LCD MODULE SPECIFICATION

Products Name: APAX T1702

43.2CM(17.0 INCH) SXGA(1280*1024)

COLOR TFT LCD MODULE

12V

● Preliminary Specification
This technical specification is tentative and it will be changed without notice.

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Version.2.0

i Contents

ii Record of Revision

Version and Date	Page	Old description	New Description	Remark
0.1. 99/11/20	All	First Edition for Customer	All	
0.2. 99/11/27	3		ii Record of Revision	Add
	5	Physical size 404(W) x 322(H) x 25(D)	Physical size 398.0(W) x328.5(H) x 25.0(D)	Spec. change
0.3 2000/2/9	4	(9) In case if a module …		Delete
	4	(10) Notebook PC Bezel …	LCD monitor housing …	
	4	This module is designed for a display unit of personal computer.		Delete
	4	(Power consumption) 40W	(Power consumption) 30W	
	5	(Line2)TFT/LCD	(Line2)TFT-LCD	
	5	Color/ Chromaticity value	"TBD" added	
	7	CIE white value	"TBD" added	
	7	White luminance at CCFL 7.0mA (center point)	White luminance at CCFL 6.0mA (center point)	
	7		Luminance uniformity(Note 1)	New
	10	(Signal pin 21) RxEIN3+	(Signal pin 21) RxEIN3-	
	18	Signal for Lamp connector (Pin #2 lamp low voltage)	Signal for Lamp connector (Pin #2 lamp high voltage)	
	18	(L63) White Luminance value : " Typ : TBD"	(L63) White Luminance value : " Typ : 235"	
	18	ICFL(CCFL current) value : " Min : 6.5"	ICFL(CCFL current) value : " Min : 5.5"	
	18	ICFL(CCFL current) value : " Typ : 7.0"	ICFL(CCFL current) value : " Typ : 6.0"	
	18	ICFL(CCFL current) value : " Max: 7.5"	ICFL(CCFL current) value : " Max : 6.5"	
	18	VCFL(CCFL Discharge Voltage Value : " Typ : 717"	VCFL(CCFL Discharge Voltage Value : " Typ : 720"	
	18	PCFL(CCFL Power consumption) value : " Typ : 20"	PCFL(CCFL Power consumption) value : " Typ : 17.3"	
	18		PCFL(CCFL Power consumption) value : " Max : 20.0"	New
	19	5.1 Mechanical characteristics	Move to 10.0 Mechanical characteristics	
	19	(Line2)…M2.5 screws.		Delete
	19	5.2 Module thickness		Delete
	19	5.3 Label		Delete
	19	5.4 Vibration & shock	5.0 Vibration, shock & drop	
	19	5.5 Drop test height 75 cm	5.3 Drop test height 60 cm	

	20	6.1.2 shipping conditions : relative humidity : 5% to 100%	6.1.2 shipping conditions : relative humidity : 8% to 95%	
	24~25		10.0 Mechanical characteristics	New

1.0 Handling Precautions

1) Since front polarizer is easily damaged, pay attention not to scratch it.

2) Be sure to turn off power supply when inserting or disconnecting from input connector.

3) Wipe off water drop immediately. Long contact with water may cause discoloration or spots.

4) When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.

5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.

6) Since CMOS LSI is used in this module, take care of static electricity and insure human earth when handling.

7) Do not open nor modify the Module Assembly.

8) Do not press the reflector sheet at the back of the module to any directions.

9) At the insertion or removal of the Signal Interface Connector, be sure not to rotate nor tilt the Interface Connector of the TFT-LCD module.

10) After installation of the TFT-LCD module into an enclosure (LCD monitor housing, for example), do not twist nor bend the TFT -LCD module even momentary. At designing the enclosure, it should be taken into consideration that no bending/twisting forces are applied to the TFT -LCD module from outside. Otherwise the TFT -LCD module may be damaged.

2.0   General Description

This specification applies to the 17.0 inch Color TFT-LCD Module .

The display supports the SXGA (1280(H) x 1024(V)) screen format and 16.7M colors (RGB 8-bits data).

All input signals are 2 Channel LVDS interface compatible.

This module does not contain an inverter card for backlight.

2.1 Display Characteristics

The following items are characteristics summary on the table under 25 ℃ condition:

ITEMS	Unit	SPECIFICATIONS
Screen Diagonal	[mm]	432(17.0")
Active Area	[mm]	337.920 (H) x 270.336(V)
Pixels H x V		1280(x3) x 1024
Pixel Pitch	[mm]	0.264 (per one triad) x 0.264
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		Normally White
White Luminance	[cd/m^2]	250(Typ)
Contrast Ratio		400 : 1 (Typ)
Optical Rise Time/Fall Time	[msec]	45(Typ)
Nominal Input Voltage VDD	[Volt]	+12.0 V
Power Consumption (VDD line + CCFL line)	[Watt]	25W(Max) (w/o Inverter, All black pattern)
Weight	[Grams]	2500 (Typ)
Physical Size	[mm]	398.0(W) x 328.5(H) x 25.0(D) (Typ)
Electrical Interface		Even/Odd R/G/B data(8bits),3 sync signal, Clock
Support Color		16.7M colors (RGB 8-bit data)

Temperature Range
  Operating
  Storage (Shipping)
	
	[^{o}C]
	[^{o}C]
		
		0 to +50
		-20 to +60

2.2 Functional Block Diagram

The following diagram shows the functional block of the 17.0 inches Color TFT-LCD Module:

LCD Drive	Lamp Connector
JAE FI-SE30P-HF or FI-S30P-HF	**JST BHR-04VS-1**
Mating Type JAE FI-S30S	**Mating Type SM04(4.0)B-BHS-1-TB**
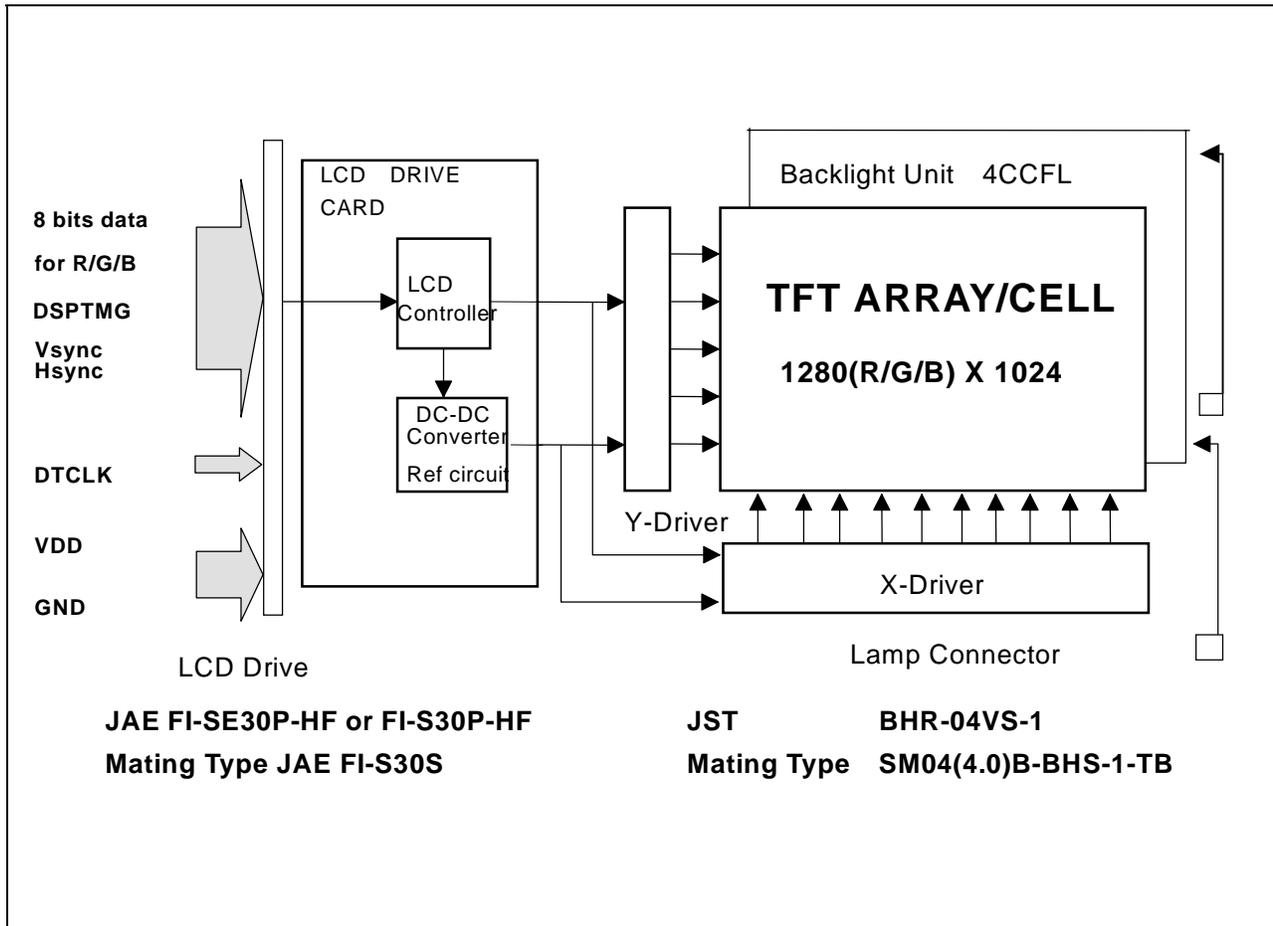
2.3 Optical Characteristics

The optical characteristics are measured under stable conditions at 25℃ (Room Temperature):

Item		Conditions	Min.	Typ.	Max.
Viewing Angle	[degree]	Horizontal (Right)		60	
	[degree]	CR = 10 (Left)		60	
CR: Contrast Ratio	[degree]	Vertical (Upper)		45	
	[degree]	CR = 10 (Lower)		70	
Contrast ratio		Normal Direction	250	400	
Response Time	[msec]	Raising Time	-	30	
	[msec]	Falling Time	-	15	
	[msec]	Raising + Falling	-	45	
Color / Chromaticity		Red x	0.60	0.63	0.66
Coordinates (CIE)		Red y	0.30	0.33	0.36
		Green x	0.27	0.30	0.33
		Green y	0.57	0.60	0.63
		Blue x	0.12	0.15	0.18
		Blue y	0.07	0.10	0.13
Color Coordinates (CIE) White		White x	0.28	0.31	0.34
		White y	0.30	0.33	0.36
Luminance Uniformity (Note 1)	[%]		80	85	-
White Luminance at CCFL 6.0mA(center point)	[cd/m^2]		200	250	-

Note 1 Measure points & Diagram

$$x = \frac{\text{Display Length distance}}{4} \text{ [mm]}$$

$$y = \frac{\text{Display Width distance}}{4} \text{ [mm]}$$

$$\text{Uniformity} = \frac{\text{Minimum Luminance in 5 Points (1-5)}}{\text{Maximum Luminance in 5 Points (1-5)}}$$

LCD Display area = 337.9 x 270.4 mm
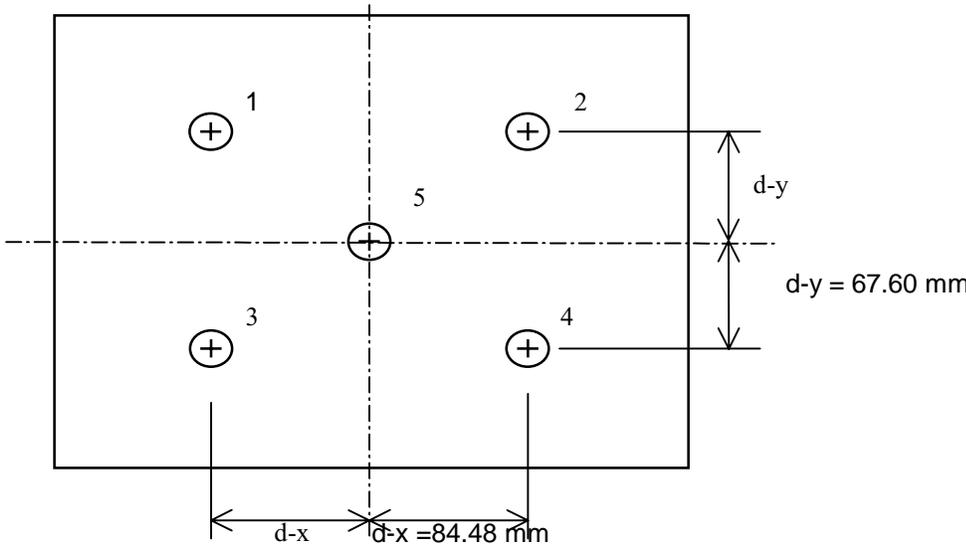
2.4 Pixel format image
Following figure shows the relationship of the input signals and LCD pixel format.

3.0 Electrical characteristics

3.1 Absolute Maximum Ratings

Absolute maximum ratings of the module is as following:

Item	Symbol	Min	Max	Unit	Conditions
Logic/LCD Drive Voltage	VIN	-0.3	+13.2	[Volt]	
Select LVDS data order	SELLVDS	-0.3	+3.3	[Volt]	
CCFL Inrush current	ICFLL	-	38	[mA]	Note 1
CCFL Current	ICFL	-	7.6	[mA] rms	
Operating Temperature	TOP	0	+50	[^{o}C]	Note 2
Operating Humidity	HOP	8	95	[%RH]	Note 2
Storage Temperature	TST	-20	+60	[^{o}C]	Note 2
Storage Humidity	HST	8	95	[%RH]	Note 2

Note 1 : Maximum Wet-Bulb should be 39℃ and No condensation.

Note 2 : Duration=50 msec.

3.2 Connectors

Physical interface is described as for the connector on module.

These connectors are capable of accommodating the following signals and will be following components.

Connector Name / Designation	Interface Connector
Manufacturer	JAE or compatible
Type / Part Number	FI-SE30P-HF or FI-S30P-HF
Mating Housing/Part Number	FI-S30S

Connector Name / Designation	Lamp Connector/Backlight lamp
Manufacturer	JST
Type / Part Number	BHR-04VS-1
Mating Type / Part Number	SM04(4.0)B-BHS-1-TB

3.3 Signal Pin

Pin#	Signal Name	Pin#	Signal Name
1	VIN	2	VIN
3	VIN	4	AGND
5	AGND	6	AGND
7	SELLVDS	8	Reserved (No connection)
9	DGND	10	RxOIN3+
11	RxOIN3-	12	RxOCLKIN+
13	RxOCLKIN-	14	RxOIN2+
15	RxOIN2-	16	RxOIN1+
17	RxOIN1-	18	RxOIN0+
19	RxOIN0-	20	RxEIN3+
21	RxEIN3-	22	RxECLKIN+
23	RxECLKIN-	24	RxEIN2+
25	RxEIN2-	26	RxEIN1+
27	RxEIN1-	28	RxEIN0+
29	RxEIN0-	30	DGND

3.4 Signal Description

The module using a pair of LVDS receiver SN75LVDS82(Texas Instruments) or compatible. LVDS is a differential signal technology for LCD interface and high speed data transfer device. Transmitter shall be SN75LVDS83(negative edge sampling) or compatible**.** The first LVDS port(RxExxx) transmits even pixels while the second LVDS port(RxOxxx) transmits odd pixels.
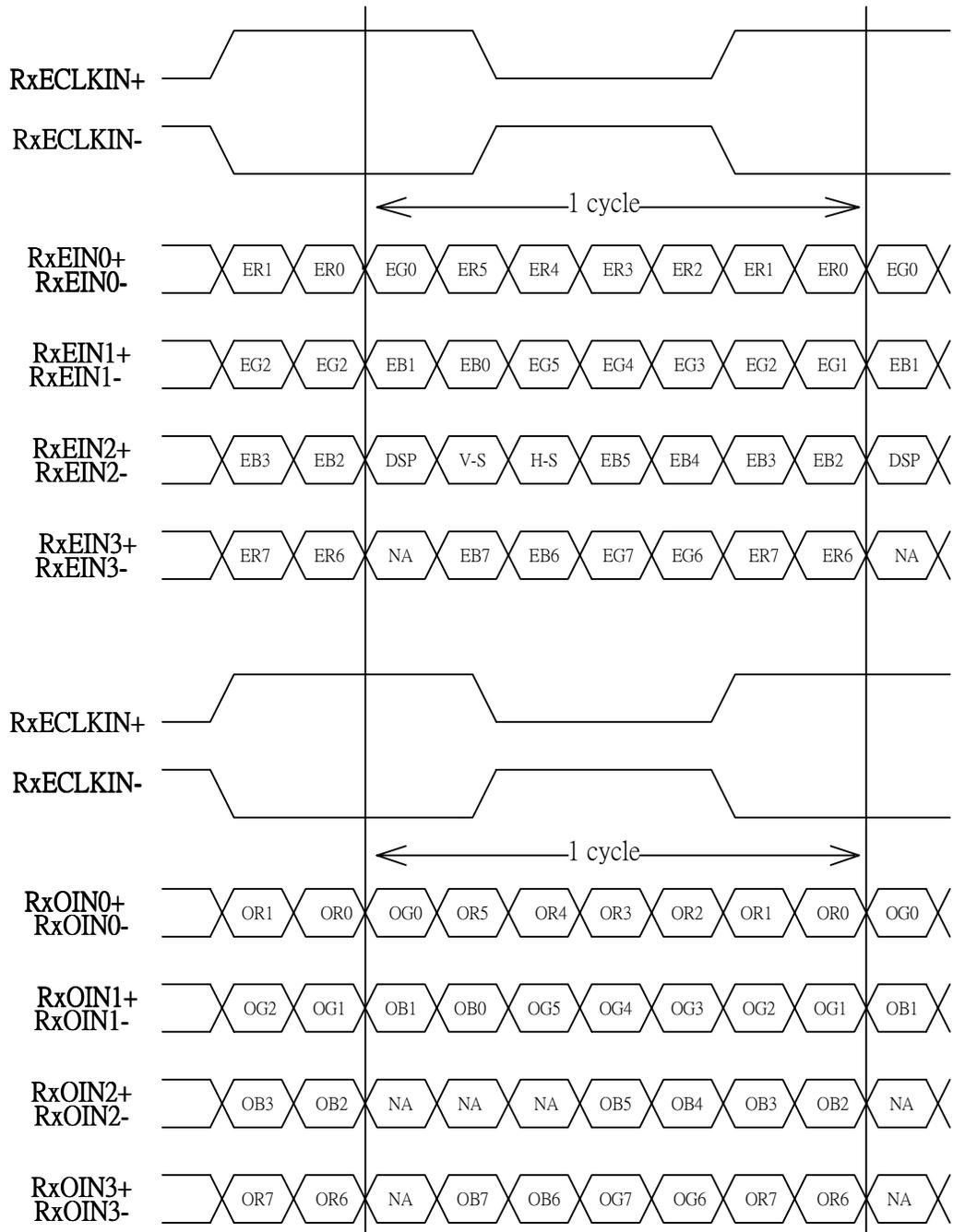
PIN #	SIGNAL NAME	DESCRIPTION
1	VIN	+12V POWER SUPPLY
2	VIN	+12V POWER SUPPLY
3	VIN	+12V POWER SUPPLY
4	AGND	Ground for VIN
5	AGND	Ground for VIN
6	AGND	Ground for VIN
7	SELLVDS	Select LVDS data order
8	Reserved	No Connection
9	DGND	Ground for LVDS signal
10	RxOIN3+	Positive LVDS differential data input (Odd data)
11	RxOIN3-	Negative LVDS differential data input (Odd data)
12	RxOCLKIN+	Positive LVDS differential clock input (Odd clock)
13	RxOCLKIN-	Negative LVDS differential clock input (Odd clock)
14	RxOIN2+	Positive LVDS differential data input (Odd data)
15	RxOIN2-	Negative LVDS differential data input (Odd data)
16	RxOIN1+	Positive LVDS differential data input (Odd data)
17	RxOIN1-	Negative LVDS differential data input (Odd data)
18	RxOIN0+	Positive LVDS differential data input (Odd data)
19	RxOIN0-	Negative LVDS differential data input (Odd data)
20	RxEIN3+	Positive LVDS differential data input (Even data)
21	RxEIN3-	Negative LVDS differential data input (Even data)
22	RxECLKIN+	Positive LVDS differential clock input (Even clock)
23	RxECLKIN-	Negative LVDS differential clock input (Even clock)
24	RxEIN2+	Positive LVDS differential data input (Even data,H-Sync,V-Sync,DSPTMG)
25	RxEIN2-	Negative LVDS differential data input (Even data,H-Sync,V-Sync,DSPTMG)
26	RxEIN1+	Positive LVDS differential data input (Even data)
27	RxEIN1-	Negative LVDS differential data input (Even data)
28	RxEIN0+	Positive LVDS differential data input (Even data)
29	RxEIN0-	Negative LVDS differential data input (Even data)
30	DGND	Ground for LVDS signal

Note: Input signals of odd and even clock shall be the same timing.

LVDS DATA Name	Description
DSP	Display Timing :When the signal is high, the pixel data shall be valid to be displayed
V-S	Vertical Sync :Both Positive and Negative polarity are acceptable
H-S	Horizontal Sync :Both Positive and Negative polarity are acceptable

TI LVDS X'mitter SN75LVDS83	Module LVDS signal SELLVDS(interface connector pin7)	
Signal Name	Low(open)	High
D0	Red0	Red2
D1	Red1	Red3
D2	Red2	Red4
D3	Red3	Red5
D4	Red4	Red6
D5	Red7	Red1
D6	Red5	Red7
D7	Green0	Green2
D8	Green1	Green3
D9	Green2	Green4
D10	Green6	Green0
D11	Green7	Green1
D12	Green3	Green5
D13	Green4	Green6
D14	Green5	Green7
D15	Blue0	Blue2
D16	Blue6	Blue0
D17	Blue7	Blue1
D18	Blue1	Blue3
D19	Blue2	Blue4
D20	Blue3	Blue5
D21	Blue4	Blue6
D22	Blue5	Blue7
D23	NA	NA
D24	H Sync	H Sync
D25	V Sync	V Sync
D26	Display Timing	Display Timing
D27	Red6	Red0

(SELLVDS=Low)

RxECLKIN+

RxECLKIN-

←————————1 cycle————————→

RxEIN0+
RxEIN0- | ER1 | ER0 | EG0 | ER5 | ER4 | ER3 | ER2 | ER1 | ER0 | EG0 |

RxEIN1+
RxEIN1- | EG2 | EG2 | EB1 | EB0 | EG5 | EG4 | EG3 | EG2 | EG1 | EB1 |

RxEIN2+
RxEIN2- | EB3 | EB2 | DSP | V-S | H-S | EB5 | EB4 | EB3 | EB2 | DSP |

RxEIN3+
RxEIN3- | ER7 | ER6 | NA | EB7 | EB6 | EG7 | EG6 | ER7 | ER6 | NA |

RxECLKIN+

RxECLKIN-

←————————1 cycle————————→

RxOIN0+
RxOIN0- | OR1 | OR0 | OG0 | OR5 | OR4 | OR3 | OR2 | OR1 | OR0 | OG0 |

RxOIN1+
RxOIN1- | OG2 | OG1 | OB1 | OB0 | OG5 | OG4 | OG3 | OG2 | OG1 | OB1 |

RxOIN2+
RxOIN2- | OB3 | OB2 | NA | NA | NA | OB5 | OB4 | OB3 | OB2 | NA |

RxOIN3+
RxOIN3- | OR7 | OR6 | NA | OB7 | OB6 | OG7 | OG6 | OR7 | OR6 | NA |

Note: R/G/B data 7:MSB, R/G/B data 0:LSB

(SELLVDS=High)

RxECLKIN+

RxECLKIN-

←————————1 cycle————————→

RxEIN0 + RxEIN0 -	ER3	ER2	EG2	ER7	ER6	ER5	ER4	ER3	ER2	EG2
RxEIN1 + RxEIN1 -	EG4	EG3	EB3	EB2	EG7	EG6	EG5	EG4	EG3	EB3
RxEIN2 + RxEIN2 -	EB5	EB4	DSP	V-S	H-S	EB7	EB6	EB5	EB4	DSP
RxEIN3 + RxEIN3 -	ER1	ER0	NA	EB1	EB0	EG1	EG0	ER1	ER0	NA

RxECLKIN+

RxECLKIN-

←————————1 cycle————————→

RxOIN0 + RxOIN0 -	OR3	OR2	OG2	OR7	OR6	OR5	OR4	OR3	OR2	OG2
RxOIN1 + RxOIN1 -	OG4	OG3	OB3	OB2	OG7	OG6	OG5	OG4	OG3	OB3
RxOIN2 + RxOIN2 -	OB5	OB4	NA	NA	NA	OB7	OB6	OB5	OB4	NA
RxOIN3 + RxOIN3 -	OR1	OR0	NA	OB1	OB0	OG1	OG0	OR1	OR0	NA

Note: R/G/B data 7:MSB, R/G/B data 0:LSB
: The interface card has a 100-ohm resistor between positive and negative lines of each LVDS signal input on the internal circuit.
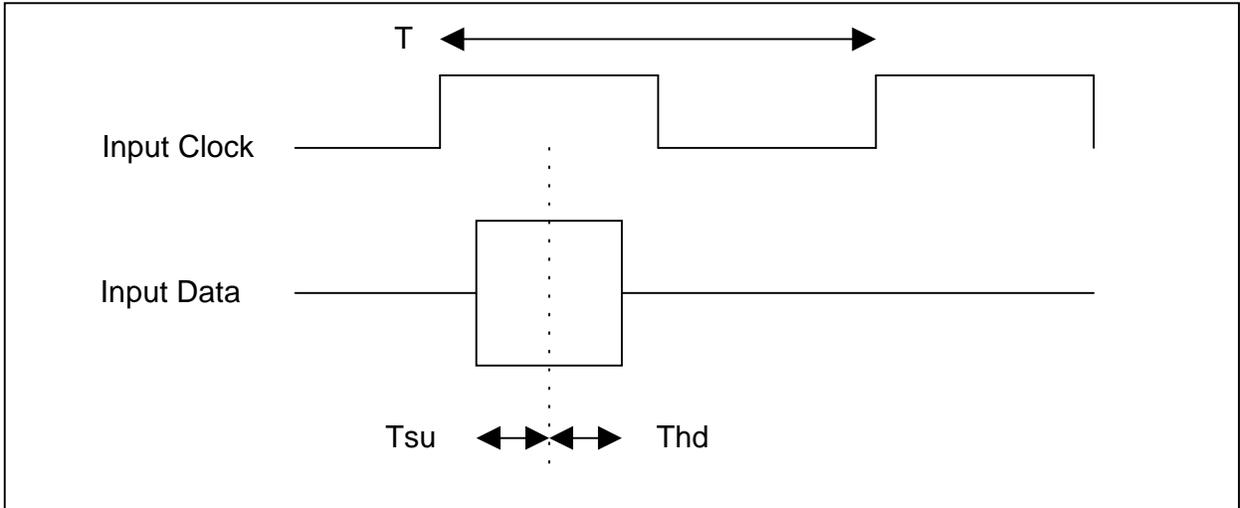
3.5 Signal Electrical Characteristics

Input signals shall be low or Hi-Z state when Vin is off
It is recommended to refer the specifications of SN75LVDS82DGG(Texas Instruments) in detail.

Each signal characteristics are as follows;

Parameter	Condition	Min	Max	Unit
Vth	Differential Input High Voltage(Vcm=+1.2V)		100	[mV]
Vtl	Differential Input Low Voltage(Vcm=+1.2V)	-100		[mV]

| Name	Description	Min	Typ	Max	Unit	Note
SELLVDS	High voltage	2	3	3.3	[V]	
	Low voltage	-0.1	0	0.7	[V]	
	Current	-1		1	[mA]	

3.6 Interface Timings

Basically, interface timings described here is not actual input timing of LCD module but output timing of SN75LVDS82DGG (Texas Instruments) or equivalent.

3.6.1 Timing Characteristics

Signal	Item	Symbol	MIN	TYP	MAX	Unit
DTCLK	Freq.	Fdck	50	54	56.8	MHz
DTCLK	Cycle	Tck	17.6	18.5	20	ns
+V-Sync	Frame Rate	1/Tv	56.25	60.02	61	Hz
+V-Sync	Cycle	Tv	16.39	16.66	17.78	ms
+V-Sync	Cycle	Tv	1035	1066	2047	lines
+V-Sync	Active level	Tva	3	3		lines
+V-Sync	V-back porch	Tvb	7	38	63	lines
+V-Sync	V-front porch	Tvf	1	1		lines
+DSPTMG	V-Line	m	-	1024	-	lines
+H-Sync	Scan rate	1/Th	-	63.98	-	KHz
+H-Sync	Cycle	Th	844	844	1023	Tck
+H-Sync	Active level	Tha(*1)	4	56		Tck
+H-Sync	Back porch	Thb(*1)	4	124		Tck
+H-Sync	Front porch	Thf	4	24		Tck
+DSPTMG	Display Pixels	n	-	640	-	Tck

Note: Typical value is refer to VESA STANDARD ,   (*1) Tha+Thb should be less than 1024 Tck.

3.6.2 Timing Definition
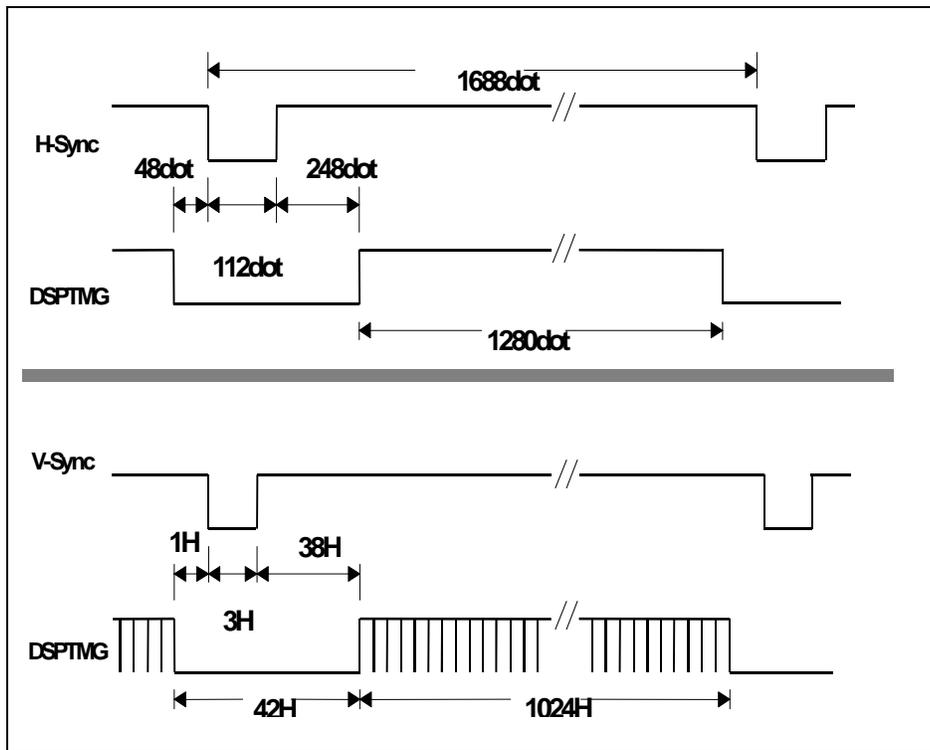
Note :1280X1024 at 60 Hz (VESA STANDARD), Horizontal line rate :15.63us, Dot clock :108.000MHz.

3.7 Power Consumption

Input power specifications are as follows;

Symbol	Parameter	Min	Typ	Max	Units	Condition
VDD	Logic/LCD Drive Voltage	11.4	12	12.6	[Volt]	
PDD	VDD Power		4.5	6.0	[Watt]	Vin=12V ,All Black Pattern
VDDrp	Allowable Logic/LCD Drive Ripple Voltage			100	[mV] p-p	
VDDns	Allowable Logic/LCD Drive Ripple Noise			100	[mV] p-p	

3.8 Power ON/OFF Sequence

Vin power and lamp on/off sequence is as follows. Interface signals are also shown in the chart. Signals from any system shall be Hi-Z state or low level when Vin is off.
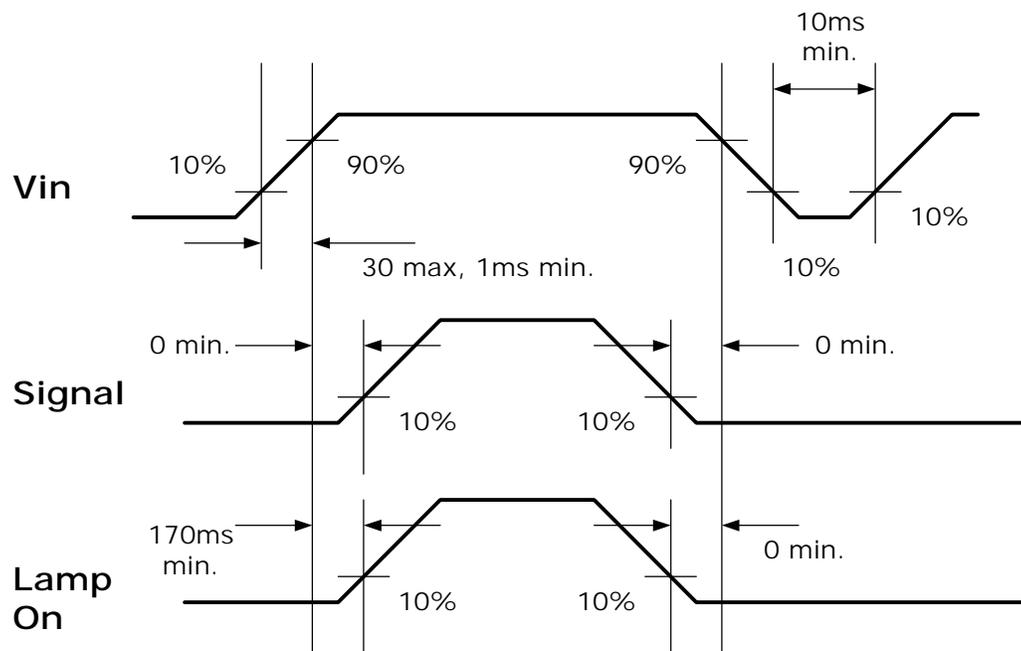
4.0 Backlight Characteristics

4.1 Signal for Lamp connector

Pin #	Signal Name
1	Lamp High Voltage
2	Lamp High Voltage
3	No Connection
4	Ground

4.2 Parameter guide line for CFL Inverter

Symbol	Parameter	Min	Typ	Max	Units	Condition
(L255)	White Luminance	200	250	-	[cd/m^2]	(Ta=25°C)
ICFL	CCFL current	5.5	6.0	6.5	[mA] rms	(Ta=25°C)
ICFLL	CCFL Inrush current	-	26	34	[mA]	**Note 1**
fCFL	CCFL Frequency	40	50	80	[KHz]	(Ta=25°C) **Note 2**
ViCFL	CCFL Ignition Voltage			1700	[Volt] rms	(Ta=0°C) **Note 4**
VCFL	CCFL Discharge Voltage (Reference)		720	863	[Volt] rms	(Ta=25°C) **Note 3**
PCFL	CCFL Power consumption		17.3	19.0	[Watt]	(Ta=25°C) **Note 3**

Note 1: Duration=50 [msec]
Note 2: CCFL Frequency should be carefully determined to avoid interference between inverter and TFT LCD
Note 3: Calculator value for reference (ICFL×VCFL=PCFL)
Note 4: CCFL inverter should be able to give out a power that has a generating capacity of over 1700 voltage.
Lamp units need 1700 voltage minimum for ignition

5.0 Vibration, Shock, and Drop
5.1 Vibration & Shock

- Frequency: 10 - 200Hz
- Sweep: 30 Minutes each Axis (X, Y, Z)
- Acceleration: 1.5G(10~200Hz P- P)
- Test method:

Acceleration (G)	1.5
Frequency (Hz)	10~200~10
Active time(min)	30

5.2 Shock Test Spec:

Acceleration (G) –a	35
Active time -b	20
Wave form	half-sin
Times	1

- Direction: $\pm$X , $\pm$Y, $\pm$Z

5.3 Drop test

Package test: The drop height is 60 cm.

6.0 Environment

The display module will meet the provision of this specification during operating condition or after storage or shipment condition specified below. Operation at 10% beyond the specified range will not cause physical damage to the unit.

6.1 Temperature and Humidity
6.1.1 Operating Conditions

The display module operates error free, when operated under the following conditions;

Temperature	0 ^{0}C to 50 ^{0}C
Relative Humidity	8% to 95%
Wet Bulb Temperature	39.0 ^{0}C

6.1.2 Shipping Conditions

The display module operates error free, after the following conditions;

Temperature	-20 ^{0}C to 60 ^{0}C
Relative Humidity	8% to 95%
Wet Bulb Temperature	39.0 ^{0}C

6.2 Atmospheric Pressure

The display assembly is capable of being operated without affecting its operations over the pressure range as following specified;

	Pressure	Note
Maximum Pressure	1040hPa	0m = sea level
Minimum Pressure	674hPa	3048m = 10.000 feet

Note : Non-operation attitude limit of this display module = 30,000 feet. = 9145 m.

6.3 Thermal Shock

The display module will not sustain damage after being subjected to 100 cycles of rapid temperature change. A cycle of rapid temperature change consists of varying the temperature from -20^{0}C to 60^{0}C, and back again.

Thermal shock cycle   -20 ^{0}C for 30min
                                                60 ^{0}C for 30min

Power is not applied during the test. After temperature cycling, the unit is placed in normal room ambient for at least 4 hours before powering on.

7.0 Reliability

This display module and the packaging of that will comply following standards.

7.1 Failure Criteria

The display assembly will be considered as failing unit when it no longer meets any of the requirements stated in this specification. Only as for maximum white luminance, following criteria is applicable.

7.2 Failure Rate

The average failure rate of the display module (from first power-on cycle till 1,000 hours later) will not exceed 1.0%. The average failure rate of the display module from 1,000 hours until 16,000 hours will not exceed 0.70% per 1000 hours.

7.2.1 Usage

The assumed usage for the above criteria is:
- 220 power-on hours per month
- 500 power on/off cycles per month
- Maximum brightness setting
- Operation to be within office environment (25^0C typical)

7.2.2 Component De-rating

All the components used in this device will be checked the load condition to meet the failure rate criteria.

7.3 CCFL Life

The assumed CCFL Life will be longer than 30,000 hours under stable condition at 25 +/_ 5C;standard current at 6.0 +/-0.5 mA.

7.4 ON/OFF Cycle

The display module will be capable of being operated over the following ON/OFF Cycles.

ON/OFF	Value	Cycle
+Vin and CCFL power	35,000	10 seconds on/10 seconds off

8.0　Safety

8.1 Sharp Edge Requirements

There will be no sharp edges or comers on the display assembly that could cause injury.

8.2 Materials
8.2.1 Toxicity

There will be no carcinogenic materials used anywhere in the display module. If toxic materials are used, they will be reviewed and approved by the responsible ADT Toxicologist.

8.2.2 Flammability

All components including electrical components that do not meet the flammability grade UL94-V1 in the module will complete the flammability rating exception approval process. The printed circuit board will be made from material rated 94-V1 or better. The actual UL flammability rating will be printed on the printed circuit board.

8.3 Capacitors

If any polarized capacitors are used in the display assembly, provisions will be made to keep them from being inserted backwards.

8.4 Hazardous Voltages

Any point exceeding 42.4 volts meets the requirement of the limited current circuit. The current through a $2K\Omega$ resistance is less than 0.7 x f (kHz) mA.

9.0 Other requirements

9.1 National Test Lab Requirement (TBD)

The display module will satisfy all requirements for compliance to

UL 1950, First Edition	U.S.A. Information Technology Equipment
CSA C22.2 No.950-M89	Canada, Information Technology Equipment
EEC 950	International, Information Technology Equipment
EN 60 950	International, Information Processing Equipment
	(European Norm for IEC950)

10.0 Mechanical Characteristics

NOTE
1 BACKLIGHT: 4 COLD CATHODE FLUORESCENT LAMPS
2 I/F CONNECTOR : JAE FI-SE30P-HF
3 THIS DIMENSION EXCLUDES DEFORMATION
4 TOLERANCE WITHOUT SPECIFIED IS 0.5 MM
5 LAMP CABLE CONNECTOR TO BE JST BHR-04VS-1

SECTION B-B

188

Y

X

122.75

REF 39

REF 10.8

I/F CONNECTOR

71.2 80±5
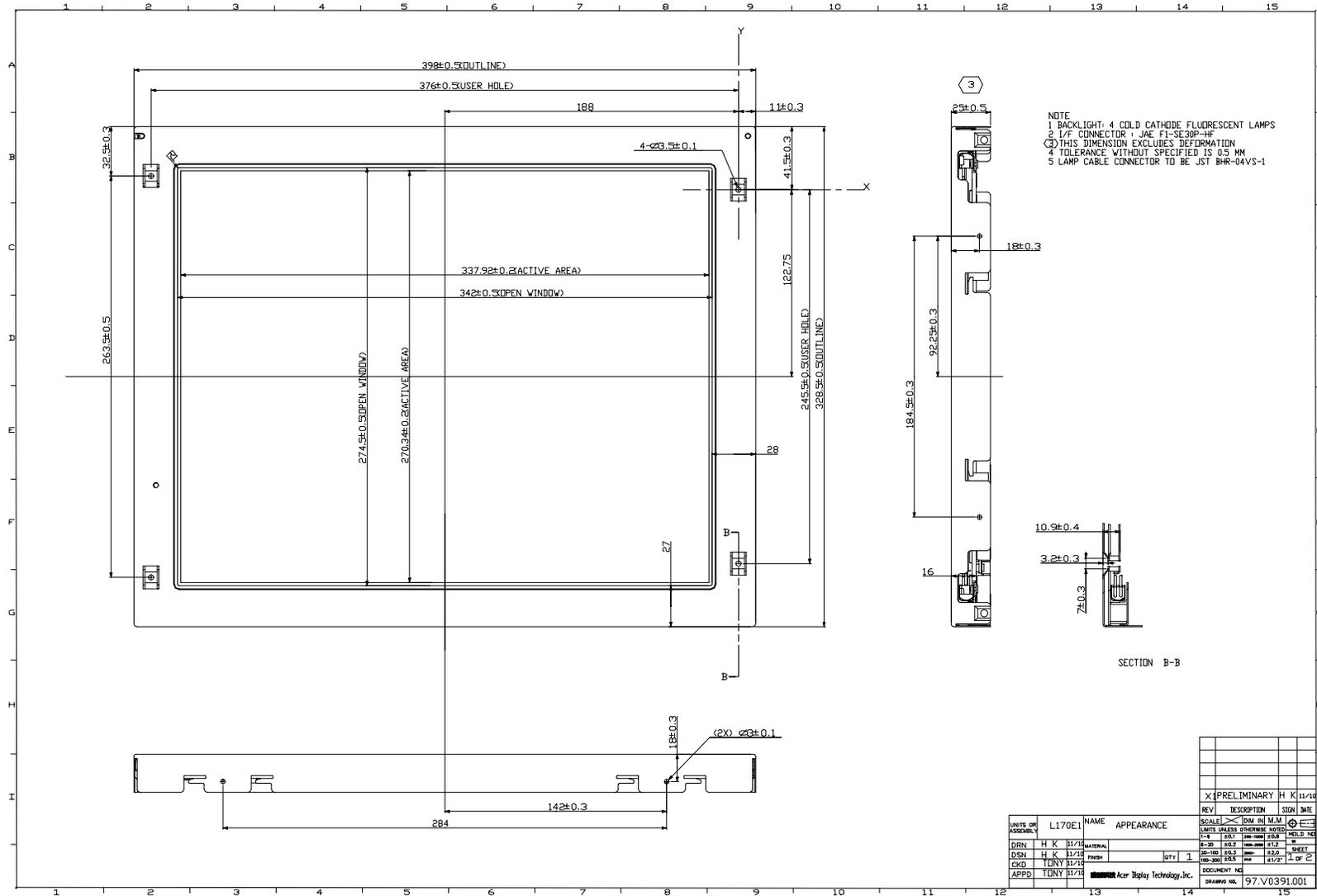
UNITS OR ASSEMBLY	L170E1	NAME	APPEARANCE
DRN	H K	11/10	MATERIAL
DSN	H K	11/10	FINISH
CKD	TONY	11/10	QTY 1
APPD	TONY	11/10	Acer Display Technology,Inc.

X2	REMOVE STANDOFF	H K	2/16
X1	PRELIMINARY	H K	11/10
REV	DESCRIPTION	SIGN	DATE

SCALE   DIM IN M.M
LIMITS UNLESS OTHERWISE NOTED
MOLD NO

SHEET 2 OF 2

DOCUMENT NO

DRAWING NO.   97.V0391.001