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TITLE : BP070WS1-500

Product Specification

Rev.0

BEIJING BOE OPTOELECTRONICS TECHNOLOGY

SPEC. NUMBER	PRODUCT GROUP	REV.	ISSUE DATE	PAGE
S	TFT-LCD	0	2013.3.18.	1 OF 28



ISSUE DATE

TFT LCD PRODUCT

2013.3.18.

REVISION HISTORY

			-	
REV.	ECN NO.	DESCRIPTION OF CHANGES	DATE	PREPARED
0	-	Initial Release	2013.03.18.	邵贤杰/翟明
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2006-	5006-0 (2/3)	,		Δ4(210 Χ 29

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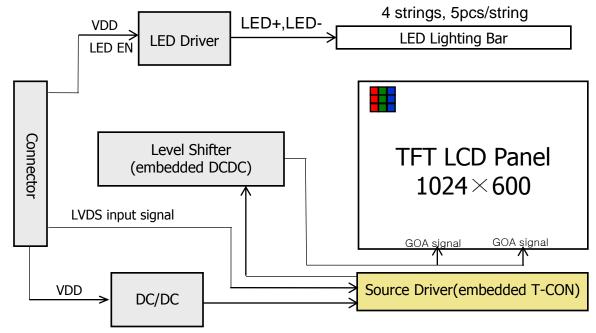
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1.0 GENERAL DESCRIPTION

1.1 Introduction

1.1 Introduction

BP070WS1-500 is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 7.0inch diagonally measured active area with WSVGA resolutions (**1024** horizontal by **600** vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher color type.



1.2 Features

- 1 Channel LVDS Interface with 1 pixel/clock
- Thin and light weight
- Data enable signal mode
- Display 16.7M colors (Hi FRC)
- Low driving voltage and low power consumption
- RoHS Compliant

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- 1.3 Application
- AV application Products

1.4 General Specification

The followings are general specifications at the model BA070WS1-500. (listed in Table 1.)

Parameter	Specification	Unit	Remarks
Active area	153.6(H) x 90(V)	mm	
Number of pixels	1024(H) ×600(V)	pixels	
Pixel pitch	50(H) ×RGB×150(V)	μm	
Pixel arrangement	Pixels RGB stripe arrangement		
Display colors	16.7M(8bits)	colors	
Display mode	Normally Black		
Outline Dimension	ion $164.05(H) \times 100.86(V) \times 2.35$ (body) (typ.)		Tolerance: ± 0.15 mm
Weight	90g (max.)	gram	
Power	P _D : 0.65(max.)		@R/G/B pattern
Consumption P _{BL} : 1.55(max.)		Watt	
	P _{total} : 2.2(max.)		
Surface Treatment	3H HC + LR		

< Table 1. General Specifications >

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2.0 ABSOLUTE MAXIMUM RATINGS

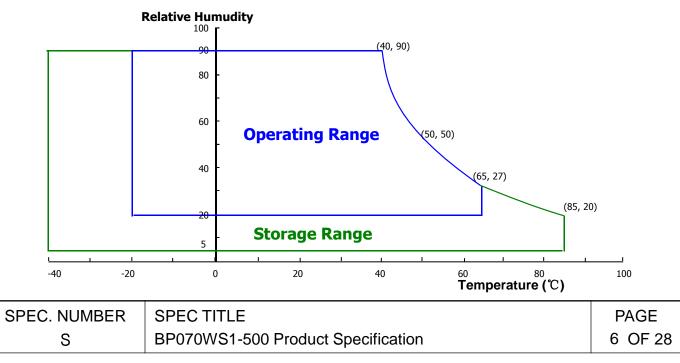
The followings are maximum values which, if exceed, may cause faulty operation or damage to the unit. The operational and non-operational maximum voltage and current values are listed in Table 2.

< Table 2. Absolute Maximum Ratings>

[VSS=GND=0V]

Parameter	Symbol	Min.	Max.	Unit	Remarks
Power Supply Voltage	V _{DD}	-0.3	4.2	V	
Power Supply For LED	V _{LED}	-0.3	40	V	
Operating Temperature	T _{OP}	-20	+65	°C	
Storage Temperature	T _{ST}	-40	+85	°C	

Note : 1) Temperature and relative humidity range are shown in the figure below. Wet bulb temperature should be 39 $^\circ\!\!C$ max. and no condensation of water.



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3.0 ELECTRICAL SPECIFICATIONS

3.1 Electrical Specifications

< Table 3. Electrical specifications >

[Ta =25 ± 2 ℃]

Parameter	Symbol	Values		Unit	Notes		
	- Jine -	Min	Тур	Max			
Power Supply Input Voltage	V _{DD}	3.2	3.7	4.2	V	Note 1	
Power Supply Current	I _{DD}	-	151	-	mA	NOLE I	
LED Driver Power Supply Voltage	H _{VDD}	3	3.7	18	V		
LED Driver Power Supply Current	I _{HVDD}	-	405	-	mA	Note 2	
LED Driver Efficiency	η	-	84	-	%		
Positive-going Input Threshold Voltage	V _{IT+}	-	-	+100	mV	Vcom = 1.2V	
Negative-going Input Threshold Voltage	V _{IT-}	-100	-	-	mV	typ.	
Differential input common mode voltage	V _{com}	-	1.2	-	V	V _{IH} =100mV, V _{IL} =-100mV	
	P _D	-	0.56	0.65	W		
Power Consumption	P _{BL}	-	1.50	1.55	W	@ White pattern	
	P _{Total}	-	2.06	2.2	W	pattorn	

Notes : 1. The supply voltage is measured and specified at the interface connector of LCM. The current draw and power consumption specified is for 3.7V at 25 $^\circ\!C$

2. Calculated value for reference (VLED X ILED)

3. CTF of Power Supply Current: PD /PBL

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3.2 Recommended Driving Condition for Backlight

< Table 4. Electrical specifications for Backlight >

ITEM	Symbo I	Min	Тур	Max	Unit	Note
Current for each LED	I _{LED}	-		20	mA	
Voltage for each LED	V_{LED}		3	3.3	V	
Input Current	I _B	-		80	mA	Total 20 LEDs, 4 Srings,5 EA e
Input Voltage	V _B		15	16.5	V	ach sring
Power Consumption for Backlight	P _B		1.50	1.55	W	

3.3 LED Driver

- With LED Driver on Customer System , We only have one connector on FPC .

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4.0 OPTICAL SPECIFICATION

4.1 Overview

The test of view angle range shall be measured in a dark room (ambient luminance \leq 1lux and temperature = $25\pm2^{\circ}$ C) with the equipment of Luminance meter system (Goniometer system and TOPCON BM-5A) and test unit shall be located at an approximate distance 50cm from the LCD surface at a viewing angle of θ and Φ equal to 0°. We refer to $\theta \emptyset = 0$ (= $\theta 3$) as the 3 o'clock direction (the "right"), $\theta \emptyset = 90$ (= $\theta 12$) as the 12 o'clock direction ("upward"), $\theta \emptyset = 180$ (= $\theta 9$) as the 9 o'clock direction ("left") and $\theta \emptyset = 270$ (= $\theta 6$) as the 6 o'clock direction ("bottom"). While scanning θ and/or \emptyset , the center of the measuring spot on the Display surface shall stay fixed. The luminance, color and uniformity should be tested by CA210. The backlight should be operating for 30 minutes prior to measurement. VDD shall be 3.7 \pm 0.5V at 25°C. Optimum viewing angle direction is 6 'clock.

4.2 Optical Specifications

<Table 5. Optical Specifications>

Parame	ter	Symbol	Condition	Min	Тур	Max	Unit	Remark
	Horizontal	Θ_3		-	80	-	Deg.	
Viewing Angle	HOLIZOIITAI	Θ_9	CR > 10	-	80	-	Deg.	Note 1
Tingle	Vertical	Θ_{12}	CK > 10	-	80	-	Deg.	Note 1
	vertical	Θ_6		-	80	-	Deg.	
Color Ga	mut			-	50	-	%	NTSC
ССТ				6000	7000	8000		
Contrast	ratio	CR		700:1	900:1	-		Note 2
Luminance of	of White	Y _w		340	400	480	cd/m ²	Note 3
White luminance	uniformity	ΔΥ9		80	90		%	Note 4
	White	W _x			0.303			
	w lite	W _y	$\Theta = 0^{\circ}$		0.333			
	Red	R _x	(Center) Normal		0.600			
Reproduction	Keu	R _y	Viewing	TYP.	0.340	TYP.		CF + C
of color	Green	G _x	Angle	- 0.02	0.345	+ 0.02		light
	Oleeli	Gy			0.565			
	Blue	B _x			0.145			
	Diuc	By			0.125			
Response Time	se Time			-	30	-	ms	Note 6
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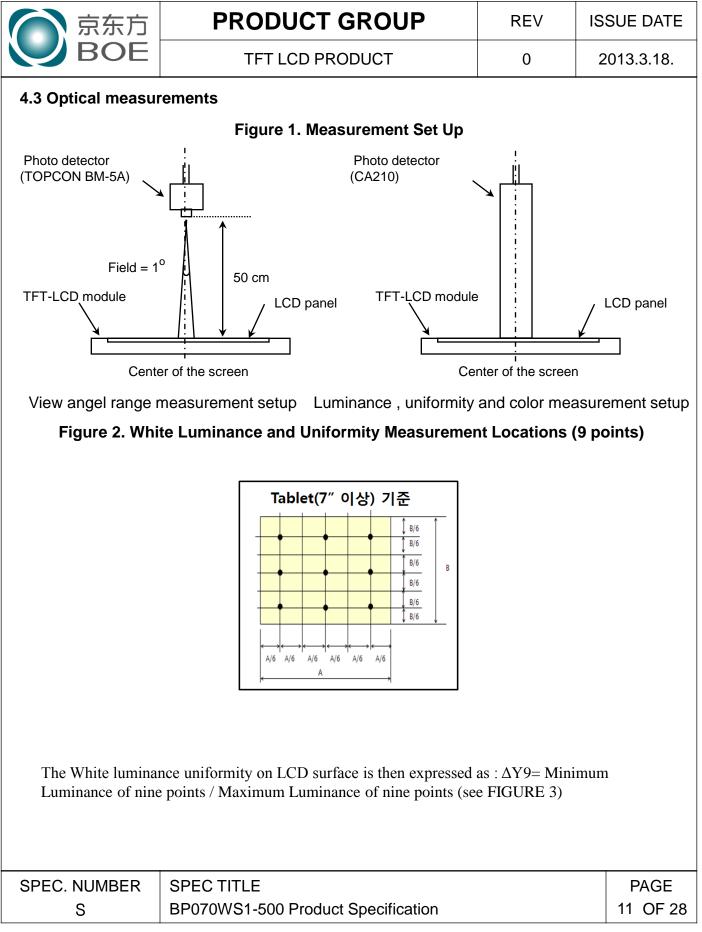


- Notes : 1. Viewing angle is the angle at which the contrast ratio is greater than 10. The viewing angles are determined for the horizontal or 3, 9 o'clock direction and the vertical or 6, 12 o'clock direction with respect to the optical axis which is normal to the LCD surface (see FIGURE 1).
 - Contrast measurements shall be made at viewing angle of Θ= 0 and at the center of the LCD surface. Luminance shall be measured with all pixels in the view field set first to white, then to the dark (black) state . (see FIGURE 1) Luminance Contrast Ratio (CR) is defined mathematically.

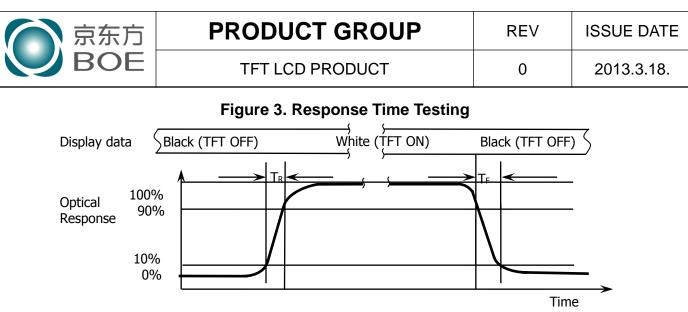
CR = Luminance when displaying a white raster Luminance when displaying a black raster

- 3. Center Luminance of white is defined as luminance values of 5point average across the LCD surface. Luminance shall be measured with all pixels in the view field set first to white. This measurement shall be taken at the locations shown in FIGURE 2 for a total of the measurements per display. The luminance is measured by CA210 when the LED current is set at 18.8m.
- 4. The White luminance uniformity on LCD surface is then expressed as : $\Delta Y = M$ inimum Luminance of 5 points / Maximum Luminance of 5 points (see FIGURE 2).
- 5. The color chromaticity coordinates specified in Table 5 shall be calculated from the spectral data measured with all pixels first in red, green, blue and white. Measurements shall be made at the center of the panel.
- 6. The electro-optical response time measurements shall be made as FIGURE 3 by switching the "data" input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr, and 90% to 10% is Td.
- 7. Cross-Talk of one area of the LCD surface by another shall be measured by comparing the luminance (YA) of a 25mm diameter area, with all display pixels set to a gray level, to the luminance (YB) of that same area when any adjacent area is driven dark. (See FIGURE 4).

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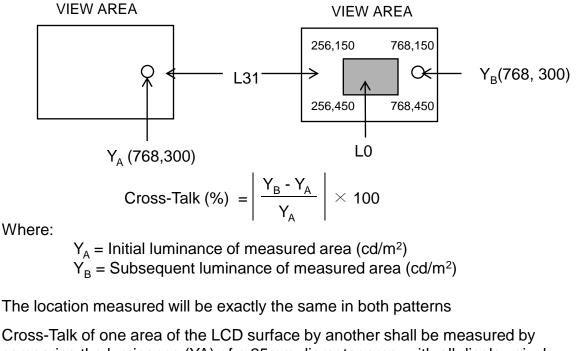


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The electro-optical response time measurements shall be made as shown in FIGURE 3 by switching the "data" input signal ON and OFF. The times needed for the luminance to change from 10% to 90% is Tr and 90% to 10% is Td.





The location measured will be exactly the same in both patterns comparing the luminance (YA) of a 25mm diameter area, with all display pixels

set to a gray level, to the luminance (YB) of that same area when any adjacent area is driven dark (Refer to FIGURE 4).

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5.0 INTERFACE CONNECTION.

5.1 Electrical Interface Connection

The electronics interface connector is PF030-B31B-N09. The connector interface pin assignments are listed in Table 6.

<Table 6. Pin Assignments for the Interface Connector>

1	Terminal	<a>Symbol	ssignments for the Interface Connector> Functions	
	Pin No.	Symbol	Description	
	1	VDDIN	-	
	2	VDDIN	4	
	3	VDDIN	4	
	4	VDDIN	Power supply VDDIN=3.7V (Typ.)	
	5	VDDIN	_	
	6	VDDIN		
	7	VDDIN		
	8	NC	Non Connection	
	9	NC	Non Connection	
	10	NC	Non Connection	
	11	GND	GROUND	
	12	GND	GROUND	
	13	RIN0-	LVDS Negative data signal (-)	
	14	RIN0+	LVDS Positive data signal (+)	
	15	GND	GROUND	
	16	RIN1-	LVDS Negative data signal (-)	
	17	RIN1+	LVDS Positive data signal (+)	
	18	GND	GROUND	
	19	RIN2-	LVDS Negative data signal (-)	
	20	RIN2+	LVDS Positive data signal (+)	
	21	GND	GROUND	
	22	LVDS_CLK-	LVDS Negative CLK signal (-)	
	23	LVDS_CLK+	LVDS Positive CLK signal (+)	
	24	GND	GROUND	
	25	RIN3-	LVDS Negative data signal (-)	
	26	RIN3+	LVDS Positive data signal (+)	
	27	GND	GROUND	
	28	LED_EN	LED enable	
	29	GND	GROUND	
	30	DVDDT	Only for SEC test. Other custormers NC	
	31	GND	GROUND	
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200	$C = C \cap C \cap (2/2)$			(4/240)/(207)

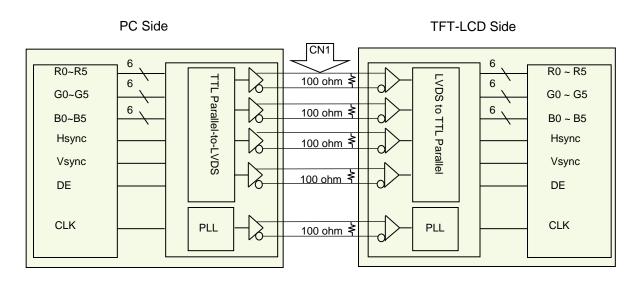
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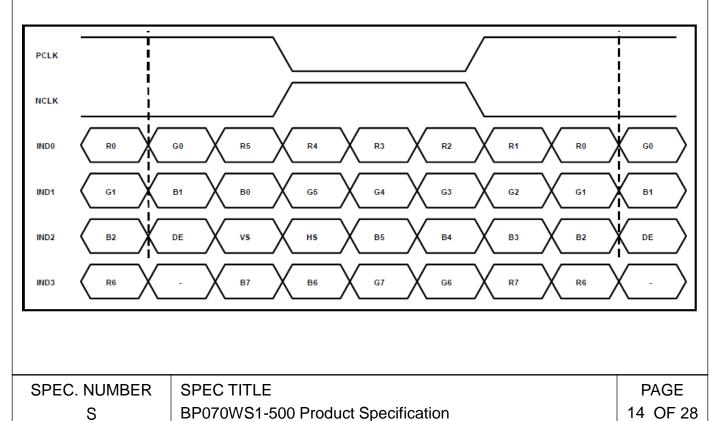
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5-2. LVDS Interface



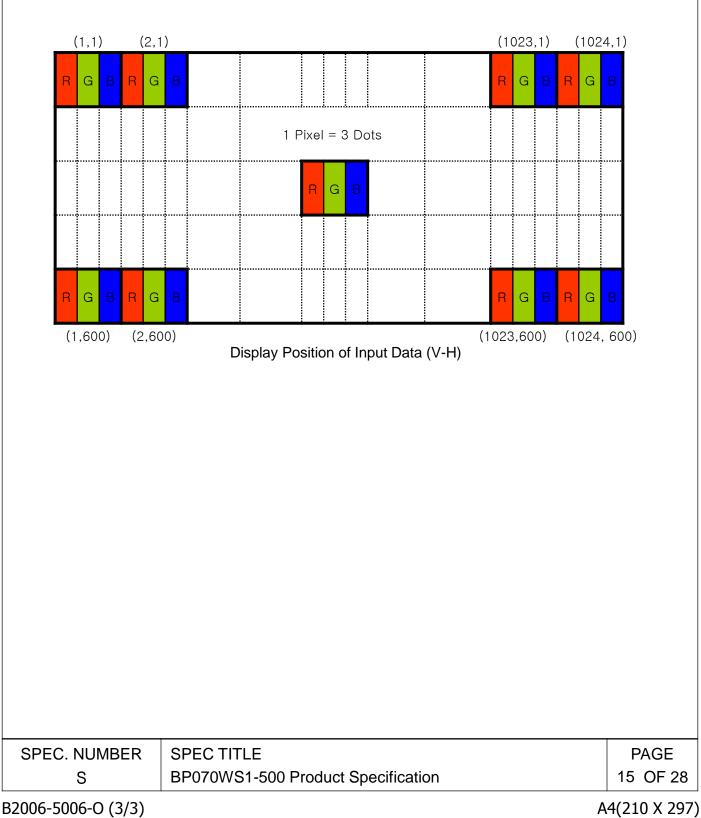
5.3.LVDS Input signal



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5.4 Data Input Format





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6.0 SIGNAL TIMING SPECIFICATION

6.1 The BP070WS1-500 is operated by the DE only.

	ltem	Symbols	Min	Тур	Max	Unit
	Frequency	1/Tc	40.8	51.2	67.2	MHz
Clock	High Time	Tch	40%	50%	60%	Тс
	Low Time	Tcl	60%	50%	40%	Тс
			610	635	800	lines
Fra	ame Period	Τv	60	60	60	Hz
			16.6	16.6	16.6	ms
Vertical	Display Period	Tvd	600	600	600	lines
One line Scanning Period		Th	1114	1344	1400	clocks
Horizontal Display Period		Thd	1024	1024	1024	clocks

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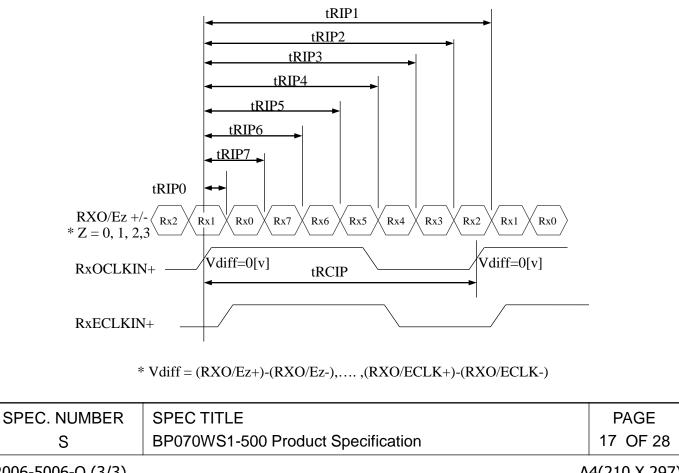


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6.2 LVDS Rx Interface Timing Parameter

The specification of the LVDS Rx interface timing parameter is shown in Table 8.

Item	Symbol	Min	Тур	Max	Unit	Remark
CLKIN Period	tRCIP	14.88	19.53	24.51	nsec	
Input Data 0	tRIP1	-0.4	0.0	+0.4	nsec	
Input Data 1	tRIP0	tRICP/7-0.4	tRICP/7	tRICP/7+0.4	nsec	
Input Data 2	tRIP7	$2 \times t$ RICP/7-0.4	$2 \times tRICP/7$	$2 \times tRICP/7+0.4$	nsec	
Input Data 3	tRIP6	$3 \times tRICP/7-0.4$	$3 \times tRICP/7$	$3 \times tRICP/7+0.4$	nsec	
Input Data 4	tRIP5	$4 \times tRICP/7-0.4$	$4 \times tRICP/7$	$4 \times tRICP/7+0.4$	nsec	
Input Data 5	tRIP4	$5 \times tRICP/7-0.4$	$5 \times tRICP/7$	$5 \times tRICP/7+0.4$	nsec	
Input Data 6	tRIP3	6 ×tRICP/7-0.4	$6 \times tRICP/7$	$6 \times tRICP/7+0.4$	nsec	
Input Data 7	tRIP2	$7 \times t$ RICP/7-0.4	$7 \times tRICP/7$	$7 \times tRICP/7+0.4$	nsec	



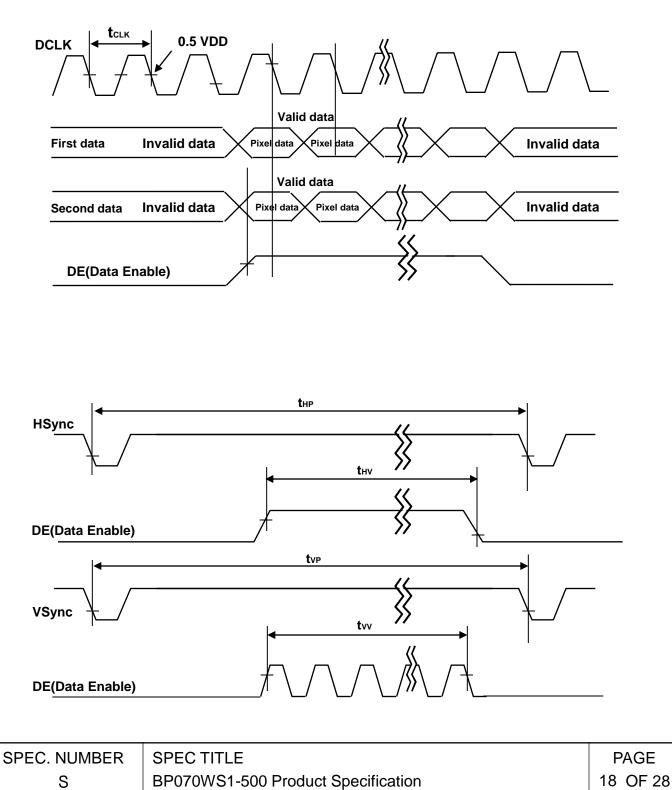
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7.0 SIGNAL TIMING WAVEFORMS OF INTERFACE SIGNAL



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8.0 INPUT SIGNALS, BASIC DISPLAY COLORS & GRAY SCALE OF COLORS

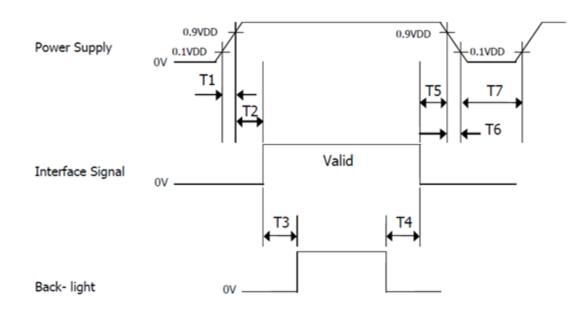
Color & G	rav Scal	е									In	put							-		-		_			
	nay Sca					ed									ı Da							lue				
			_				_			-	_		_	_	_	_	_		_			_			B1	
	Blac		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-	Blue		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
-	Gree		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Basic Colors	Cyar		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1		1		1
-	Red		1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-	Mager		1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	$\frac{1}{0}$	1	1	1	1	1		1
-	Yello Whit		1	$\frac{1}{1}$	1	1	1	1	1	1	1	1	1	1	1	$\frac{1}{1}$	1	1	$\frac{0}{1}$	0	0	0	0	0	0	0
	Blac		0	$\frac{1}{0}$	$\frac{1}{0}$	1 0	$\frac{1}{0}$	$\frac{1}{0}$	$1 \\ 0$	$\frac{1}{0}$	$\frac{1}{0}$	$1 \\ 0$	$1 \\ 0$	$\frac{1}{0}$	$1 \\ 0$	$\frac{1}{0}$	$\frac{1}{0}$	$1 \\ 0$	$\frac{1}{0}$	$\frac{1}{0}$	$1 \\ 0$	$1 \\ 0$	$1 \\ 0$	$1 \\ 0$	$1 \\ 0$	$\frac{1}{0}$
-		<u> </u>	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ł	Darke	۲	0	0	0	0	0	0	1	$\frac{1}{0}$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray Scale		~1		0	0	1	1	U	1 1	<u> </u>				<u> </u>	<u>↓ </u>	0				0	0	<u> </u>	1	0		
of Red	∇						L								Ļ								L			
	Bright	er	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	\bigtriangledown		1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red		1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blac	k	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\bigtriangleup		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Gray Scale	Darke	er	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
of Green	\bigtriangleup					,	1							,	1								1			
of Green	\bigtriangledown						-								<u> </u>							<u> </u>	-			
	Bright	er	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0
-			0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	Gree		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
-		K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$\frac{1}{0}$
Gray Scale		51	0	0	0			0	10	0	0	0	0		<u> ∪</u> ↑	0	0	0	0	0	0		<u> U</u>	0	1	0
of Blue							 								 								 			
of Blue	Bright	er	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1
ŀ		.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0
ľ	Blue	<u>,</u>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	Blac		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	\triangle		0		0		0		0			0		0	0	0	0					0	_		0	1
Gray Scale	Darke	er	0		0	0	0	0	1	0			0	0	0	0	1	0			0		0	0	1	0
-	\bigtriangleup													,	↑								1			
of White	\bigtriangledown					,	ļ								↓											
	Bright	er	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1
ļ	\bigtriangledown		1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0
	Whit	e	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
						_																				<u> </u>
SPEC. NUM	DEK	SP																							PA	
S		BP	070)W	S1	-50	0 F	Pro	du	ct S	Spe	ecif	ica	tio	n									19) C)F 2
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9.0 POWER SEQUENCE

To prevent a latch-up or DC operation of the LCD module, the power on/off sequence shall be as shown in below



Devementer		Values									
Parameter	Min	Тур	Max	Units							
T1	0.5	-	10	ms							
T2	0	-	50	ms							
T3	200	-	-	ms							
T4	200	-	-	ms							
T5	0.5	-	50	ms							
T6	0	-	10	ms							
Τ7	500	-	-	ms							

Notes:

- 1. When the power supply VDD is 0V, keep the level of input signals on the low or keep high impedance.
- 2. Do not keep the interface signal high impedance when power is on. Back Light must be turn on after power for logic and interface signal are valid.

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10.0 Connector Description

Physical interface is described as for the connector on LCM. These connectors are capable of accommodating the following signals and will be following components.

10.1 TFT LCD Module

Connector Name /Description	For Signal Connector	
Manufacturer	UJU or Compatible	
Type/ Part Number	PF030-B31B-N09 or Compatible	

10.2 LED Connector

Pin No.	Symbol	For Signal Connector
1	VLEDP	LED Anode Power Supply
2	VLEDN1	
3	VLEDN2	
4	VLEDN3	LED Cathode Power Supply
5	VLEDN4	

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11.0 MECHANICAL CHARACTERISTICS

11.1 Dimensional Requirements

FIGURE 5 shows mechanical outlines for the model BP070WS1-500. Other parameters are shown in Table 9.

Parameter	Specification	Unit
Active Area	153.6 (H) ×90 (V)	
Number of pixels	1024(H) X600 (V) (1 pixel = R + G + B dots)	
Pixel pitch	0.150 (H) X 0.150 (V)	
Pixel arrangement	RGB Vertical stripe	
Display colors	16.7M	
Display mode	Normally Black	
Dimensional outline	164.05*100.86*2.35 (Typ.)	mm
Weight	90 (Max)	gram
Back-light	LED, Horizontal-LED Array type	

<Table 9. Dimensional Parameters>

11.2 Mounting

See FIGURE 6.

11.3 Glare and Polarizer Hardness.

The surface of the LCD has an low reflection coating and hard coating to reduce scratching.

11.4 Light Leakage

There shall not be visible light from the back-lighting system around the edges of the screen as seen from a distance 50cm from the screen with an overhead light level of 150lux.

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12.0 RELIABILITY TEST

The Reliability test items and its conditions are shown in below.

<Table 10. Reliability test>

No	Test Items	Conditions
1	High temperature storage test	Ta = 85 ℃, 24 hrs
2	Low temperature storage test	Ta = -40 ℃, 24 hrs
3	High temperature & high humidity operation test	Ta = 60 °C, 90%RH, 96 hrs
4	High temperature operation test	Ta = 60 ℃, 24 hrs
5	Low temperature operation test	Ta = -20 ℃, 24 hrs
6	Thermal shock	Ta = -40 $^{\circ}$ C \leftrightarrow 85 $^{\circ}$ C (2 hr), 30 cycle

13.0 HANDLING & CAUTIONS

- (1) Cautions when taking out the module
 - Pick the pouch only, when taking out module from a shipping package.
- (2) Cautions for handling the module
 - As the electrostatic discharges may break the LCD module, handle the LCD module with care. Peel a protection sheet off from the LCD panel surface as slowly as possible.
 - As the LCD panel and back light element are made from fragile glass material, impulse and pressure to the LCD module should be avoided.
 - As the surface of the polarizer is very soft and easily scratched, use a soft dry cloth without chemicals for cleaning.
 - Do not pull the interface connector in or out while the LCD module is operating.
 - Put the module display side down on a flat horizontal plane.
 - Handle connectors and cables with care.
- (3) Cautions for the operation
 - When the module is operating, do not lose CLK, ENAB signals. If any one of these signals is lost, the LCD panel would be damaged.
 - Obey the supply voltage sequence. If wrong sequence is applied, the module would be damaged.

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- (4) Cautions for the atmosphere
 - Dew drop atmosphere should be avoided.
 - Do not store and/or operate the LCD module in a high temperature and/or humidity atmosphere. Storage in an electro-conductive polymer packing pouch and under relatively low temperature atmosphere is recommended.
- (5) Cautions for the module characteristics
 - Do not apply fixed pattern data signal to the LCD module at product aging.
 - Applying fixed pattern for a long time may cause image sticking.
- (6) Other cautions
 - Do not disassemble and/or re-assemble LCD module.
 - Do not re-adjust variable resistor or switch etc.
 - When returning the module for repair or etc., Please pack the module not to be broken. We recommend to use the original shipping packages.

14.0 LABEL

(1) Product label

BO C C C B US)E Made in china	BPO	de:GH96-06366X 70WS1-500 X	
	n Iumber		x x x x x x No 5. Month (1, 2, 3,, 9, No 6. Product Identification No 7. Serial Number	
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(2) High voltage caution label

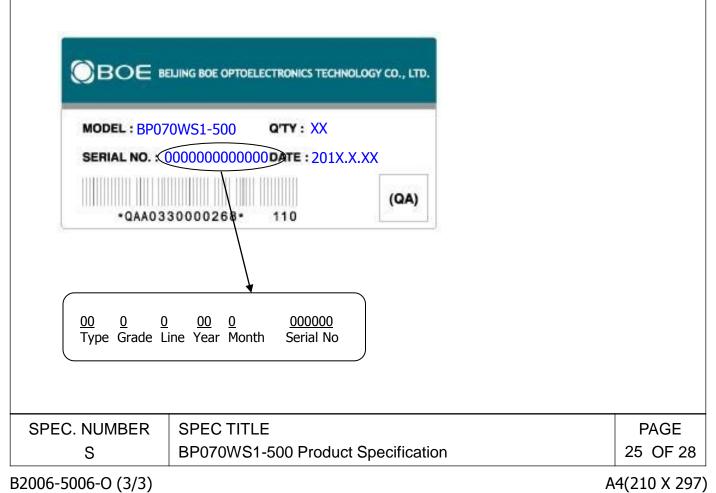


HIGH VOLTAGE
CAUTION
RISK OF ELECTRIC SHOCK,
DISCONNECT THE ELECTRIC
POWER BEFORE SER∨ICING

COLD CATHODE FLUORESCENT LAMP IN LCD PANEL CONTAINS A SMALL AMOUNT OF MERCURY, PLEASE FOLLOW LOCAL OR-DINANCES OR REGULATIONS FOR DISPOSAL.

(3) Box label

Label Size: 110 mm (L) \times 56 mm (W) Contents Model: BP070WS1-500 Q`ty: Module Q`ty in one box Serial No.: Box Serial No. See next figure for detail description. Date: Packing Date Internal use of Product

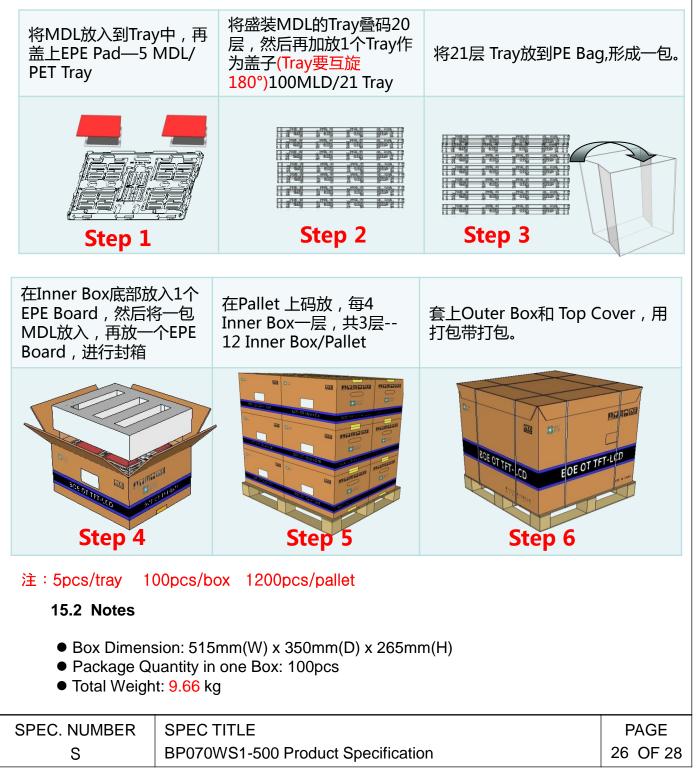




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15.0 PACKING INFORMATION

15.1 Packing order



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16.0 MECHANICAL OUTLINE DIMENSION

Figure 6. TFT-LCD Module Outline Dimension (Front View)

