0	1	0	0	1	1	53	Enter standby mode	0	8.2.2
Display control	DISP ON/OFF	1	0	1	0	1	0	1	1	0	0	D	58, 59	Enable and disable display and display flashing	1	8.3.1
	SCROLL	1	0	1	0	1	0	0	0	1	0	0	44	Set display start address and display regions	10	8.3.2
	CSRFORM	1	0	1	0	1	0	1	1	1	0	1	5D	Set cursor type	2	8.3.3
	CGRAM ADR	1	0	1	0	1	0	1	1	1	0	0	5C	Set start address of character generator RAM	2	8.3.6
	CSRDIR	1	0	1	0	1	0	0	1	1	CD 1	CD 0	4C to 4F	Set direction of cursor movement	0	8.3.4
	HDOT SCR	1	0	1	0	1	0	1	1	0	1	0	5A	Set horizontal scroll position	1	8.3.7
	OVLAY	1	0	1	0	1	0	1	1	0	1	1	5B	Set display overlay format	1	8.3.5
Drawing control	CSRW	1	0	1	0	1	0	0	0	1	1	0	46	Set cursor address	2	8.4.1
	CSRR	1	0	1	0	1	0	0	0	1	1	1	47	Read cursor address	2	8.4.2
Memory control	MWRITE	1	0	1	0	1	0	0	0	0	1	0	42	Write to display memory	—	8.5.1
	MREAD	1	0	1	0	1	0	0	0	0	1	1	43	Read from display memory	—	8.5.2

Notes:

1. In general, the internal registers of the SED1330F are modified as each command parameter is input. However, the microprocessor does not have to set all the parameters of a command and may send a new command before all parameters have been input. The internal registers for the parameters that have been input will have been changed but the remaining parameter registers are unchanged. 2-byte parameters (where two bytes are treated as one data item) are handled as follows:

   a. CSRW, CSRR: Each byte is processed individually. The microprocessor may read or write just the low byte of the cursor address.

   b. SYSTEM SET, SCROLL, CGRAM ADR: Both parameter bytes are processed together. If the command is changed after half of the parameter has been input, the single byte is ignored.

2. APL and APH are 2-byte parameters, but are treated as two 1-byte parameters.