HannStar HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	1/28
Document No.		Revision	1.0

TO   :Solomon

Date   :Aug., 14, 2008

HannStar Product Specification
(Formal)

8.9" Color TFT-LCD Module

Model: **HSD089IFW1**

-B**

Note: 1.Please contact HannStar Display Corp. before designing your product based on this
       module specification.
    2.The information contained herein is presented merely to indicate the characteristics and
       performance of our products. No responsibility is assumed by HannStar for any intellectual
       property claims or other problems that may result from application based on the module
       described herein.
    3.The mark " ** " of Model means sub-model code.

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	2/28
Document No.		Revision	1.0

Record of Revisions

Rev.	Date	Sub-Model	Description of change
1.0	Aug., 14, 2008	B00	Formal Product Specification was first released.

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Document Title	HSD089IFW1-B Formal Specification	Page No.	3/28
Document No.		Revision	1.0

Contents

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	4/28
Document No.		Revision	1.0

1.0 GENERAL DESCRIPTION

1.1 Introduction

HannStar Display model HSD089IFW1-B is a color active matrix thin film transistor (TFT) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching device. This model is composed of a TFT LCD panel, a driving circuit and a back light system. This TFT LCD has a 8.9 (17:10) inch diagonally measured active display area with WSVGA (1024 horizontal by 600 vertical pixel) resolution.

1.2 Features

- 8.9 (17:10 diagonal) inch configuration
- One channel LVDS interface
- 256K color by 6 bit R.G.B signal input
- RoHS Compliance

1.3 Applications

- Mobile NB
- Digital Photo frame
- Display terminal for AV application

1.4 General information

Item	Specification	Unit
Outline Dimension	213.36x 129.55 x 5.15 (Typ.)	mm
Display area	195.072(H) x 113.4(V)	mm
Number of Pixel	1024 RGB(H) x600(V)	pixels
Pixel pitch	190.5(H) x 189(V)	mm
Pixel arrangement	RGB Vertical stripe	
Display mode	Normally white	
Surface treatment	Antiglare, Hard-Coating (3H) with EWV film	
Weight	200 (Typ.)	g
Back-light	Single LED (Side-Light type)	
Power Consumption	Logic System	0.95 (Max.)	W
	B/L System	2.1 (Max.)	W

1.5 Mechanical Information

Item		Min.	Typ.	Max.	Unit
Module Size	Horizontal (H)	213.06	213.36	213.66	mm
	Vertical (V)	129.25	129.55	129.85	mm
	Depth (D)	—	5.15	5.45	mm
Weight		—	200	215	g

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	5/28
Document No.		Revision	1.0

2.0 ABSOLUTE MAXIMUM RATINGS

2.1 Electrical Absolute Rating

2.1.1 TFT LCD Module

Item	Symbol	Min.	Max.	Unit	Note
LED Power Supply voltage	V_{LED}	-0.3	6.0	V	GND=0
Logic Supply voltage	V_{DD}	-0.3	6.0	V	

2.2 Environment Absolute Rating

Item	Symbol	Min.	Max.	Unit	Note
Operating Temperature	T_{opa}	0	50	℃	
Storage Temperature	T_{stg}	-20	60	℃	

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	6/28
Document No.		Revision	1.0

3.0 OPTICAL CHARACTERISTICS

3.1 Optical specification

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast		CR		400	500	—		(1)(2)
Response time	Rising	T_R	$\Theta=0$ Normal viewing angle	—	5	7	msec	(1)(3)
	Falling	T_F		—	20	28		
White luminance (Center)		Y_L		180	220	—	cd/m^2	(1)(4) (I_L=150mA)
Color chromaticity (CIE1931)	White	W_x		0.260	0.310	0.360		
		W_y		0.280	0.330	0.380		
Viewing angle	Hor.	Θ_L	CR>10	60	70	—		(1)(4)
		Θ_R		60	70	—		
	Ver.	Θ_U		40	50	—		
		Θ_D		50	60	—		
Brightness uniformity		B_{UNI}	$\Theta=0$	70	—	—	%	(5)
Optima View Direction			6 O' clock					(6)

3.2 Measuring Condition

- ■ Measuring surrounding：dark room
- ■ LED current I_L：150mA
- ■ Ambient temperature：25±2°C
- ■ 15min. warm-up time.

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	7/28
Document No.		Revision	1.0

3.3 Measuring Equipment

- FPM520 of Westar Display technologies, INC., which utilized SR-3 for Chromaticity and BM-5A for other optical characteristics.
- Measuring spot size：20 ~ 21 mm

Note (1) Definition of Viewing Angle:

Θ_U

12' o'clock
$\Phi=90^o$

Θ_L　　　　Θ_R

$\Phi=180^o$　　　　　　$\Phi=0^o$
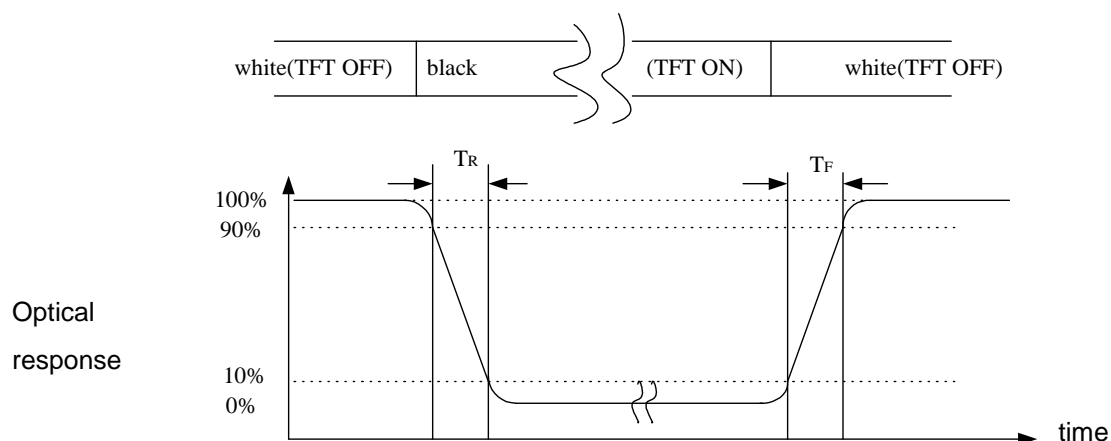
Θ_D

6' o'clock
$\Phi=270^o$
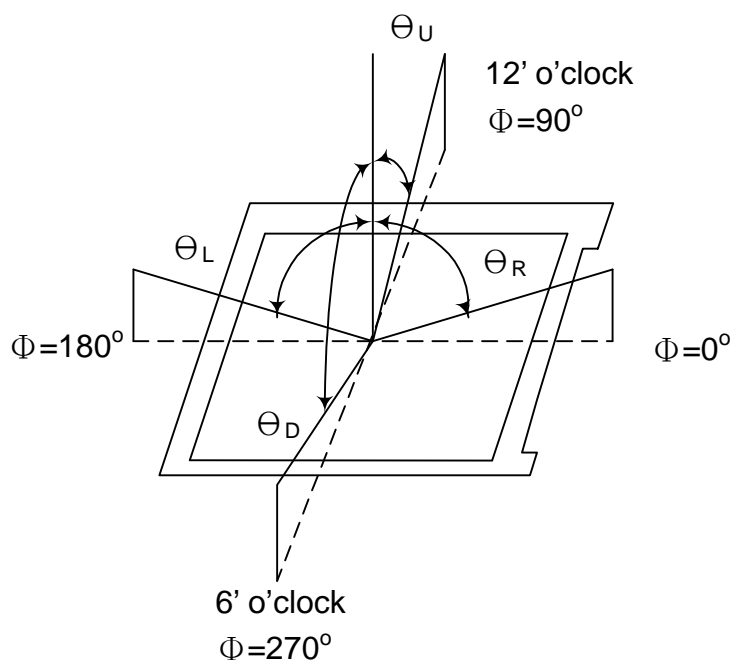
Note (2) Definition of Contrast Ratio (CR) :
measured at the center point of panel

$$CR = \frac{\text{Luminance with all pixels white}}{\text{Luminance with all pixels black}}$$

Note (3) Definition of Response Time : Sum of T_R and T_F

| white(TFT OFF) | black | (TFT ON) | white(TFT OFF) |

Optical response

Note (4) Definition of optical measurement setup

LCD Panel

Field = 1°

Photo-detector (BM-5A)

120cm

![HannStar logo] HannStar Display Corp.
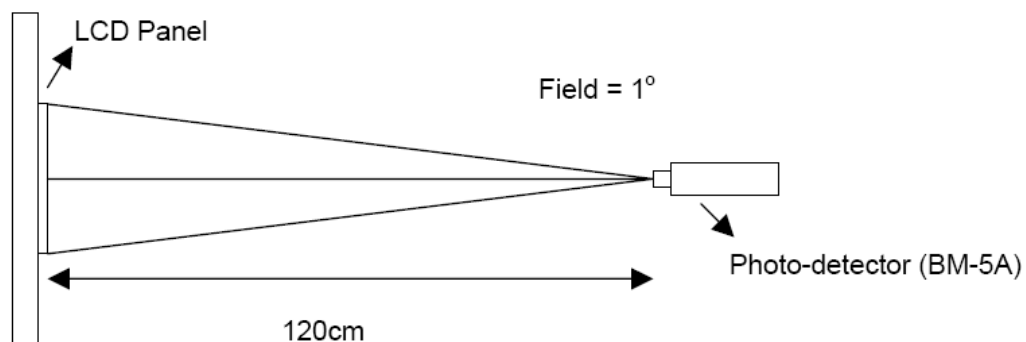
Document Title	HSD089IFW1-B Formal Specification	Page No.	9/28
Document No.		Revision	1.0

Note (5) Definition of brightness uniformity

16.67%   50.00%   83.33%

16.67%

50.00%

83.33%
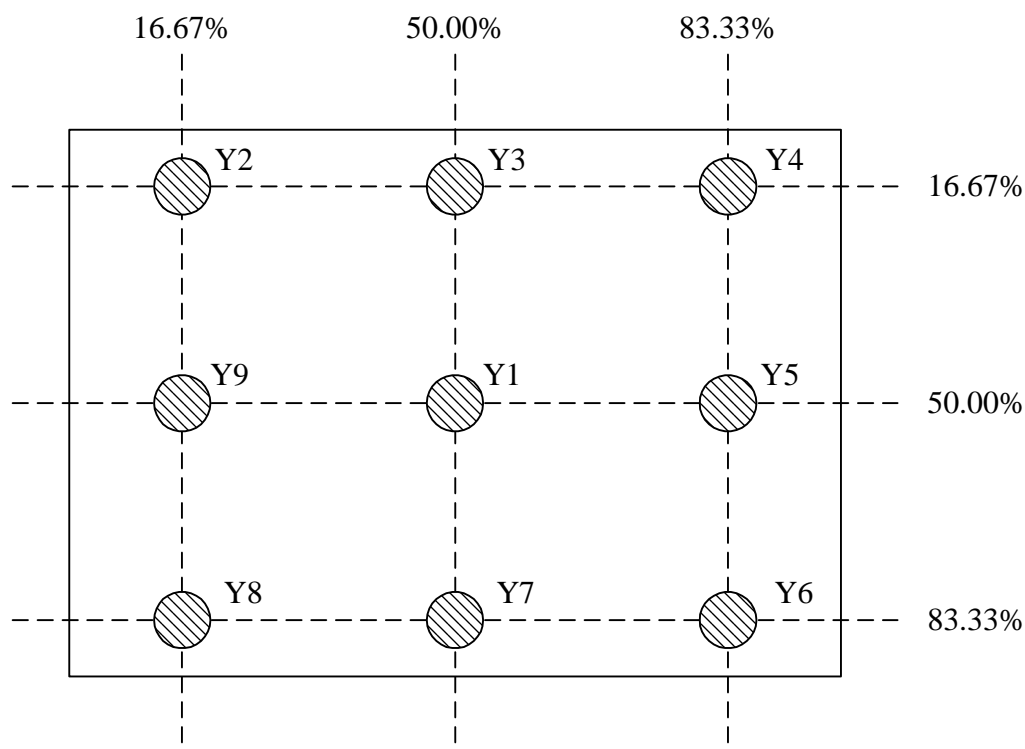
$$\text{Luminance uniformity} = \frac{\text{(Min Luminance of 9 points)}}{\text{(Max Luminance of 9 points)}} \times 100\%$$

Note (6)：Rubbing Direction (The different Rubbing Direction will cause the different optima view direction.

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Document Title	HSD089IFW1-B Formal Specification	Page No.	10/28
Document No.		Revision	1.0

4.0 BLOCK DIAGRAM
4.1 TFT LCD Module:

4.2 Pixel Format

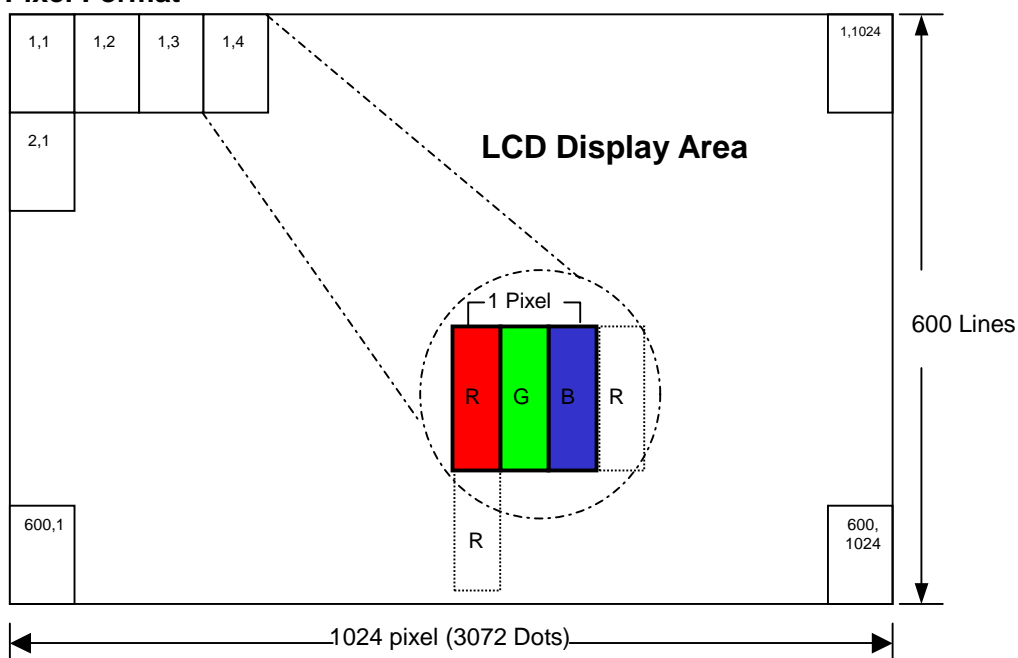HannStar Display Corp.
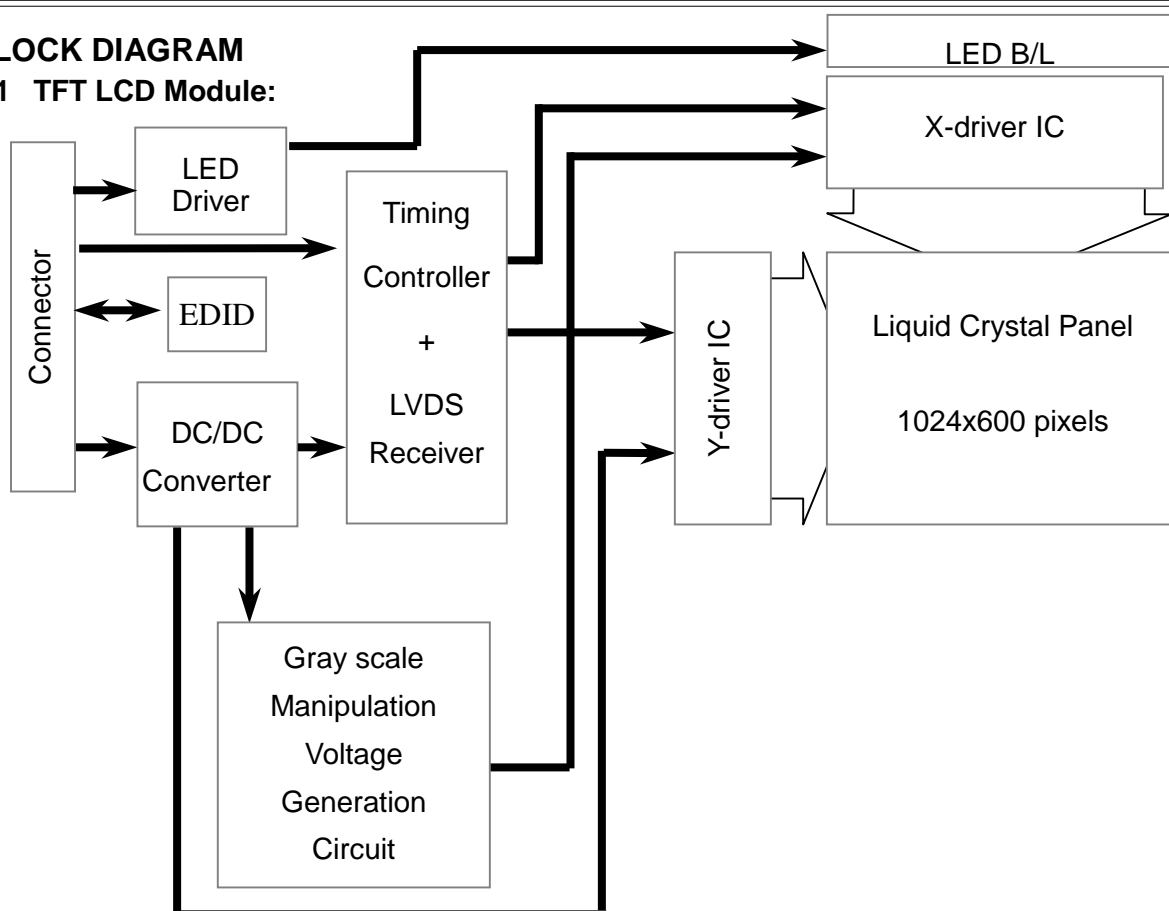
Document Title	HSD089IFW1-B Formal Specification	Page No.	11/28
Document No.		Revision	1.0

4.3 Relationship Between Displayed Color and Input

	Display	R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0	Gray scale level
		MSB					LSB	MSB					LSB	MSB					LSB	
Basic color	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-
	Blue	L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	H	H	-
	Green	L	L	L	L	L	L	H	H	H	H	H	H	L	L	L	L	L	L	-
	Light Blue	L	L	L	L	L	L	H	H	H	H	H	H	H	H	H	H	H	H	-
	Red	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	-
	Purple	H	H	H	H	H	H	L	L	L	L	L	L	H	H	H	H	H	H	-
	Yellow	H	H	H	H	H	H	H	H	H	H	H	H	L	L	L	L	L	L	-
	White	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-
Gray scale of Red	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
		L	L	L	L	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L1
		L	L	L	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L2
	Dark ↑ ↓ Light	:			:			:			:			:			:			L3…L60
		H	H	H	H	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L61
		H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L62
	Red	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	Red L63
Gray scale of Green	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
		L	L	L	L	L	L	L	L	L	L	L	H	L	L	L	L	L	L	L1
		L	L	L	L	L	L	L	L	L	L	H	L	L	L	L	L	L	L	L2
	Dark ↑ ↓ Light	:			:			:			:			:			:			L3…L60
		L	L	L	L	L	L	H	H	H	H	L	H	L	L	L	L	L	L	L61
		L	L	L	L	L	L	H	H	H	H	H	L	L	L	L	L	L	L	L62
	Green	L	L	L	L	L	L	H	H	H	H	H	H	L	L	L	L	L	L	Green L63
Gray scale of Blue	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	H	L1
		L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	H	L	L2
	Dark ↑ ↓ Light	:			:			:			:			:			:			L3…L60
		L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	L	H	L61
		L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	H	L	L62
	Blue	L	L	L	L	L	L	L	L	L	L	L	L	H	H	H	H	H	H	Blue L63
Gray scale of White & Black	Black	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L0
		L	L	L	L	L	H	L	L	L	L	L	H	L	L	L	L	L	H	L1
		L	L	L	L	H	L	L	L	L	L	H	L	L	L	L	L	H	L	L2
	Dark ↑ ↓ Light	:			:			:			:			:			:			L3…L60
		H	H	H	H	L	H	H	H	H	H	L	H	H	H	H	H	L	H	L61
		H	H	H	H	H	L	H	H	H	H	H	L	H	H	H	H	H	L	L62
	White	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	White L63

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Document Title	HSD089IFW1-B Formal Specification	Page No.	12/28
Document No.		Revision	1.0

5.0 INTERFACE PIN CONNECTION

5.1 TFT LCD Module：

CN1 (Input signal): FI-XB30SL-HF10 (JAE or equivalent)

Pin No.	Signal	Description
1	GND	Ground
2	VDD	3.3V Power
3	VDD	3.3V Power
4	V_EDID	3.3V Power for EDID
5	ADJ	Adjust for LED brightness Note
6	CLK_EDID	EDID Clock Input
7	DATA_EDID	EDID Data Input
8	RXIN0-	LVDS Signal - channel0-
9	RXIN0+	LVDS Signal+ channel0+
10	GND	Ground
11	RXIN1-	Data Input channel1-
12	RXIN1+	Data Input channel1+
13	GND	Ground
14	RXIN2-	Data Input channel2-
15	RXIN2+	Data Input channel2+
16	GND	Ground
17	RXCLKIN-	Data Input CLK-
18	RXCLKIN+	Data Input CLK+
19	GND	Ground
20	NC	NC
21	NC	NC
22	GND	Ground
23	GND	Ground
24	VLED	LED Power +5V
25	VLED	LED Power +5V
26	VLED	LED Power +5V
27	NC	NC
28	NC	NC
29	NC	NC
30	NC	NC

Note：The brightness of LCD panel could be changed by adjusting ADJ

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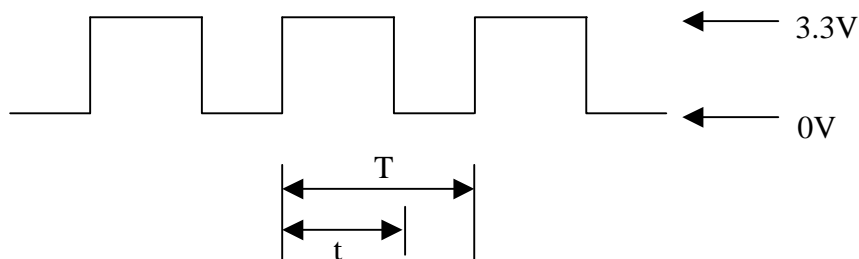| Document Title	HSD089IFW1-B Formal Specification	Page No.	13/28
Document No.		Revision	1.0

[Note]
(1) ADJ can adjust brightness to control Pin. Pulse duty the bigger the brighter.
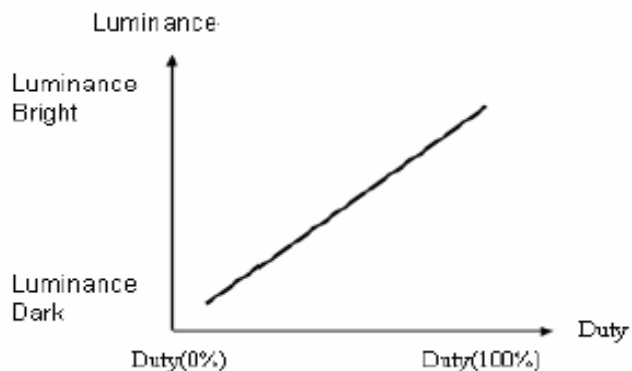
(2) ADJ Signal=0~3.3V，Operation Frequency：

Dimming Range		
PWM Frequency (F)	Duty Cycle (Min.)	Duty Cycle (Max.)
100Hz < F < 500Hz	5%	100%
500Hz < F < 20KHz	10%	100%

Duty Cycle = t / T *100%

T = 1 / F

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Document Title	HSD089IFW1-B Formal Specification	Page No.	14/28
Document No.		Revision	1.0

6.0 ELECTRICAL CHARACTERISTICS

6.1 TFT LCD Module

Item	Symbol	Min.	Typ.	Max.	Unit	Note
Supply Voltage	V_{DD}	3.0	3.3	3.6	V	Note (2)
	V_{LED}	4.7	5.0	5.3	V	
Current of power supply	IDD	-	0.27	-	A	V_{DD} =3.3V、L0 pattern

Note : (1) The brightness of LCD panel could be changed by adjusting ADJ.

(2) V_{DD} dip codition :

When VDD operating within 2.7V≦VDD<3.0V，td≦10ms , the display may momentarily become abnormal .

V_{DD}＞3.0V，V_{DD} dip condition should be same as $V_{DD-turn-con}$ condition.

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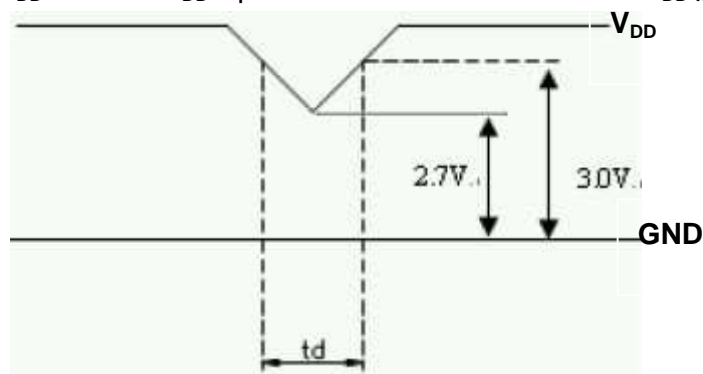
Document Title	HSD089IFW1-B Formal Specification	Page No.	15/28
Document No.		Revision	1.0

6.2 Switching Characteristics for LVDS Receiver

Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Differential Input High Threshold	Vth	—	—	100	mV	V_{CM}=1.2V
Differential Input Low Threshold	Vtl	-100	—	—	mV	
Input Current	I_{IN}	-10	—	+10	uA	
Differential input Voltage	$|V_{ID}|$	0.1	—	0.6	V	
Common Mode Voltage Offset	V_{CM}	($|V_{ID}|$/2)	1.25	1.8-0.4-($|V_{ID}|$/2)	V	

6.3 Bit Mapping & Interface Definition
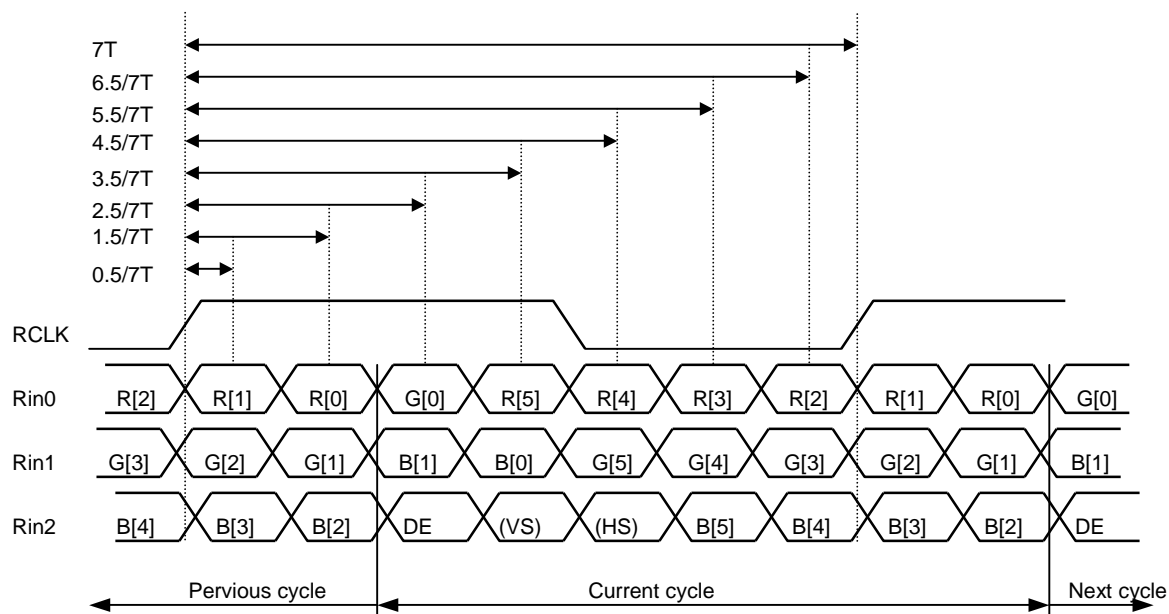
LVDS Receiver Input Timing Definition

for 6bits LVDS input

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Document Title	HSD089IFW1-B Formal Specification	Page No.	16/28
Document No.		Revision	1.0

6.4 Interface Timing (DE mode)

Item	Symbol	Min.	Typ.	Max.	Unit
Frame Rate	--	55	60	65	Hz
Frame Period	t1	612	625	638	line
Vertical Display Time	t2	600	600	600	line
Vertical Blanking Time	t3	12	25	38	line
1 Line Scanning Time	t4	1160	1200	1240	clock
Horizontal Display Time	t5	1024	1024	1024	clock
Horizontal Blanking Time	t6	136	176	216	clock
Clock Rate	t7	39	45	51.42	MHz

Timing Diagram of Interface Signal (DE mode)

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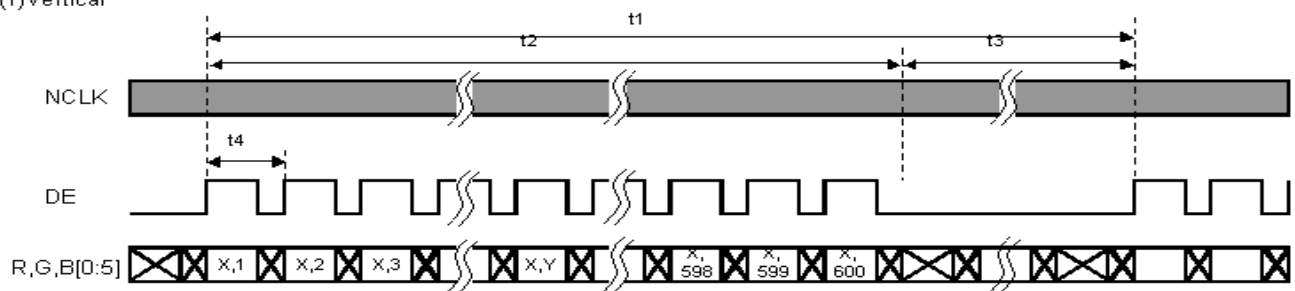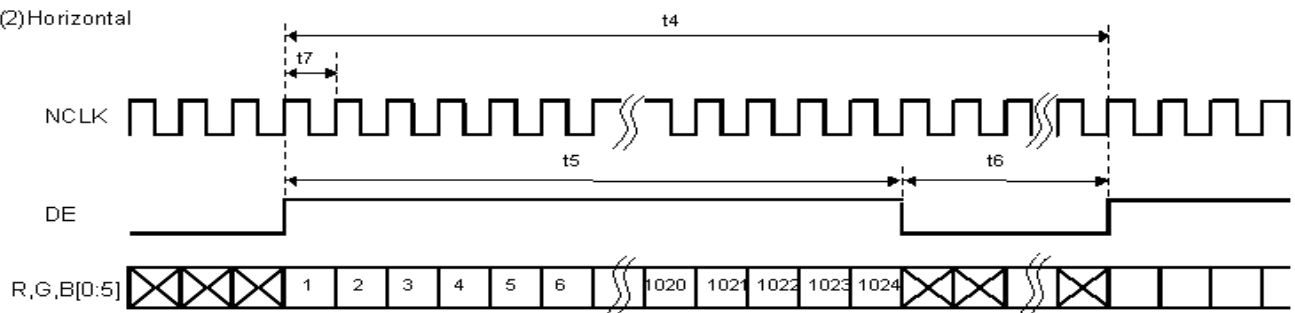
Document Title	HSD089IFW1-B Formal Specification	Page No.	17/28
Document No.		Revision	1.0

6.5 Power On / Off Sequence
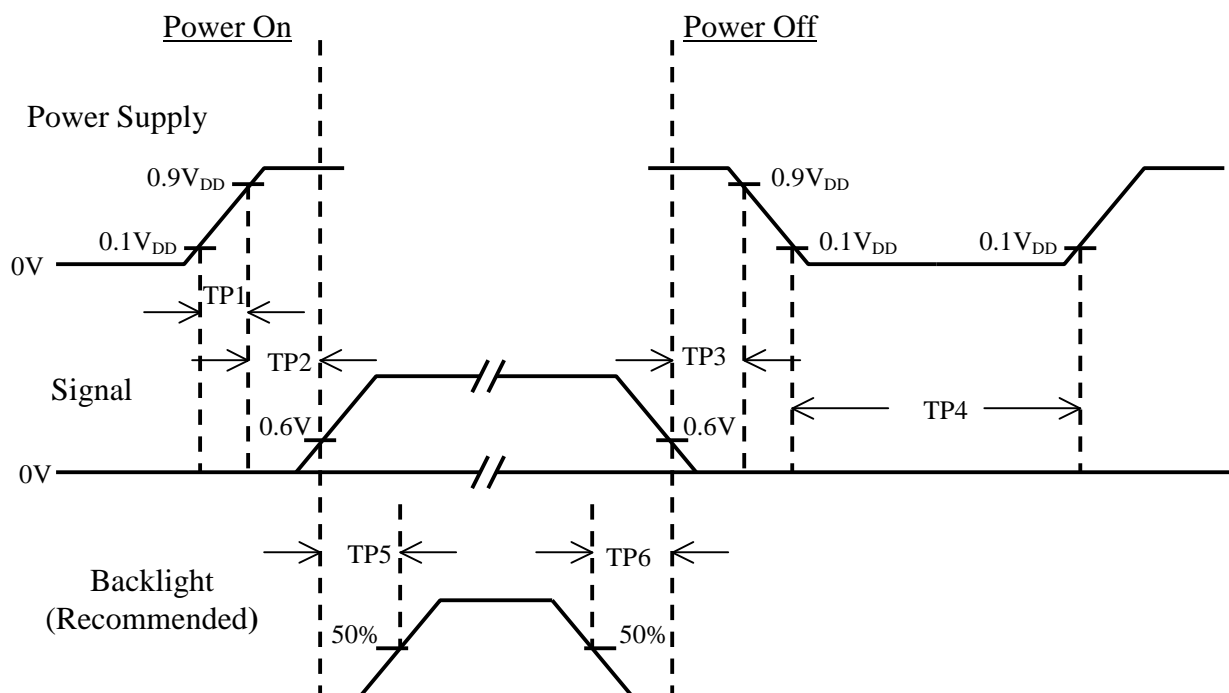
Item	Min.	Typ.	Max.	Unit	Remark
TP1	0.5	--	10	msec	
TP2	0	--	50	msec	
TP3	0	--	50	msec	
TP4	500	--	--	msec	
TP5	200	--	--	msec	
TP6	200	--	--	msec	

Note：(1) The supply voltage of the external system for the module input should be the same as the definition of V_{DD}.

(2) Apply the lamp volatge within the LCD operation range. When the back-light turns on before the LCD operation or the LCD truns off before the back-light turns off, the display may momentarily become white.

(3) In case of VDD = off level, please keep the level of input signal on the low or keep a high impedance.

(4) TP4 should be measured after the module has been fully discharged between power off and on period.

(5) Interface signal shall not be kept at high impedance when the power is on.

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Document Title	HSD089IFW1-B Formal Specification	Page No.	18/28
Document No.		Revision	1.0

7.0 Reliability test items

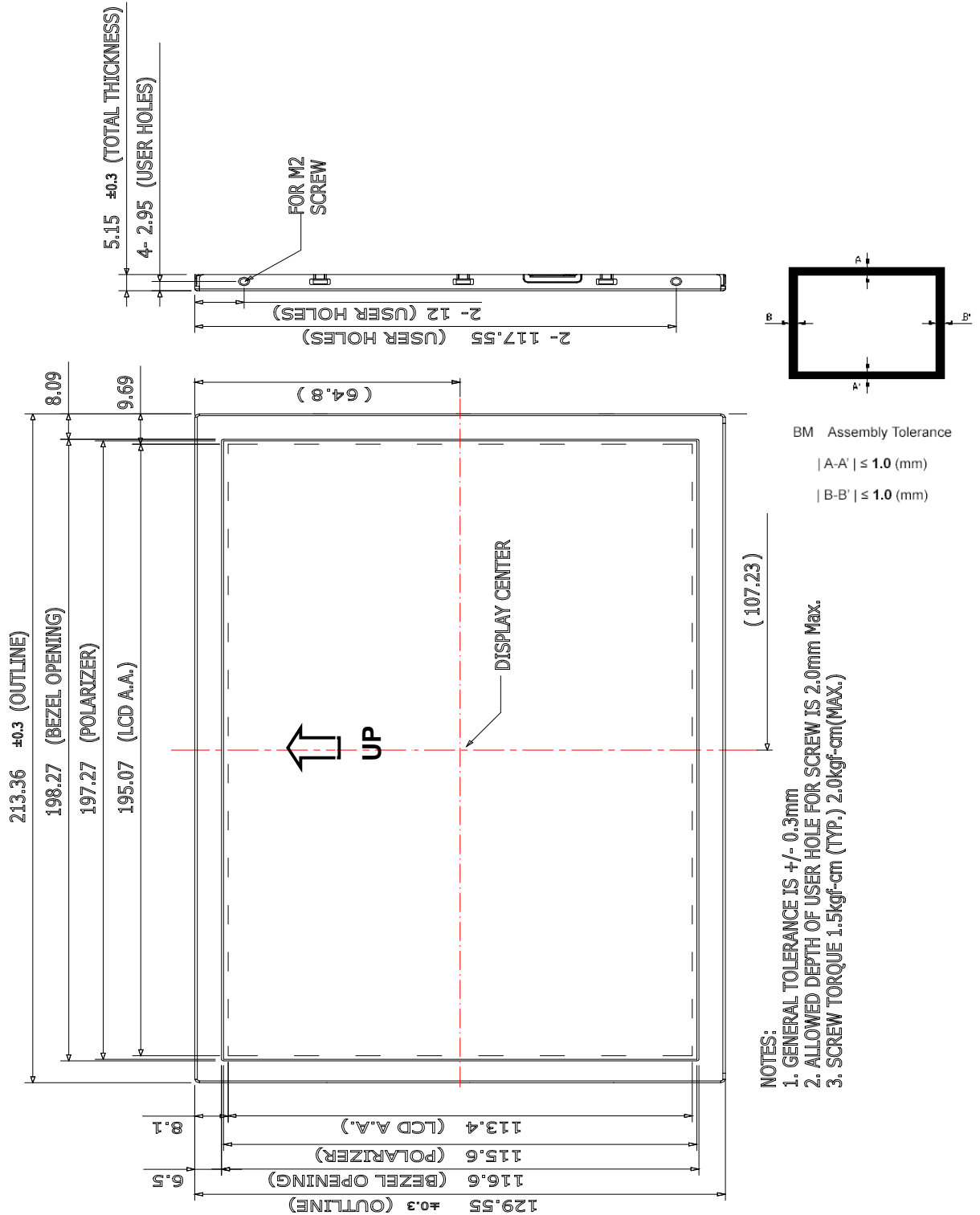| No.	Item	Conditions	Remark
1	High Temperature Storage	Ta=+60°C, 240hrs	
2	Low Temperature Storage	Ta=-20°C, 240hrs	
3	High Temperature Operation	Ta=+50°C, 500hrs	
4	Low Temperature Operation	Ta=0°C, 500hrs	
5	High Temperature and High Humidity (operation)	Ta=+50°C, 80%RH, 500hrs	
6	Thermal Cycling Test (non operation)	-20°C(30min) → +60°C(30min), 100 cycles	
7	Electrostatic Discharge	±200V,200pF(0Ω) 1 time/connector	
8	Vibration	1.Random: 1.04G, 10~500Hz, XYZ, 30min/each direction 2.Sine: 1.5G, 5~500Hz, XYZ 30min/each direction	
9	Shock	Half-Sine, 220G, 2ms, ±XYZ, 1time	
10	Vibration (with carton)	Random: 1.04G, 10~500Hz, XYZ, 45min/each direction	
11	Drop (with carton)	Height：60 cm 1 corner, 3 edges, 6 surfaces	JIS Z0202

Note: There is no display function NG issue occurred, all the cosmetic specification is judged
before the reliability stress.

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Document Title	HSD089IFW1-B Formal Specification	Page No.	19/28
Document No.		Revision	1.0

8.0   OUTLINE DIMENSION
8.1 Outline Dimension

Unit : mm

5.15 ±0.3 (TOTAL THICKNESS)

4- 2.95 (USER HOLES)

FOR M2 SCREW

2- 12 (USER HOLES)

2- 117.55 (USER HOLES)

8.09

9.69

(64.8)

213.36 ±0.3 (OUTLINE)

198.27 (BEZEL OPENING)

197.27 (POLARIZER)

195.07 (LCD A.A.)

DISPLAY CENTER

UP

(107.23)

8.1

113.4 (LCD A.A.)

115.6 (POLARIZER)

6.5

116.6 (BEZEL OPENING)

129.55 ±0.3 (OUTLINE)

BM   Assembly Tolerance

| A-A' | ≤ **1.0** (mm)

| B-B' | ≤ **1.0** (mm)

NOTES:
1. GENERAL TOLERANCE IS +/- 0.3mm
2. ALLOWED DEPTH OF USER HOLE FOR SCREW IS 2.0mm Max.
3. SCREW TORQUE 1.5kgf-cm (TYP.) 2.0kgf-cm(MAX.)

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	20/28
Document No.		Revision	1.0

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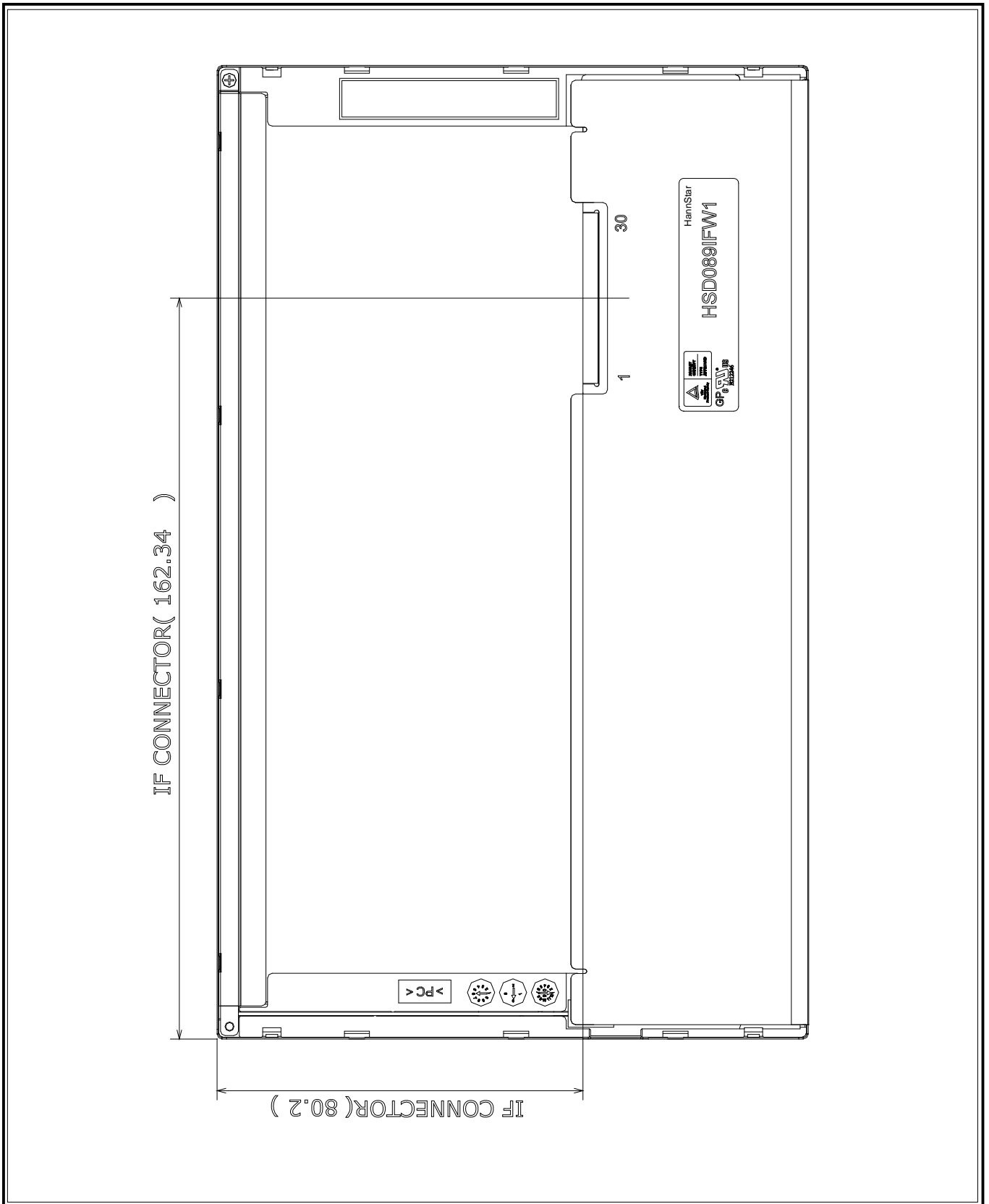
Document Title	HSD089IFW1-B Formal Specification	Page No.	21/28
Document No.		Revision	1.0

9.0 LOT MARK

9.1 Lot Mark

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Code 1,2,3,4,5,6: HannStar internal flow control code.
Code 7: production location.
Code 8: production year.
Code 9: production month.
Code 10,11,12,13,14,15: serial number.

Note (1) Production Year

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Mark	9	0	1	2	3	4	5	6	7	8

Note (2) Production Month

Month	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct	Nov.	Dec.
Mark	1	2	3	4	5	6	7	8	9	A	B	C

9.2 Location of Lot Mark

(1) The label is attached to the backside of the LCD module.
(2) This is subject to change without prior notice.

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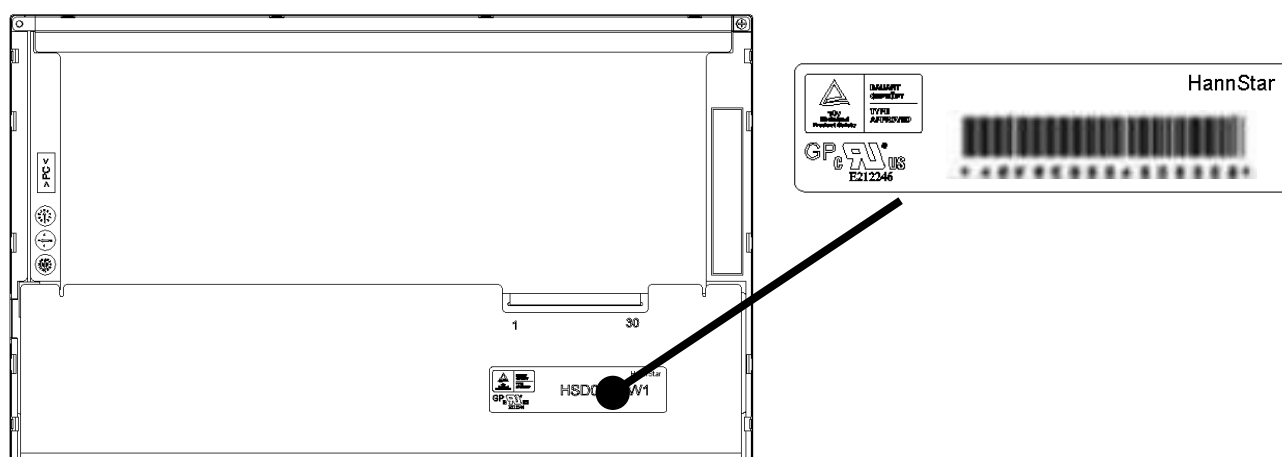
Document Title	HSD089IFW1-B Formal Specification	Page No.	22/28
Document No.		Revision	1.0

10.0 PACKAGE SPECIFICATION

10.1 Packing form

(1) Package quantity in one carton: 60 pieces.

(2) Carton size: 534 mm×298 mm×334 mm.

10.2 Packing assembly drawings

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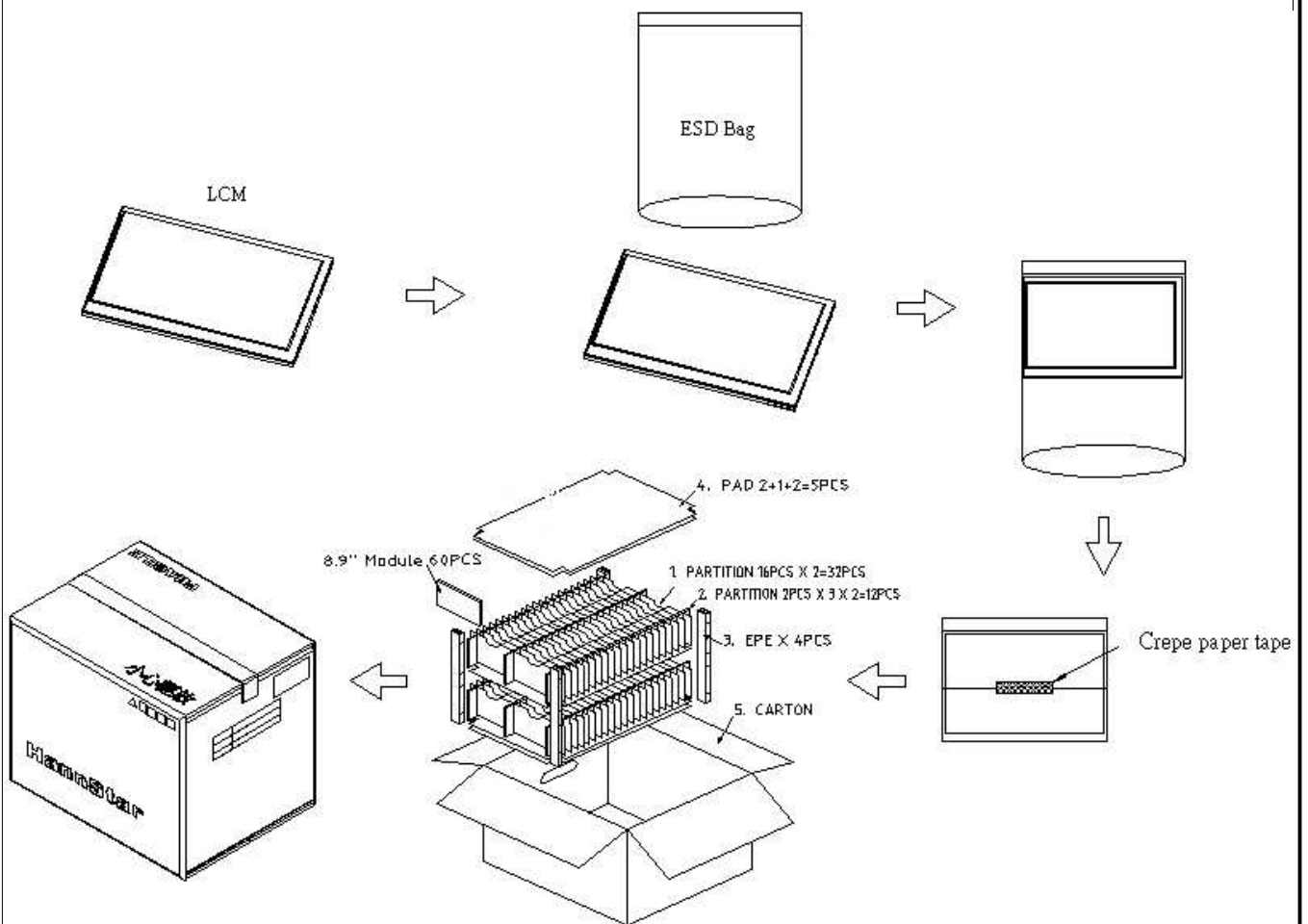
Document Title	HSD089IFW1-B Formal Specification	Page No.	23/28
Document No.		Revision	1.0

11.0 GENERAL PRECAUTION

11.1 Use Restriction

This product is not authorized for use in life supporting systems, aircraft navigation control systems, military systems and any other application where performance failure could be life-threatening or otherwise catastrophic.

11.2 Disassembling or Modification

Do not disassemble or modify the module. It may damage sensitive parts inside LCD module, and may cause scratches or dust on the display. HannStar does not warrant the module, if customers disassemble or modify the module.

11.3 Breakage of LCD Panel

11.3.1. If LCD panel is broken and liquid crystal spills out, do not ingest or inhale liquid crystal, and do not contact liquid crystal with skin.

11.3.2. If liquid crystal contacts mouth or eyes, rinse out with water immediately.

11.3.3. If liquid crystal contacts skin or cloths, wash it off immediately with alcohol and rinse thoroughly with water.

11.3.4. Handle carefully with chips of glass that may cause injury, when the glass is broken.

11.4 Electric Shock

11.4.1. Disconnect power supply before handling LCD module.

11.4.2. Do not pull or fold the LED cable.

11.4.3. Do not touch the parts inside LCD modules and the fluorescent LED's connector or cables in order to prevent electric shock.

11.5 Absolute Maximum Ratings and Power Protection Circuit

11.5.1. Do not exceed the absolute maximum rating values, such as the supply voltage variation, input voltage variation, variation in parts' parameters, environmental temperature, etc., otherwise LCD module may be damaged.

11.5.2. Please do not leave LCD module in the environment of high humidity and high temperature for a long time.

11.5.3. It's recommended to employ protection circuit for power supply.

11.6 Operation

11.6.1 Do not touch, push or rub the polarizer with anything harder than HB pencil lead.

11.6.2 Use fingerstalls of soft gloves in order to keep clean display quality, when persons handle the LCD module for incoming inspection or assembly.

11.6.3 When the surface is dusty, please wipe gently with absorbent cotton or other soft material.

HannStar HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	24/28
Document No.		Revision	1.0

11.6.4 Wipe off saliva or water drops as soon as possible. If saliva or water drops contact with polarizer for a long time, they may causes deformation or color fading.

11.6.5 When cleaning the adhesives, please use absorbent cotton wetted with a little petroleum benzine or other adequate solvent.

11.7 Mechanism

Please mount LCD module by using mounting holes arranged in four corners tightly.

11.8 Static Electricity

11.8.1 Protection film must remove very slowly from the surface of LCD module to prevent from electrostatic occurrence.

11.8.2 Because LCD module use CMOS-IC on circuit board and TFT-LCD panel, it is very weak to electrostatic discharge. Please be careful with electrostatic discharge. Persons who handle the module should be grounded through adequate methods.

11.9 Strong Light Exposure

The module shall not be exposed under strong light such as direct sunlight. Otherwise, display characteristics may be changed.

11.10 Disposal

When disposing LCD module, obey the local environmental regulations.

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	25/28
Document No.		Revision	1.0

12.0 EDID Table

Byte# （Decimal）	Byte# （HEX）	Field Name & Comments	Value （HEX）	Value （BIN）	Value （DEC）
0	0	Header	00	00000000	0
1	1	Header	FF	11111111	255
2	2	Header	FF	11111111	255
3	3	Header	FF	11111111	255
4	4	Header	FF	11111111	255
5	5	Header	FF	11111111	255
6	6	Header	FF	11111111	255
7	7	Header	00	00000000	0
8	8	EISA Manufacture Code LSB (3 character ID = HSD)	22	00100010	34
9	9	Compressed ASCII	64	01100100	100
10	0A	Product Code "0805"	25	00100101	37
11	0B	Hex, LSB first	03	00000011	3
12	0C	LCD module Serial No - Preferred but Optional	00	00000000	0
13	0D	LCD module Serial No - Preferred but Optional	00	00000000	0
14	0E	LCD module Serial No – Preferred but Optional	00	00000000	0
15	0F	LCD module Serial No – Preferred but Optional	00	00000000	0
16	10	Week of manufacture	00	00000000	0
17	11	Year of manufacture = 2008	12	00010010	18
18	12	EDID Structure Version # = 1	01	00000001	1
19	13	EDID revision # = 3	03	00000011	3
20	14	Video input definition = Digital input, CRGB	80	10000000	128
21	15	Max H image size = 20cm	14	00010100	20
22	16	Max V image size = 11cm	0B	00001011	11
23	17	Display Gamma = 2.2	78	01111000	120
24	18	Feature support (DPMS) = Active off, RGB color	0A	00001010	10
25	19	Red/green low bits (10000110)	86	10000110	134
26	1A	Blue/white low bits (00100110)	26	00100110	38
27	1B	Red x , Red x = 0.58	94	10010100	148
28	1C	Red y , Red y = 0.34	57	01010111	87
29	1D	Green x , Green x = 0.317	51	01010001	81
30	1E	Green y , Green y = 0.564	90	10010000	144
31	1F	Blue x , Blue x = 0.152	27	00100111	39

Byte# (Decimal)	Byte# (HEX)	Field Name & Comments	Value (HEX)	Value (BIN)	Value (DEC)
32	20	Blue y , Blue y = 0.131	21	00100001	33
33	21	White x , White x = 0.31	4F	01001111	79
34	22	White y , White y = 0.33	54	01010100	84
35	23	Established timing 1	00	00000000	0
36	24	Established timing 2	00	00000000	0
37	25	Manufacturer's timings	00	00000000	0
38	26	Standard timing #1 was not used	01	00000001	1
39	27		01	00000001	1
40	28	Standard timing #2 was not used	01	00000001	1
41	29		01	00000001	1
42	2A	Standard timing #3 was not used	01	00000001	1
43	2B		01	00000001	1
44	2C	Standard timing #4 was not used	01	00000001	1
45	2D		01	00000001	1
46	2E	Standard timing #5 was not used	01	00000001	1
47	2F		01	00000001	1
48	30	Standard timing #6 was not used	01	00000001	1
49	31		01	00000001	1
50	32	Standard timing #7 was not used	01	00000001	1
51	33		01	00000001	1
52	34	Standard timing #8 was not used	01	00000001	1
53	35		01	00000001	1
54	36	Detailed timing/monitor (descriptor #1)	94	10010100	148
55	37	1024x600 @60Hz: Pixel Clock = 45 MHz	11	00010001	17
56	38	Horizontal active=1024 pixels (L8b)	00	00000000	0
57	39	Horizontal blanking= 176 pixels (L8b)	B0	10110000	176
58	3A	HA (U4b): HB (U4b)	40	01010000	64
59	3B	Vertical active=600 lines (L8b)	58	01011000	88
60	3C	Vertical blanking= 25 lines (L8b)	19	00011001	25
61	3D	HA (U4b): HB (U4b)	20	00100000	32
62	3E	H sync. Offset= 53 pixels	35	00110101	53
63	3F	H sync. Width= 35 pixels	23	00100011	35

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	27/28
Document No.		Revision	1.0

Byte# (Decimal)	Byte# (HEX)	Field Name & Comments	Value (HEX)	Value (BIN)	Value (DEC)
64	40	V sync. Offset= 4 lines	45	01000101	69
65	41	V sync. Width= 5 lines	00	00000000	0
66	42	H image size = 195 mm (L8b)	C3	11000011	195
67	43	V image size = 113 mm (L8b)	71	01110001	113
68	44	Horizontal Image (U4b): Vertical Image (U4b)	00	00000000	0
69	45	No Horizontal Border=0	00	00000000	0
70	46	No Vertical Border=0	00	00000000	0
71	47	Non-interlaced, Normal display, No stereo, Digital separate sync, H/V pol Negatives	19	00011001	25
72	48	Detailed timing/monitor (descriptor #2)	16	00010110	22
73	49	1024x600 @65Hz: Pixel Clock = 51.42 MHz	14	00010100	20
74	4A	Horizontal active=1024 pixels (L8b)	00	00000000	0
75	4B	Horizontal blanking=216pixels (L8b)	D8	11011000	216
76	4C	HA (U4b): HB (U4b)	40	01000000	64
77	4D	Vertical active=600 lines (L8b)	58	01011000	88
78	4E	Vertical blanking= 38 lines (L8b)	26	00100110	38
79	4F	HA (U4b): HB (U4b)	20	00100000	32
80	50	H sync. Offset= 93 pixels	5D	01011101	93
81	51	H sync. Width= 35 pixels	23	00100011	35
82	52	V sync. Offset= 17lines	15	00010101	21
83	53	V sync. Width=5 lines	04	00000100	4
84	54	H image size = 195 mm (L8b)	C3	11000011	195
85	55	V image size = 113 mm (L8b)	71	10000001	113
86	56	Horizontal Image (U4b): Vertical Image (U4b)	00	00000000	0
87	57	No Horizontal Border=0	00	00000000	0
88	58	No Vertical Border=0	00	00000000	0
89	59	EDID Module revision	00	00000000	0
90	5A	Flag	00	00000000	0
91	5B	Flag	00	00000000	0
92	5C	Flag	00	00000000	0
93	5D	Dummy Descriptor	FE	11111110	254
94	5E	Flag	00	00000000	0
95	5F	PC Maker P/N 1st Character =M	00	00000000	0

HannStar Display Corp.

Document Title	HSD089IFW1-B Formal Specification	Page No.	28/28
Document No.		Revision	1.0

Byte# (Decimal)	Byte# (HEX)	Field Name & Comments	Value (HEX)	Value (BIN)	Value (DEC)
96	60	PC Maker P/N 2nd Character =3	00	00000000	0
97	61	PC Maker P/N 3rd Character =4	00	00000000	0
98	62	PC Maker P/N 4th Character =9	00	00000000	0
99	63	PC Maker P/N 5th Character =5	00	00000000	0
100	64	LCD Supplier EEDID Revision # =1.0	00	0000000	0
101	65	Manufacturer P/N = 1	00	00000000	0
102	66	Manufacturer P/N = 5	00	00000000	0
103	67	Manufacturer P/N = P	00	00000000	0
104	68	Manufacturer P/N = X	00	00000000	0
105	69	Manufacturer P/N = 1	00	00000000	0
106	6A	Manufacturer P/N = 4	00	00000000	0
107	6B	Manufacturer P/N(If <13char, then terminate with ASCII code, set remaining=20h)	00	00000000	0
108	6C	Flag	00	00000000	0
109	6D	Flag	00	00000000	0
110	6E	Flag	00	00000000	0
111	6F	Data Type Tag	FE	11111110	254
112	70	Flag	00	00000000	0
113	71	SMBUS Value = 20 nit	00	00000000	0
114	72	SMBUS Value = 28 nit	00	00000000	0
115	73	SMBUS Value = 40 nit	00	00000000	0
116	74	SMBUS Value = 56 nit	00	00000000	0
117	75	SMBUS Value = 79 nit	00	00000000	0
118	76	SMBUS Value = 111 nit	00	00000000	0
119	77	SMBUS Value = 156 nit	00	00000000	0
120	78	SMBUS Value = max nit	00	00000000	0
121	79	Number of LVDS channels=1	01	00000001	1
122	7A	Panel Self Test (00-Not Present, 01-Present)	00	00000000	0
123	7B	(If<13 char, then terminate with ASCII code 0Ah,set remaining char=20h)	00	00000000	0
124	7C	(If<13 char, then terminate with ASCII code 0Ah,set remaining char=20h)	00	00000000	0
125	7D	(If<13 char, then terminate with ASCII code 0Ah,set remaining char=20h)	00	00000000	0
126	7E	Extension Flag = 00	00	00000000	0
127	7F	Checksum	F4	11110100	244

Note: 1. Checksum will be changed according to LCD module Serial No (HEX Byte 0C~0F)、Week of manufacture (HEX Byte 10)、Year of manufacture (HEX Byte 11) changed.