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- () Preliminary Specifications
- (V) Final Specifications

Module	12.5" (12.49") HD 16:9 Color TFT-LCD with LED Backlight design
Model Name	B125XTN01.0 (H/W:0A)
Note (LED Backlight with driving circuit design

Customer	Date
Checked & Approved by	Date
Note: This Specification is su	abject to change without

Approved by	Date		
Marcus Yen	12/25/2012		
Prepared by	Date		
Eric Hou	<u>12/25/2012</u>		
NBBU Marketing Division AU Optronics corporation			

notice.



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Record of Revision

V	ersion and Date	Page	Old description	New Description	Remark
0.1	2012/08/30	All	First Edition for Customer		
0.2	2012/11/05	5		Power consumption	
		11		Functional Block Dirgam	
		24		Display Port Panel BL power sequence timing parameter	
		30		EDID Description	
0.3	2012/11/21	11		Remove DCR form Functional Block Diagram	
		19	Pin 1:DCR	Pin 1:NC	
1.0	2012/12/25	All	Final Spec		
		27		Label position shift to left hand side	



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1. 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 Module.
- 11) After installation of the TFT Module into an enclosure (Notebook PC Bezel, for example), do not twist nor bend the TFT Module even momentary. At designing the enclosure, it should be taken into consideration that no bending/twisting forces are applied to the TFT Module from outside. Otherwise the TFT Module may be damaged.
- 12) Small amount of materials having no flammability grade is used in the LCD module. The LCD module should be supplied by power complied with requirements of Limited Power Source (IEC60950 or UL1950), or be applied exemption.
- 13) Disconnecting power supply before handling LCD modules, it can prevent electric shock, DO NOT TOUCH the electrode parts, cables, connectors and LED circuit part of TFT module that a LED light bar build in as a light source of back light unit. It can prevent electrostatic breakdown.



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B125XTN01.0 is a Color Active Matrix Liquid Crystal Display composed of a TFT LCD panel, a driver circuit, and LED backlight system. The screen format is intended to support the 16:9 HD, 1366(H) x768(V) screen and 262k colors (RGB 6-bits data driver) with LED backlight driving circuit. All input signals are eDP(Embedded DisplayPort) interface compatible.

B125XTN01.0 is designed for a display unit of notebook style personal computer and industrial machine.

2.1 General Specification

The following items are characteristics summary on the table at 25 °C condition:

Items	Unit	Specifications					
Screen Diagonal	[mm]	317.3					
Active Area	[mm]	276.615 x 15	5.52				
Pixels H x V		1366x3(RGE	3) x 768				
Pixel Pitch	[mm]	0.2025x0.202	25				
Pixel Format		R.G.B. Vertical Stripe					
Display Mode		Normally White					
White Luminance (ILED=23mA) (Note: ILED is LED current)	[cd/m ²]	200 typ. (5 points average) 170 min. (5 points average)					
Luminance Uniformity		1.25 max. (5 points)					
Contrast Ratio		400 typ	400 typ				
Response Time	[ms]	16 typ / 25 N	16 typ / 25 Max				
Nominal Input Voltage VDD	[Volt]	+3.3 typ.					
Power Consumption	[Watt]	2.9 max. (Inc	2.9 max. (Include Logic and Blu power)				
Weight	[Grams]	250 max.					
Physical Size	[mm]		Min.	Тур.	Max.		
Include bracket		Length	290.0	290.5	291.0		
		Width	180.9	181.4	181.9		
		Thickness	-	-	3.0		
Electrical Interface		1 Lane eDP1	.2				
Glass Thickness	[mm]	0.4					
Surface Treatment		Anti Glare, Har	dness 3H, Reflec	ction 4.3%			
Support Color		262K colors (RGB 6-bit)					
Temperature Range Operating Storage (Non-Operating)	[°C]	0 to +50 -20 to +60					
RoHS Compliance		RoHS Comp	liance				



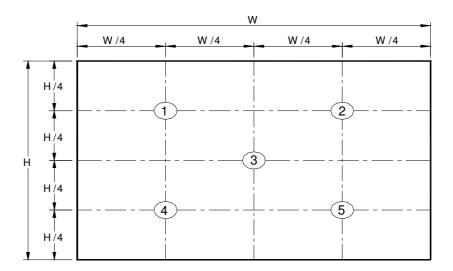
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The optical characteristics are measured under stable conditions at 25 °C (Room Temperature):

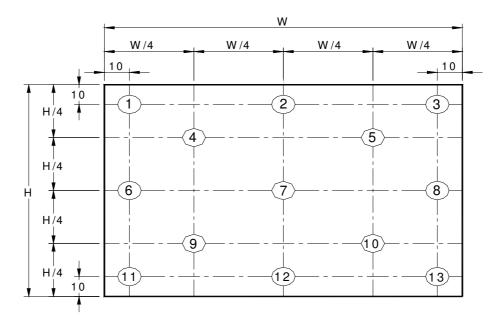
Item		Symbol	Conditions	Min.	Тур.	Max.	Unit	Note
White Lumin			5 points average	170	200	-	cd/m ²	1, 4, 5.
Viewing Angle		θ r θ l	Horizontal (Right) CR = 10 (Left)	40 40	45 45		degree	
		ф н ф г	Vertical (Upper) CR = 10 (Lower)	15 35	20 40	-		4, 9
Luminance Uniformity		δ sp	5 Points	-	-	1.25		1, 3, 4
Luminance Uniformity		δ 13₽	13 Points	-	-	1.6		2, 3, 4
Contrast Ratio		CR		300	400	-		4, 6
Cross talk		%				4		4, 7
Response Time		\mathbf{T}_{RT}	Rising + Falling	-	16	25	msec	4, 8
	Red	Rx		0.550	0.580	0.610		
	Red	Ry		0.305	0.335	0.365		
0.1.7	Green	Gx		0.300	0.330	0.360		
Color / Chromaticity	Giccii	Gy		0.535	0.565	0.595		
Coodinates	Dina	Bx	CIE 1931	0.125	0.155	0.185		4
	Blue	By		0.110	0.140	0.170		
	737L:4-	Wx		0.283	0.313	0.343		
	White	Wy		0.299	0.329	0.359		
NTSC		%		_	45	-		

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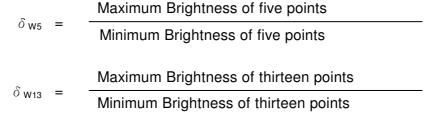
Note 1: 5 points position (Ref: Active area)



Note 2: 13 points position (Ref: Active area)



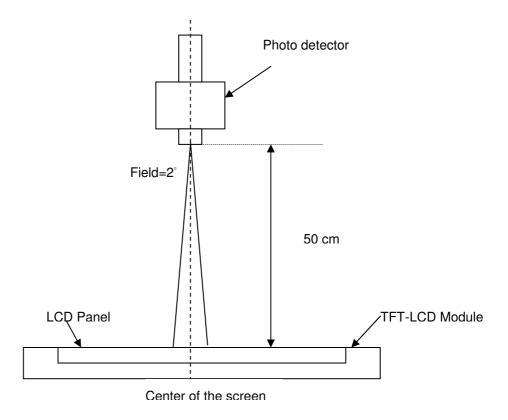
Note 3: The luminance uniformity of 5 or 13 points is defined by dividing the maximum luminance values by the minimum test point luminance



Note 4: Measurement method

The LCD module should be stabilized at given temperature for 30 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 30 minutes in a

stable, windless and dark room, and it should be measured in the center of screen.



Note 5: Definition of Average Luminance of White (Y_L):

Measure the luminance of gray level 63 at 5 points \cdot Y_L = [L (1)+ L (2)+ L (3)+ L (4)+ L (5)] / 5 L (x) is corresponding to the luminance of the point X at Figure in Note (1).

Note 6: Definition of contrast ratio:

Contrast ratio is calculated with the following formula.

Note 7: Definition of Cross Talk (CT)

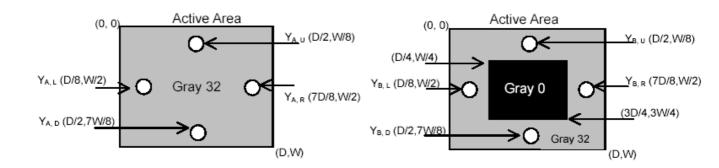
$$CT = | Y_B - Y_A | / Y_A \times 100 (\%)$$

Where

YA = Luminance of measured location without gray level 0 pattern (cd/m2)

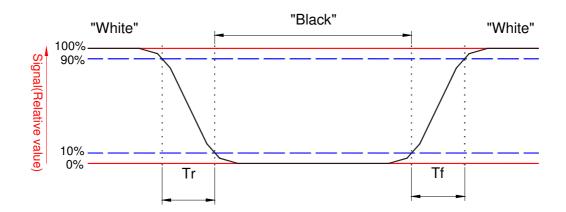
 $Y_B = Luminance$ of measured location with gray level 0 pattern (cd/m2)

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Note 8: Definition of response time:

The output signals of BM-7 or equivalent are measured when the input signals are changed from "Black" to "White" (falling time) and from "White" to "Black" (rising time), respectively. The response time interval between the 10% and 90% of amplitudes. Refer to figure as below.

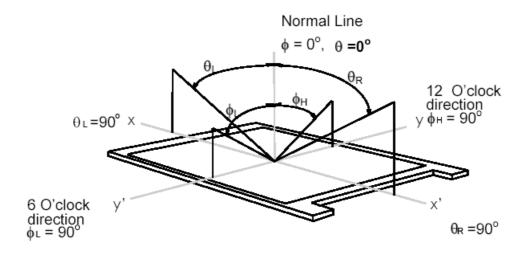




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Note 9. Definition of viewing angle

Viewing angle is the measurement of contrast ratio ≥ 10 , at the screen center, over a 180° horizontal and 180° vertical range (off-normal viewing angles). The 180° viewing angle range is broken down as follows; 90° (θ) horizontal left and right and 90° (Φ) vertical, high (up) and low (down). The measurement direction is typically perpendicular to the display surface with the screen rotated about its center to develop the desired measurement viewing angle.

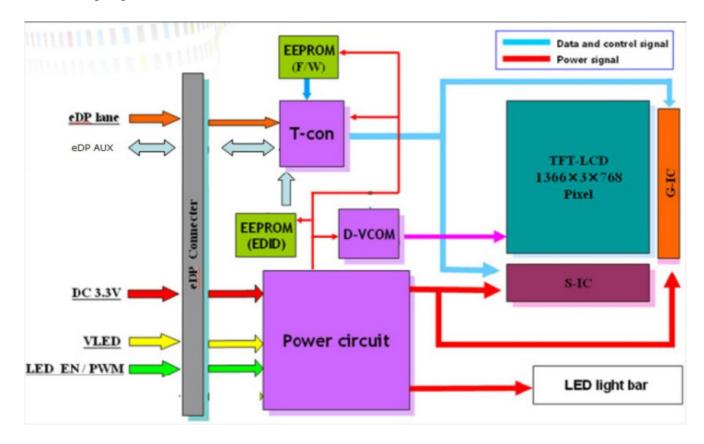




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3. Functional Block Diagram

The following diagram shows the functional block of the 12.5 inches wide Color TFT/LCD 30 Pin





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4. Absolute Maximum Ratings

An absolute maximum rating of the module is as following:

4.1 Absolute Ratings of TFT LCD Module

Item	Symbol	Min	Max	Unit	Conditions
Logic/LCD Drive Voltage	Vin	-0.3	+4.0	[Volt]	Note 1,2

4.2 Absolute Ratings of Environment

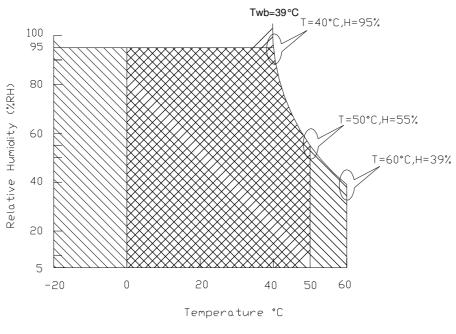
Item	Symbol	Min	Max	Unit	Conditions
Operating Temperature	TOP	0	+50	[°C]	Note 4
Operation Humidity	НОР	5	95	[%RH]	Note 4
Storage Temperature	TST	-20	+60	[°C]	Note 4
Storage Humidity	HST	5	95	[%RH]	Note 4

Note 1: At Ta (25°C)

Note 2: Permanent damage to the device may occur if exceed maximum values

Note 3: LED specification refer to section 5.2

Note 4: For quality performance, please refer to AUO IIS (Incoming Inspection Standard).



Operating Range

Storage Range

+

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5.1 TFT LCD Module

5.1.1 Power Specification

Input power specifications are as follows;

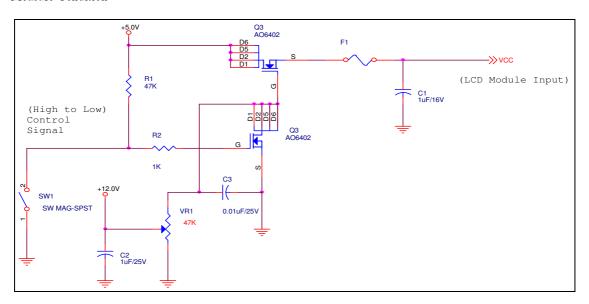
The power specification are measured under 25°C and frame frenquency under 60Hz

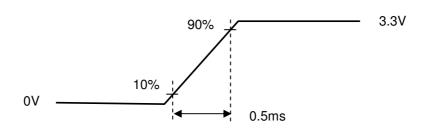
Symble	Parameter	Min	Тур	Max	Units	Note
VDD	Logic/LCD Drive	3.0	3.3	3.6	[Volt]	
	Voltage					
PDD	VDD Power	-	-	0.75	[Watt]	Note 1
IDD	IDD Current	-	-	227	[mA]	Note 1
IRush	Inrush Current	-	-	2000	[mA]	Note 2
VDDrp	Allowable	-	_	100	[mV]	
	Logic/LCD Drive				p-p	
	Ripple Voltage					

Note 1: Maximum Measurement Condition: Black Pattern at 3.3V driving voltage. (Pmax=V3.3 x Iblack)

Typical Measurement Condition: Mosaic Pattern

Note 2: Measure Condition



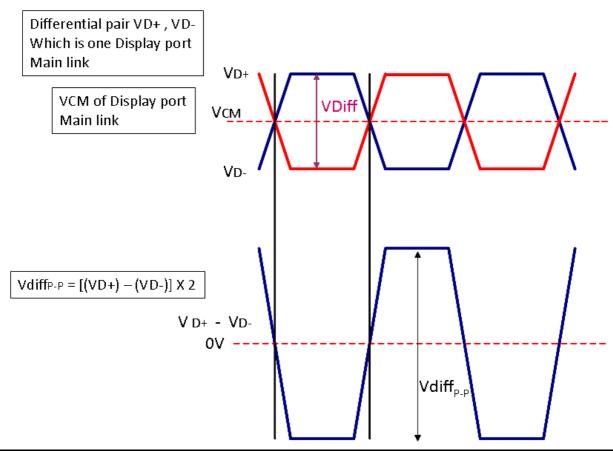


5.1.2 Signal Electrical Characteristics

Input signals shall be low or High-impedance state when VDD is off.

Signal electrical characteristics are as follows;

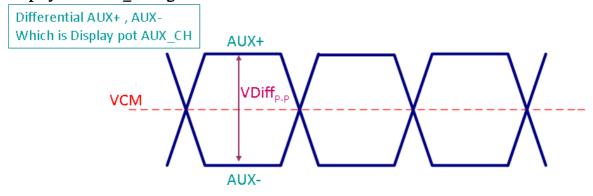
Display Port main link signal:



	Display port main link					
		Min	Тур	Max	unit	
VCM	RX input DC Common Mode Voltage		0		V	
VDiff _{P-P}	Peak-to-peak Voltage at a receiving Device	100		1320	mV	

Follow as VESA display port standard V1.2

Display Port AUX_CH signal:



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	Display port AUX_CH							
		Min	Тур	Max	unit			
VCM	AUX DC Common Mode Voltage		0		V			
VDiff _{P-P}	AUX Peak-to-peak Voltage at a receiving Device	0.4	0.6	0.8	V			

Follow as VESA display port standard V1.2.

Display Port VHPD signal:

	Display port VHPD				
		Min	Тур	Max	unit
VHPD	HPD Voltage	2.25		3.6	V

Follow as VESA display port standard V1.2.



5.2 Backlight Unit

5.2.1 LED characteristics

Parameter	Symbol	Min	Тур	Max	Units	Condition
Backlight Power Consumption	PLED	-	-	2.15	[Watt]	(Ta=25°C), Note 1 Vin =12V
LED Life-Time	N/A	15,000	-	-	Hour	(Ta=25°C), Note 2 I _F =20 mA

Note 1: Calculator value for reference PLED = VF (Normal Distribution) * IF (Normal Distribution) / Efficiency

Note 2: The LED life-time define as the estimated time to 50% degradation of initial luminous.

5.2.2 Backlight input signal characteristics

Parameter	Symbol	Min	Тур	Max	Units	Remark
LED Power Supply	VLED	5.0	12.0	21.0	[Volt]	
LED Enable Input High Level		2.2	-	5.5	[Volt]	
LED Enable Input Low Level	VLED_EN	-	-	0.5	[Volt]	
PWM Logic Input High Level	VPWM EN	2.2	-	5.5	[Volt]	Define as Connector
PWM Logic Input Low Level		-	-	0.5	[Volt]	Interface (Ta=25°C)
PWM Input Frequency	FPWM	200	1K	10K	Hz	
PWM Duty Ratio	Duty	1		100	%	

Note 1: Recommend system pull up/down resistor no bigger than 10kohm

Note 2: measured in panel VIN

Note 3: If the PWM duty ratio(min) is set between 5% to 1%, the PWM input frequency should be set below 1KHz. The brightness-duty characteristic might not be able to keep in it's linearity if the dimming control is operated in 1% to 5% range.



6. Signal Interface Characteristic

6.1 Pixel Format Image

Following figure shows the relationship of the input signals and LCD pixel format.

	1						136	56
1st Line	R G B	R G B		R	G	В	R C	В
			1		1			
		•	<u>:</u>		•			
			:					
					•			
		:	:					
	1		1		ı		,	
		:			•			
			·				,	
768th Line	R G B	R G B		R	G	В	R	В



6.2 Integration Interface Requirement

6.2.1 Connector Description

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	For Signal Connector
Manufacturer	IPEX
Type / Part Number	I-PEX 20455-030E-12
Mating Housing/Part Number	I-PEX 20453-030T-11 or Compatible

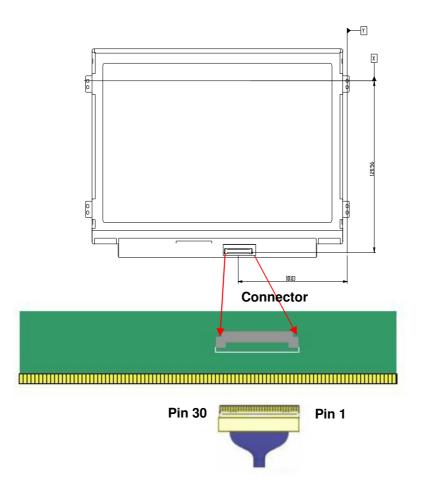


6.2.2 Pin Assignment (1 Lane)

eDP lane is a differential signal technology for LCD interface and high speed data transfer device.

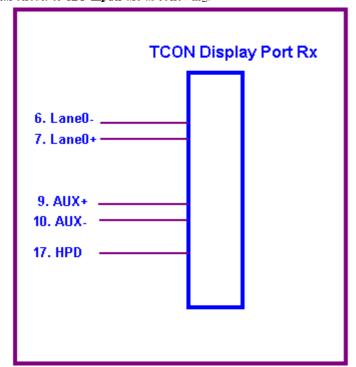
PIN#	Signal Name	nnology for LCD interface and high speed data transfer device. Description
1	NC	NC
2	H_GND	Ground
3	Lane1_N	NC
4	Lane1_P	NC
5	H_GND	Ground
6	Lane0_N	Complement signal link lane0
7	Lane0_P	True signal link lane0
8	H_GND	Ground
9	AUX_CH_P	True signal Auxiliary Channel
10	AUX_CH_N	Complement signal Auxiliary Channel
11	H_GND	Ground
12	LCD_VCC	Logic power
13	LCD_VCC	Logic power
14	LCD_Self_Test	LCD Panel Self Test Enable
15	LCD_GND	Ground
16	LCD_GND	Ground
17	HPD	HPD Signal in
18	BL_GND	Ground
19	BL_GND	Ground
20	BL_GND	Ground
21	BL_GND	Ground
22	BL_Enable	Backlight on/off
23	BL_PWM_DIM	System PWM signal Input
24	NC	NC
25	NC	NC
26	BL_PWR	Backlight power
27	BL_PWR	Backlight power
28	BL_PWR	Backlight power
29	BL_PWR	Backlight power
30	NC	NC





Note1: Start from right side.

Note2: Input signals shall be low or High-impedance state when VDD is off. Internal circuit of **eDP inputs** are as following.





6.3.1 Timing Characteristics

Basically, interface timings should match the 1366x768 /60Hz manufacturing guide line timing.

Parameter		Symbol	Min.	Тур.	Max.	Unit
Frame Rate		Ī	50 60.11 -		Hz	
Clock frequency		1/ T Clock	60	75.6	80	MHz
	Period	$\mathbf{T}_{ ext{V}}$	788	790	768+A	
Vertical	Active	$\mathbf{T}_{ ext{VD}}$	768		T Line	
Section	Blanking	$\mathbf{T}_{ ext{VB}}$	20	22	A	
	Period	T H	1416	1592	1366+B	
Horizontal Section	Active	$\mathbf{T}_{ ext{HD}}$		1366		$\mathbf{T}_{ ext{Clock}}$
	Blanking	Тнв	50	226	В	

Note 1: DE mode only

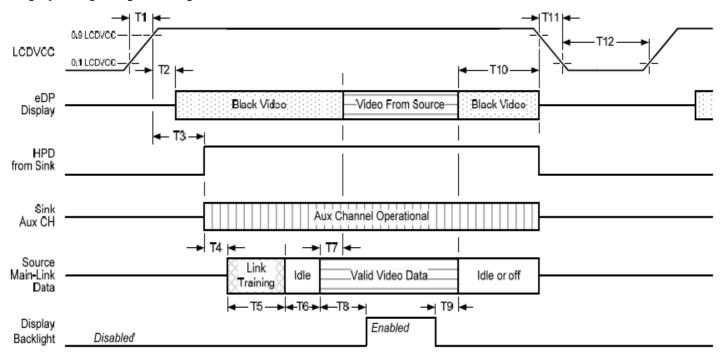
Note 2 : The maximum clock frequency = (1366+B)*(768+A)*60<80MHz



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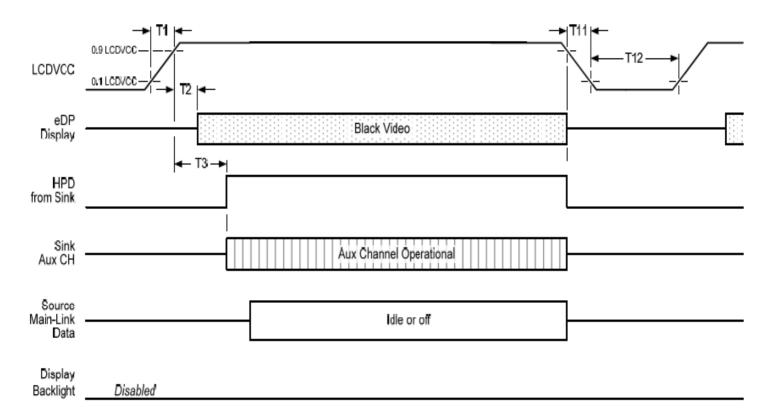
6.4 Power ON/OFF Sequence

Display Port panel power sequence:



Display port interface power up/down sequence, normal system operation

Display Port AUX_CH transaction only:



Display port interface power up/down sequence, AUX_CH transaction only



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Display Port panel power sequence timing parameter:

Timing	Description	Dond bu		Limits		Notes
parameter	Description	Reqd. by	Min.	Тур.	Max.	Notes
T1	power rail rise time, 10% to 90%	source	0.5ms		10ms	
Т2	delay from LCDVDD to black video generation	sink	0ms		200ms	prevents display noise until valid video data is received from the source
Т3	delay from LCDVDD to HPD high	sink	0ms		200ms	sink AUX_CH must be operational upon HPD high.
T4	delay from HPD high to link training initialization	source				allows for source to read link capability and initialize.
T5	link training duration	source				dependant on source link to read training protocol.
Т6	link idle	source				Min accounts for required BS-Idle pattern. Max allows for source frame synchronization.
T7	delay from valid video data from source to video on display	sink	0ms		50ms	max allows sink validate video data and timing.
Т8	delay from valid video data from source to backlight enable	source				source must assure display video is stable.
Т9	delay from backlight disable to end of valid video data	source				source must assure backlight is no longer illuminated.
T10	delay from end of valid video data from source to power off	source	0ms		500ms	
T11	power rail fall time, 905 to 10%	source			10ms	
T12	power off time	source	150ms			

Note1: The sink must include the ability to generate black video autonomously. The sink must automatically enable black video under the following conditions:

-upon LCDVDD power on (with in T2 max)-when the "Novideostream_Flag" (VB-ID Bit 3) is received from the source (at the end of T9).

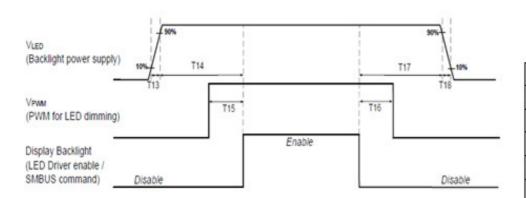
-when no main link data, or invalid video data, is received from the source. Black video must be displayed within 64ms (typ) from the start of either condition. Video data can be deemed invalid based on MSA and timing information, for example.

Note 2: The sink may implement the ability to disable the black video function, as described in Note 1, above, for system development and debugging purpose.

Note 3: The sink must support AUX_CH polling by the source immediately following LCDVDD power on without causing damage to the sink device (the source can re-try if the sink is not ready). The sink must be able to respond to an AUX_CH transaction with the time specified within T3 max.



Display Port panel B/L power sequence timing parameter:



Note: When the adapter is hot plugged, the backlight power supply sequence is shown as below.

VLED (Backlight power supply) (Hot Plug)	90% / 10% VLED	Low 10%	
(Not Flog)	Н	H	

	Min (ms)	Max (ms)
T13	0.2	2
T14	0	36
T15	- 5	•
T16	-	- 4
T17	0	0
T18	0	73
T19	1*	8
T20	1*	. 0

Seamless change: T19/T20 = 5×T PARIS

*T_{PANN}= 1/PWM Frequency

Note: If T19,T20 < 5xTPWM* • The flash display may occur. We suggest T19,T20 ≥ 5xTPWM* to realize seamless change display.



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7.1 Vibration Test

Test Spec:

• Test method: Non-Operation

• Acceleration: 1.5 G

• Frequency: 10 - 500Hz Random

• Sweep: 30 Minutes each Axis (X, Y, Z)

7.2 Shock Test

Test Spec:

• Test method: Non-Operation

• Acceleration: 220 G, Half sine wave

• Active time: 2 ms

 \bullet Pulse: X,Y,Z .one time for each side

7.3 Reliability Test

Items	Required Condition	Note
Temperature Humidity Bias	Ta= 40°C, 90%RH, 300h	
High Temperature Operation	Ta= 50°C, Dry, 300h	
Low Temperature Operation	Ta=0°C, 300h	
High Temperature Storage	Ta= 60°C, 35%RH, 300h	
Low Temperature Storage	Ta= -20°C, 50%RH, 250h	
Thermal Shock Test	Ta=-20°C to 60°C, Duration at 30 min, 100 cycles	
ESD	Contact: ±8 KV Air: ±15 KV	Note 1

Note1: According to EN 61000-4-2, ESD class B: Some performance degradation allowed. Self-recoverable.

No data lost, No hardware failures.

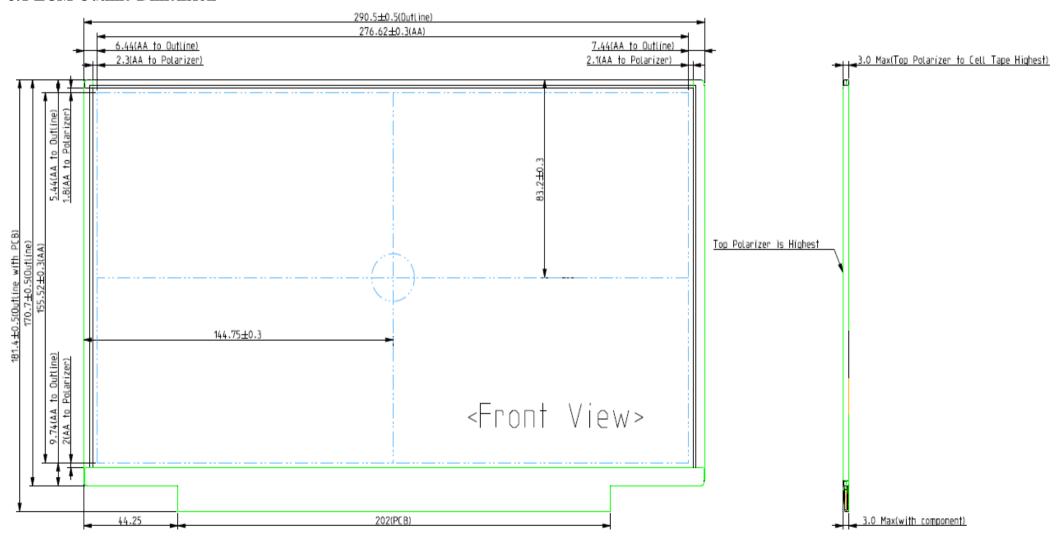
Remark: MTBF (Excluding the LED): 30,000 hours with a confidence level 90%



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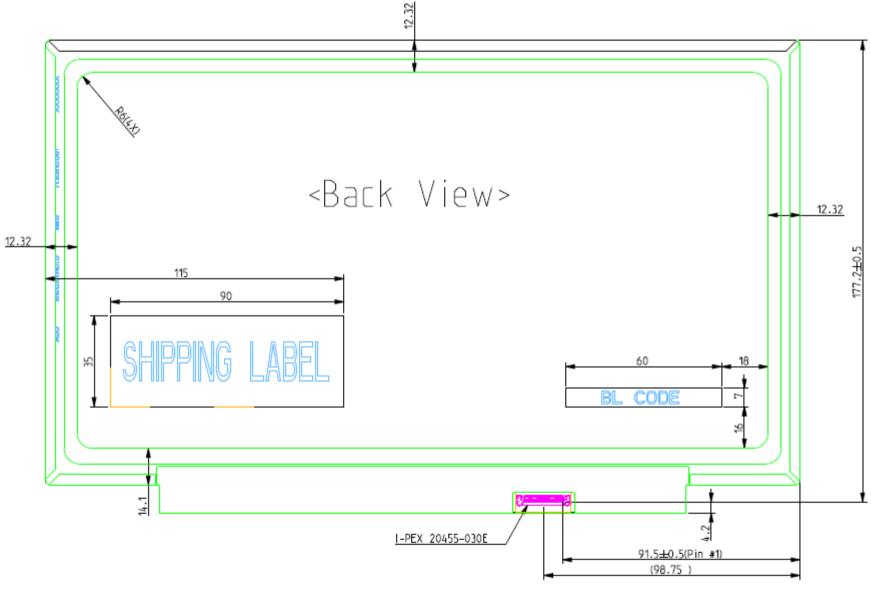
8. Mechanical Characteristics

8.1 LCM Outline Dimension





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Note: Prevention IC damage, IC positions not allowed any overlap over these area

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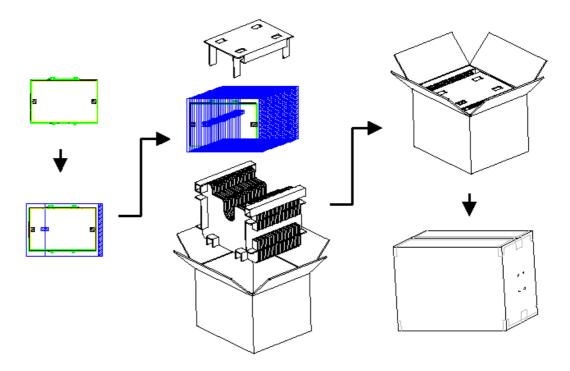
9. Shipping and Package

9.1 Shipping Label Format

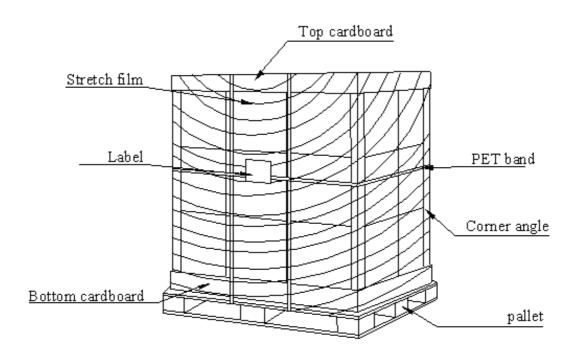




9.2 Carton Package



9.3 Shipping Package of Palletizing Sequence





10. Appendix: EDID Description

10.1 EDID Description

Address	FUNCTION	Value	Value	Value	Note
HEX		HEX	BIN	DEC	
00	Header	00	00000000	0	
01		FF	11111111	255	
02		FF	11111111	255	
03		FF	11111111	255	
04		FF	11111111	255	
05		FF	11111111	255	
06		FF	11111111	255	
07		00	00000000	0	
08	EISA Manuf. Code LSB	06	00000110	6	
09	Compressed ASCII	AF	10101111	175	
0A	Product Code	6C	01101100	108	
0B	hex, LSB first	10	00010000	16	
0C	32-bit ser #	00	00000000	0	
0D		00	00000000	0	
0E		00	00000000	0	
0F		00	00000000	0	
10	Week of manufacture	26	00100110	38	
11	Year of manufacture	16	00010110	22	
12	EDID Structure Ver.	01	00000001	1	
13	EDID revision #	04	00000100	4	
14	Video input def. (digital I/P, non-TMDS, CRGB)	95	10010101	149	
15	Max H image size (rounded to cm)	1C	00011100	28	
16	Max V image size (rounded to cm)	10	00010000	16	
17	Display Gamma (=(gamma*100)-100)	78	01111000	120	
18	Feature support (no DPMS, Active OFF, RGB, tmg Blk#1)	02	00000010	2	
19	Red/green low bits (Lower 2:2:2:2 bits)	86	10000110	134	
1A	Blue/white low bits (Lower 2:2:2:2 bits)	75	01110101	117	
1B	Red x (Upper 8 bits)	97	10010111	151	
1C	Red y/ highER 8 bits	52	01010010	82	
1D	Green x	4B	01001011	75	
1E	Green y	89	10001001	137	
1F	Blue x	24	00100100	36	
20	Blue y	2A	00101010	42	
21	White x	50	01010000	80	
22	White y	54	01010100	84	
23	Established timing 1	00	00000000	0	
24	Established timing 2	00	00000000	0	
25	Established timing 3	00	00000000	0	
26	Standard timing #1	01	00000000	1	
27	Standard trining #1	01	00000001	1	
28	Standard timing #2	01	0000001	1	



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29		01	00000001	1	
2A	Standard timing #3	01	00000001	1	
2B		01	00000001	1	
2C	Standard timing #4	01	00000001	1	
2D		01	00000001	1	
2 E	Standard timing #5	01	00000001	1	
2F		01	00000001	1	
30	Standard timing #6	01	00000001	1	
31		01	00000001	1	
32	Standard timing #7	01	00000001	1	
33	2	01	00000001	1	
34	Standard timing #8	01	00000001	1	
35	Standard thining we	01	00000001	1	
36	Pixel Clock/10000 LSB	88	10001000	136	
37	Pixel Clock/10000 USB	1D	00011101	29	
38	Horz active Lower 8bits	56	01010110	86	
39	Horz blanking Lower 8bits	E2	11100010	226	
3A	HorzAct:HorzBlnk Upper 4:4 bits	50	01010000	80	
3 B	Vertical Active Lower 8bits	00	00000000	0	
3C	Vertical Blanking Lower 8bits	16	00010110	22	
3D	Vert Act : Vertical Blanking (upper 4:4 bit)	30	00110000	48	
3E	HorzSync. Offset	26	00110000	38	
3F	HorzSync.Width	16	00010110	22	
40	VertSync.Offset: VertSync.Width	36	00110110	54	
41	Horz‖ Sync Offset/Width Upper 2bits	00	00000000	0	
42	Horizontal Image Size Lower 8bits	14	00010100	20	
43	Vertical Image Size Lower 8bits	9B	10011011	155	
44	Horizontal & Vertical Image Size (upper 4:4 bits)	10	00010000	16	
45	Horizontal Border (zero for internal LCD)	00	00000000	0	
46	Vertical Border (zero for internal LCD)	00	00000000	0	
47	Signal (non-intr, norm, no stero, sep sync, neg pol)	18	00011000	24	
48	Detailed timing/monitor	00	00000000	0	
49	descriptor #2	00	00000000	0	
4A		00	00000000	0	
4B		0F	00001111	15	
4C		00	00000000	0	
4D		00	00000000	0	
4E		00	00000000	0	
4F		00	00000000	0	
50		00	00000000	0	
51		00	00000000	0	
52		00	00000000	0	
53		00	00000000	0	
54		00	00000000	0	
55		00	00000000	0	
56		00	00000000	0	
57		00	00000000	0	



58		00	00000000	0	
59		20	00100000	32	
5A	Detailed timing/monitor	00	00000000	0	
5B	descriptor #3	00	00000000	0	
5C		00	00000000	0	
5D		FE	11111110	254	
5E		00	00000000	0	
5F	Manufacture	41	01000001	65	А
60	Manufacture	55	01010101	85	U
61	Manufacture	4F	01001111	79	О
62		0A	00001010	10	
63		20	00100000	32	
64		20	00100000	32	
65		20	00100000	32	
66		20	00100000	32	
67		20	00100000	32	
68		20	00100000	32	
69		20	00100000	32	
6A		20	00100000	32	
6 B		20	00100000	32	
6C	Detailed timing/monitor	00	00000000	0	
6D	descriptor #4	00	00000000	0	
6 E		00	00000000	0	
6F		FE	11111110	254	
70		00	00000000	0	
71	Manufacture P/N	42	01000010	66	В
72	Manufacture P/N	31	00110001	49	1
73	Manufacture P/N	32	00110010	50	2
74	Manufacture P/N	35	00110101	53	5
75	Manufacture P/N	58	01011000	88	X
76	Manufacture P/N	54	01010100	84	T
77	Manufacture P/N	4E	01001110	78	N
78	Manufacture P/N	30	00110000	48	0
79	Manufacture P/N	31	00110001	49	1
7A	Manufacture P/N	2E	00101110	46	
7 B	Manufacture P/N	30	00110000	48	0
7C		20	00100000	32	
7D		0A	00001010	10	
7 E	Extension Flag	00	00000000	0	
7 F	Checksum	EC	11101100	236	