TFT-Display Datasheet

OT101CBWDLT-06 | ONation

Features

Active Screen Area	216.96x135.6 [mm]
Size | Format	10,1“ | 16:10
Resolution	1280x800
Backlight	LED
Brightness	800 cd/m^2
LED Life Time	50K (h)
Interface	LVDS
Viewing Angle	L/R 85/85 - U/D 85/85
Touchscreen	PCAP
Power Supply	3.3V [Typ.]
Module Outline	252x172.6x10 [mm]
Operation Temperature	-20… + 70°C
Storage Temperature	-30… + 80°C

Contact

HY-LINE Computer Components
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computer@hy-line.de

ONation Corporation

TFT COLOR LCD MODULE

MODEL: OT101CBWDLT-06

WXGA
LVDS interface

Version: P01

Customer : _____

Approved By : _____

Date: _____

ONATION		
APPROVAL	**CHECKER**	**PREPARE**
Tim		Louis

C O N T E N T S

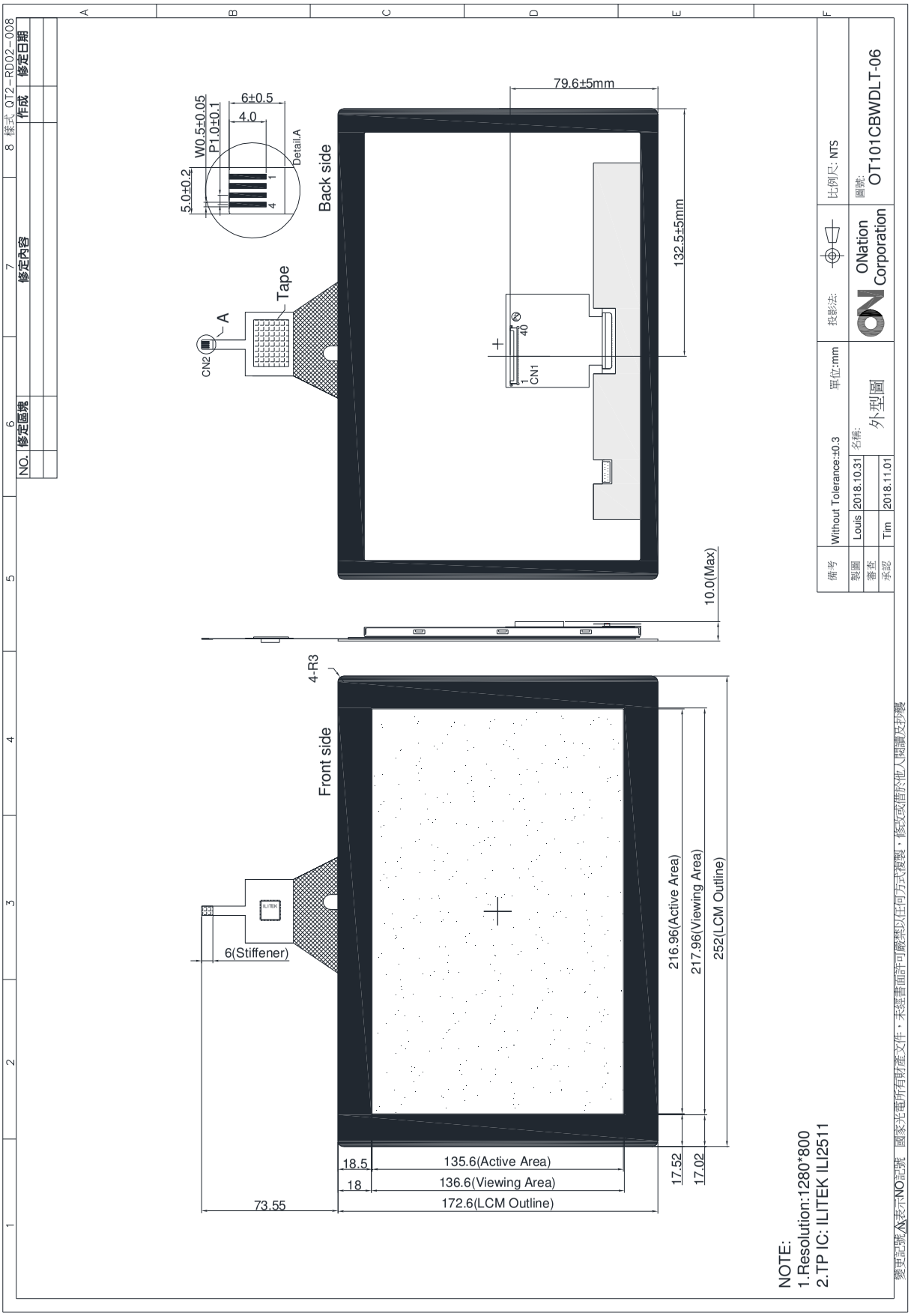
1.RECORD OF REVISION

REV	DATE	PAGE	SUMMARY
P01	2018.10.31	ALL	Preliminary specification was first issued.

2.MECHANICAL SPECIFICATIONS

(1)	Number Of Dots (Dots)	1280 X (R.G.B) X 800
(2)	Module Size(mm)	252.0(W) X 172.6(H) X 10.0(D) (MAX.)
(3)	Active Area(mm)	216.96(H) X 135.6(V)
(4)	Pixel Pitch(mm)	0.0565(H) X 0.1695(V)
(5)	LCD / Polarizer Model	TFT , Transmissive, Normally Black
(6)	Backlight Color	White LED
(7)	Viewing Direction	Wide Viewing Angle
(8)	Electrical Interface	LVDS
(9)	Touch Panel Type	CTP,USB interface
(10)	Module Weight(g)	TBD±5%

3. OUTLINE DIMENSIONS



4. INTERFACE PIN CONNECTION

4.1 LCM PANEL DRIVING SECTION

CN1 Connector: I-PEX 20455 (Without lock bar) or Equivalent

PIN NO.	SIGNAL	I/O	FUNCTION	REMARK
1	VCC	P	Power Supply For Digital Circuit	
2	VCC	P	Power Supply For Digital Circuit	
3	VCC	P	Power Supply For Digital Circuit	
4	NC	-	No Connection	
5	NC	-	No Connection	
6	NC	-	No Connection	
7	NC	-	No Connection	
8	RxIN0-	I	Negative LVDS differential Data input	
9	RxIN0+	I	Positive LVDS differential Data input	
10	GND	P	Ground	
11	RxIN1-	I	Negative LVDS differential Data input	
12	RxIN1+	I	Positive LVDS differential Data input	
13	GND	P	Ground	
14	RxIN2-	I	Negative LVDS differential Data input	
15	RxIN2+	I	Positive LVDS differential Data input	
16	GND	P	Ground	
17	CKIN-	I	Negative LVDS differential Clock input	
18	CKIN+	I	Positive LVDS differential Clock input	
19	GND	P	Ground	
20	RxIN3-	I	Negative LVDS differential Data input	
21	RxIN3+	I	Positive LVDS differential Data input	
22	GND	P	Ground	
23	NC	-	No Connection	
24	NC	-	No Connection	
25	GND	P	Ground	
26	GND	P	Ground	
27	ADJ	I	PWM Frequency Adjust	
28	EN	I	Enable control.	
29	VSS	P	Backlight Circuit Ground	
30	VSS	P	Backlight Circuit Ground	

Note :'P'stand for power , 'I'stand for input , 'O'stand for output

PIN NO.	SIGNAL	I/O	FUNCTION	REMARK
31	VSS	P	Backlight Circuit Ground	
32	VSS	P	Backlight Circuit Ground	
33	VSS	P	Backlight Circuit Ground	
34	NC	-	No Connection	
35	NC	-	No Connection	
36	VLED	P	Power for Backlight Circuit	
37	VLED	P	Power for Backlight Circuit	
38	VLED	P	Power for Backlight Circuit	
39	VLED	P	Power for Backlight Circuit	
40	VLED	P	Power for Backlight Circuit	

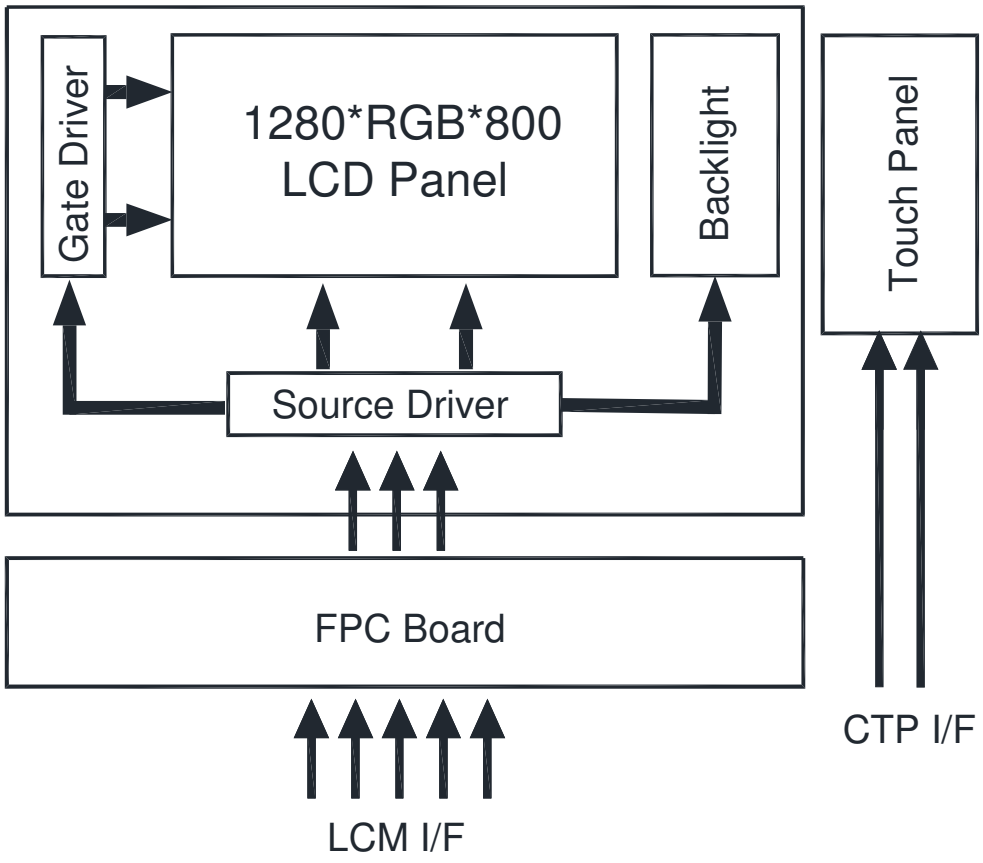
Note :'P'stand for power , 'I'stand for input , 'O'stand for output

CN2 Interface:

PIN NO.	SIGNAL	I/O	FUNCTION	REMARK
1	VBUS	P	Power for CTP Circuit 5V	
2	D-	I/O	Series Data Signal	
3	D+	I/O	Series Data Signal	
4	GND	P	CTP Circuit Ground	

Note :'P'stand for power , 'I'stand for input , 'O'stand for output

5. BLOCK DIAGRAM



6. ABSOLUTE MAXIMUM RATINGS

6.1 ELECTRICAL ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	MAX.	UNIT	REMARK
Power Supply Voltage	VCC	-0.3	+5.0	V	
Logic Output Voltage	V_I	-0.3	VCC+0.3	V	

Note：The absolute maximum rating values of this product not allowed to be exceeded at any times. Should be module be used with any of absolute maximum ratings exceeded. The characteristics of the module may not be recovered, or in an extreme case the module may be permanently destroyed.

6.2 ENVIRONMENTAL ABSOLUTE MAXIMUM RATINGS

ITEM	OPERATING		STORAGE		REMARK
	MIN.	MAX.	MIN.	MAX.	
Ambient Temperature(℃)	Ta=-20	Ts=70	Ta=-30	Ta=80	Note 1,2.
Humidity(% RH)	5~90		5~90		

Note 1：The response time will become lower when operated at low temperature.

Note 2：Background color changes slightly depending on ambient temperature.

Note 3：Operation Ta=60℃ & RH=90% ≦ 240Hrs.

7. ELECTRICAL CHARACTERISTICS

7.1 LCM ELECTRICAL CHARACTERISTICS

Ta=25℃

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Power Voltage For LCD	VCC	2.5	3.3	3.6	V	
	ICC	-	240	300	mA	VCC=3.3V White Pattern
Input High Voltage	V_{IH}	0.7*VCC	-	VCC	V	
Input Low Voltage	V_{IL}	0	-	0.3*VCC	V	

7.2 BACKLIGHT UNITS

Ta=25℃

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
LED Driving Voltage	VLED	5.0	12.0	13.2	V	
LED Driving Current	ILED	-	750	900	mA	VLED=12V
ADJ Input Voltage	VIH	3.0	3.3	3.6	V	
	VIL	0	-	1.0	V	
ADJ Frequency	-	100	-	2000	Hz	
LED Life Time	-	20,000	-	-	Hrs	

Note 1: The “LED dice life time” is defined as the brightness decrease to 50% original brightness that ambient temperature is 25℃

8. OPTICAL CHARACTERISTICS

Ta=25℃

ITEM		SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT	REMARK
Contrast Ratio		CR	Viewing Normal Angle	600	800	-	-	Note 1
Response Time		T_{ON}		-	10	20	ms	Note 2
		T_{OFF}		-	15	30		
Chromaticity	White	X	θx=θy=0°	0.26	0.31	0.36	-	Note 4
		Y		0.26	0.31	0.36	-	
Viewing Angle	Hor.	θx+	Center CR≧10	75	85	-	Deg.	Note 3
		θx -		75	85	-		
	Ver.	θy+		75	85	-		
		θy -		75	85	-		
Luminance		L	PWM=100% θx=θy=0°	600	800	-	cd/m^2	Note 5
Uniformity		YU			70	-	%	

Note 1：Definition of Contrast Ratio (CR)：

The contrast ratio can be calculated by the following expression.

Contrast Ratio (CR) = L63/L0

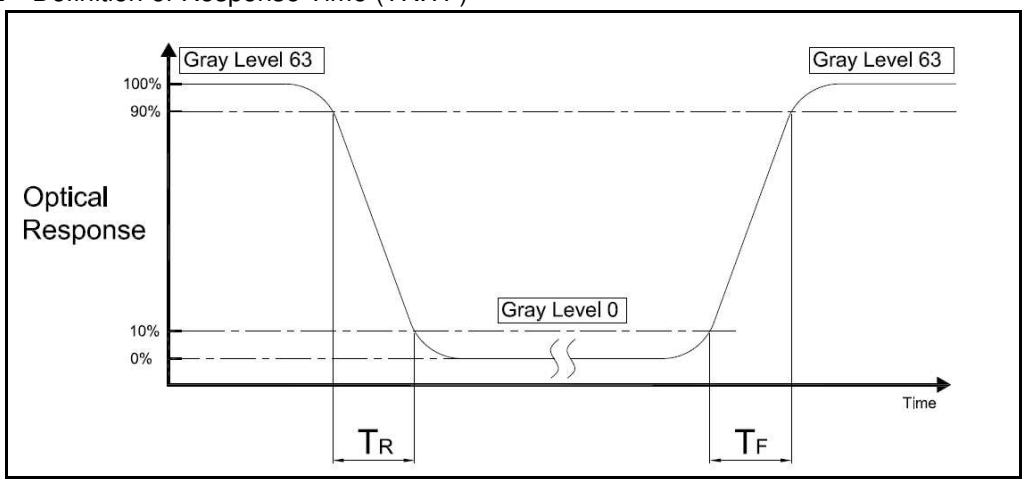
L63：Luminance of gray level 63

L0：Luminance of gray level 0

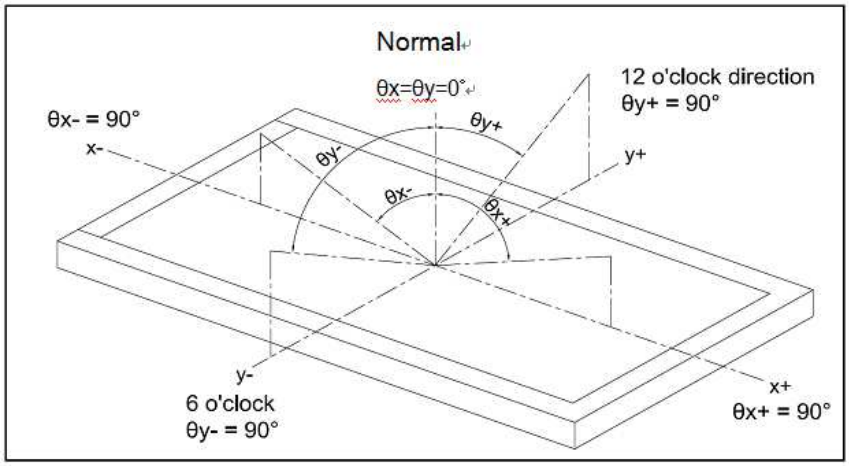
CR = CR(5)

CR(X) is corresponding to the Contrast Ratio of the point X at Figure in Note 5

Note 2：Definition of Response Time (TR.TF)

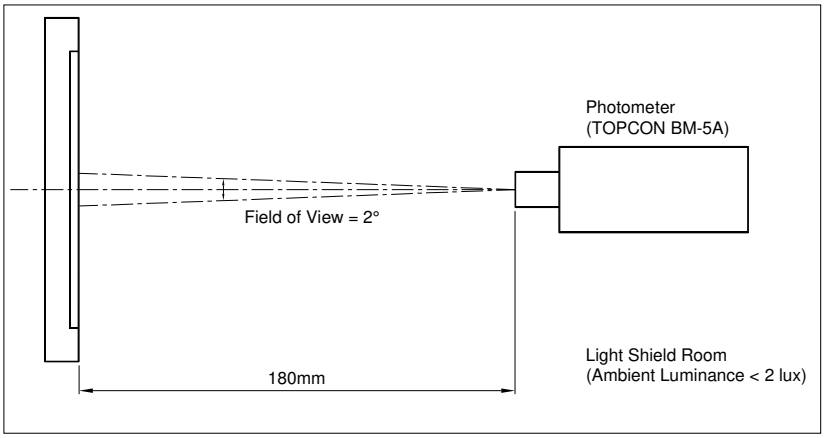


Note 3：Definition of Viewing Angle

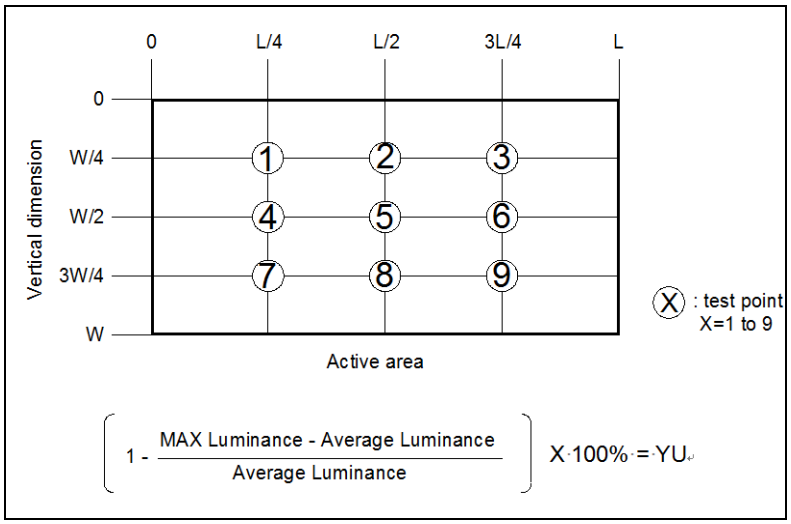


Note 4：Measurement Set-Up:

The LCD module should be stabilized at a given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.



Note 5：



9. TOUCH PANEL SPECIFICATIONS

9.1 Type :

Projected capacitive Touch Panel

9.2 STRUCTURE :

Glass +Glass

9.3 IC MODEL :

9.3.1 IC manufacture : ILITEK
9.3.2 IC part number : ILI2511
9.3.3 Interface：USB
Regards the specification, please refer the IC data sheet from supplier

9.4 ELECTRICAL CHARACTERISTICS :

9.4.1 Operating Voltage : DC 3.3V
9.4.2 Response：According to Integration time of controller
9.4.3 Accuracy ：ILI2511 meets all Windows 8.1 and Windows 10 requirements with best user touch experience and highest noise immunity performance.
9.4.4 Multi-Touch Fingers Pitch：Between the Fingers Pitch > 10mm
(Note: Channel Pitch Should be 5mm~7mm)
9.4.5 Accuracy : ±1.5%

9.5 MECHANICAL CHARACTERISTICS :

9.5.1 Input Mode： Finger or Conductive Pen
9.5.2 Surface hardness：≥6H
9.5.3 Multi-touch : 5 points

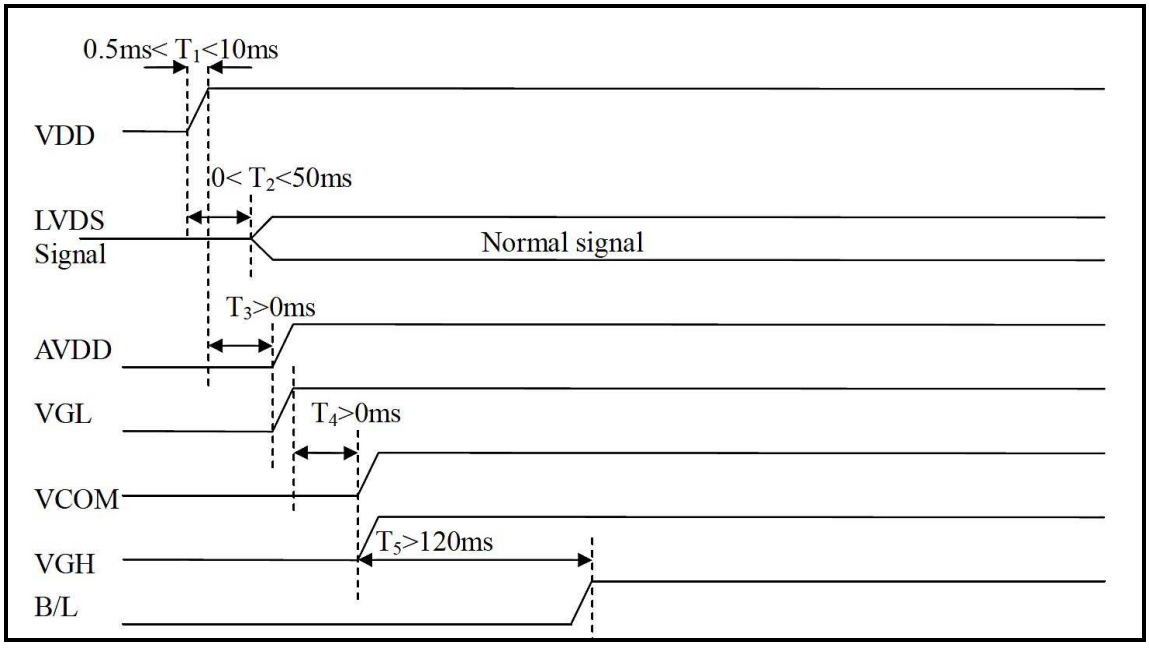
9.6 OPTICAL CHARACTERISTICS :

9.6.1 Transparency：85±3%
9.6.2 Haze : ≦1%

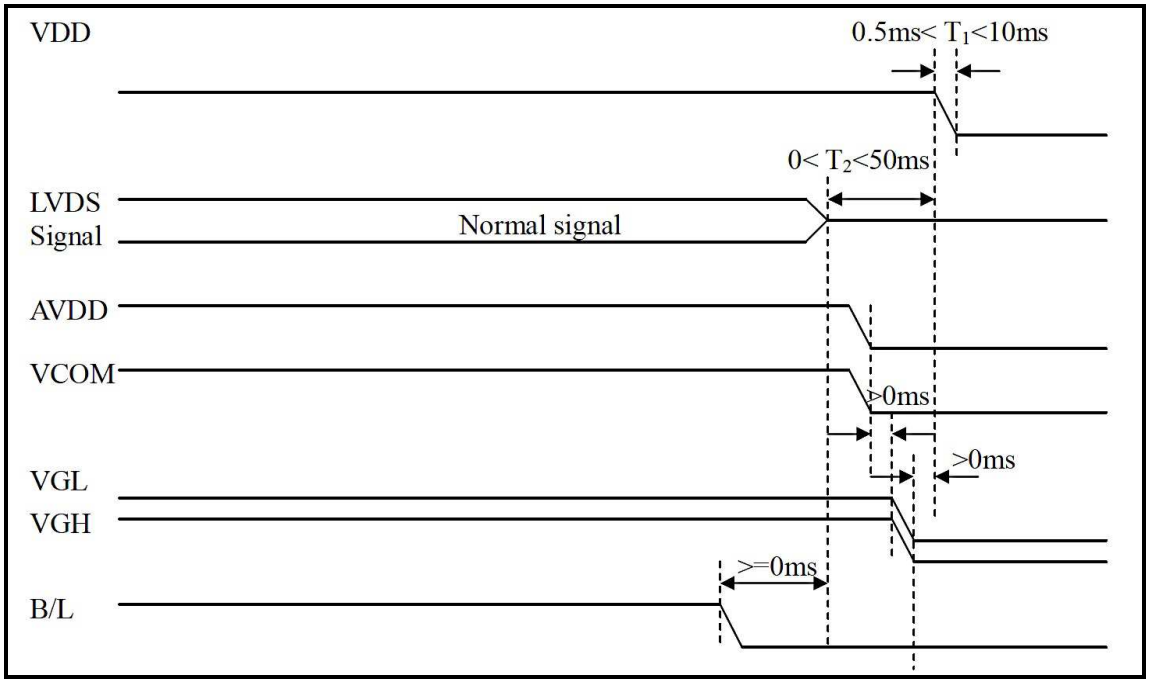
10. TIMING SPECIFICATIONS

10.1 POWER SIGNAL SEQUENCE

• Power ON

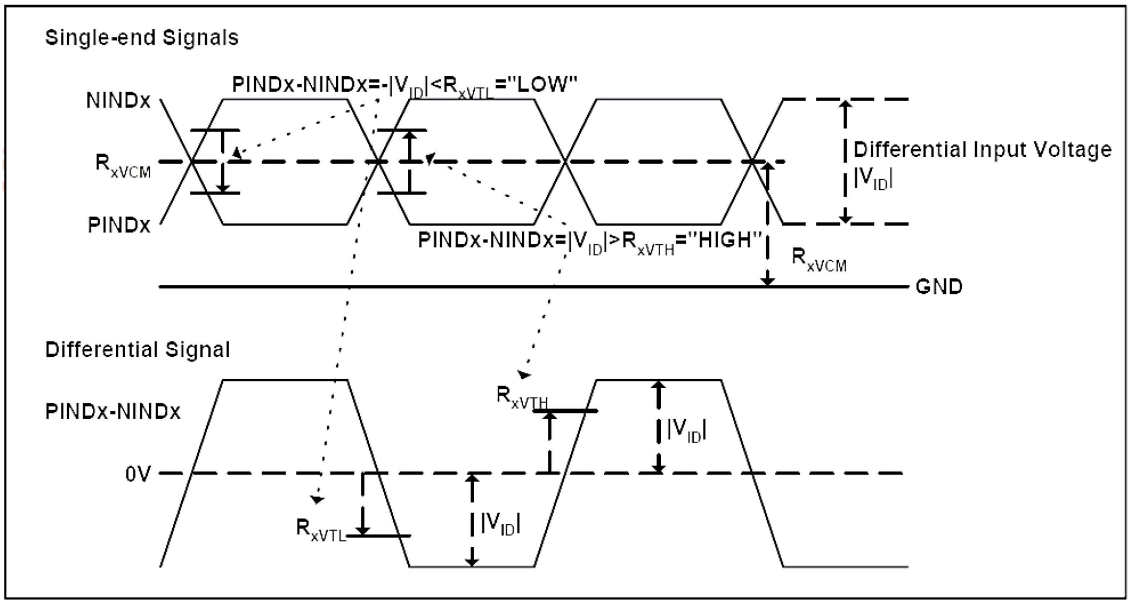


• Power OFF



10.2 AC Electrical Characteristics

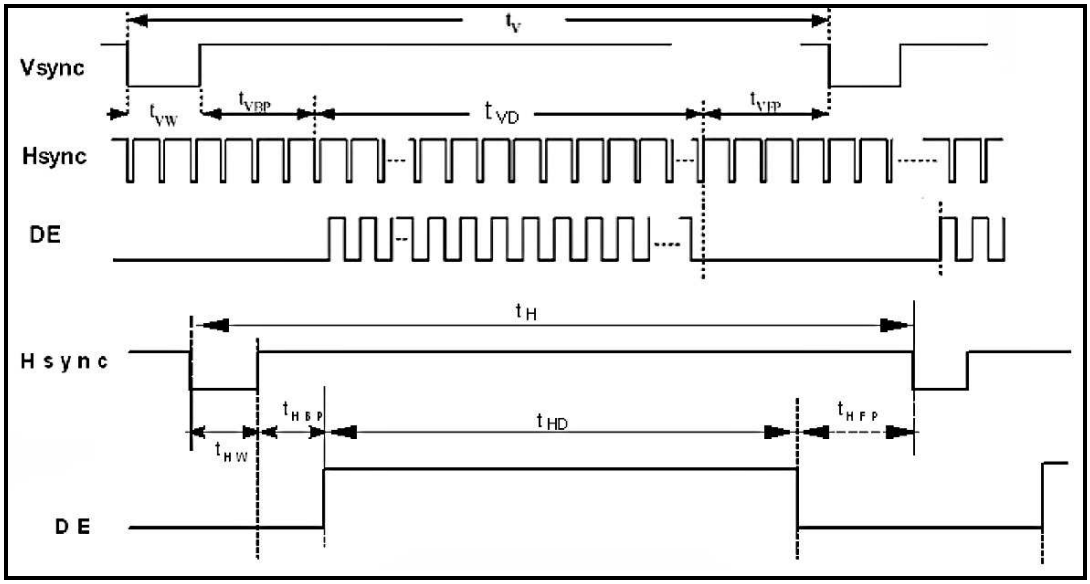
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
LVDS Differential Input High Threshold Voltage	R_{XVTH}	-	-	+100	mV	R_{XVCM}=1.2V
LVDS Differential Input Low Threshold Voltage	R_{XVTL}	-100	-	-	mV	
LVDS Differential Input Common mode Voltage	R_{XVCM}	0.7	-	1.6	V	
LVDS Differential Voltage	$\|V_{ID}\|$	200	-	600	mV	



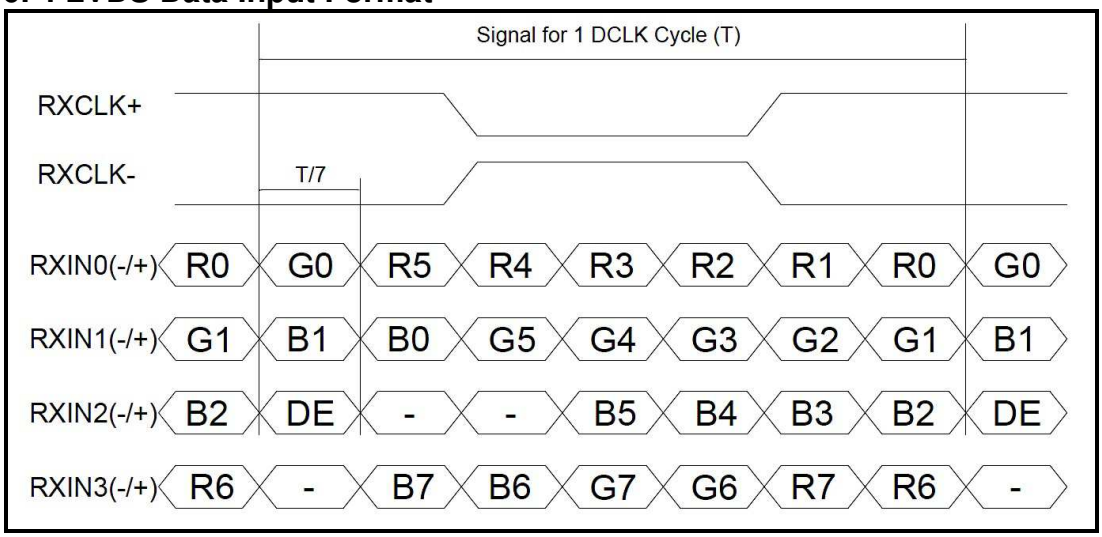
10.3 Timing Table

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	Remark
Clock Frequency	1/Tc	68.9	71.1	73.4	MHz	Note1
Horizontal display area	t_{HD}		1280		T_C	
HS period time	t_H	1410	1440	1470	T_C	
HS Width +Back Porch+Front Porch	t_{HW}+ H_{BP} +t_{HFP}	130	160	190	T_C	
Vertical display area	t_{VD}		800		T_H	
VS period time	t_V	815	823	833	T_H	
VS Width +Back Porch +Front Porch	t_{VW}+ t_{VBP} +t_{VFP}	15	23	33	T_H	

Note1:Frame rate =60Hz



10. 4 LVDS Data Input Format



11 RELIABILITY TEST

ENVIRONMENTAL TEST				
NO.	ITEM	CONDITIONS	TIME PERIOD	REMARK
1	High Temperature Storage	Ta=80℃	240HRS	
2	Low Temperature Storage	Ta=-30℃	240HRS	
3	High Temperature Operation	Ts=70℃	240HRS	
4	Low Temperature Operation	Ta=-20℃	240HRS	
5	Storage Temperature Cycle	Ta=-30℃~ 80℃	1H each cycle 100CYCLE	
6	High Temperature Humidity Operation	60℃ 90%RH	240HRS	

Note1 : Ta is the ambient temperature of samples.
Note2 : Ts is the temperature of panel's surface.
Note3 : In the standard condition, there shall be no practical problem that may affect the display function. After the reliability test, the product only guarantees operation, but don't guarantee all of the cosmetic specification.
Note4 : Before cosmetic and function test, the product must have enough recovery time, at least 2 hours at room temperature.

12. LCM INSPECTION STANDARD

Inspection specifications refer Document Number：OT101CBWDLT-06-IIS VER1.0

13. PACKAGE INFORMATION

LCM Model	LCM Qty. in the box	Outside Box Size	Weight
OT101CBWDLT-06	-	-	-

14.PRECAUTIONS FOR USE

14.1 SAFETY

(1) Do not swallow any liquid crystal, even if there is no proof that liquid crystal is poisonous.
(2) If the LCD panel breaks, be careful not to get liquid crystal to touch your skin.
(3) If skin is exposed to liquid crystal, wash the area thoroughly with alcohol or soap.

14.2 STORAGE CONDITIONS

(1) Store the panel or module in a dark place where the temperature is 23±5°C and the humidity is below 50±20%RH.
(2) Store in anti-static electricity container.
(3) Store in clean environment, free from dust, active gas, and solvent.
(4) Do not place the module near organics solvents or corrosive gases.
(5) Do not crush, shake, or jolt the module.

14.3 HANDLING PRECAUTIONS

(1) Avoid static electricity which can damage the CMOS LSI.
(2) The polarizing plate of the display is very fragile. So, please handle it very carefully.
(3) Do not give external shock.
(4) Do not apply excessive force on the surface.
(5) Do not wipe the polarizing plate with a dry cloth, as it may easily scratch the Surface of plate.
(6) Do not use ketonic solvent & Aromatic solvent, use with a soft cloth soaked with a cleaning naphtha solvent.
(7) Do not operate it above the absolute maximum rating.
(8) Do not remove the panel or frame from the module.
(9) When the module is assembled, it should be attached to the system firmly, Be careful not to twist and bend the module.
(10) Wipe off water droplets or oil immediately . If you leave the droplets for a long time, staining and discoloration may occur.
(11) If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, legs or clothes, it must be washed away thoroughly with soap.

14.4 WARRANTY

(1) Acceptance inspection period.
(2) The period is within one month after the arrival of contracted commodity at the buyer's factory site.
(3) Applicable warrant period
(4) The period is within 12 months since the date of shipping out under normal using and storage conditions.

ONation Corporation

TFT COLOR LCD MODULE

MODEL: OT101CBWDLT-06

WXGA
LVDS interface

Version: P01

Customer : _____

Approved By : _____

Date: _____

ONATION		
APPROVAL	**CHECKER**	**PREPARE**
Tim		Louis

C O N T E N T S

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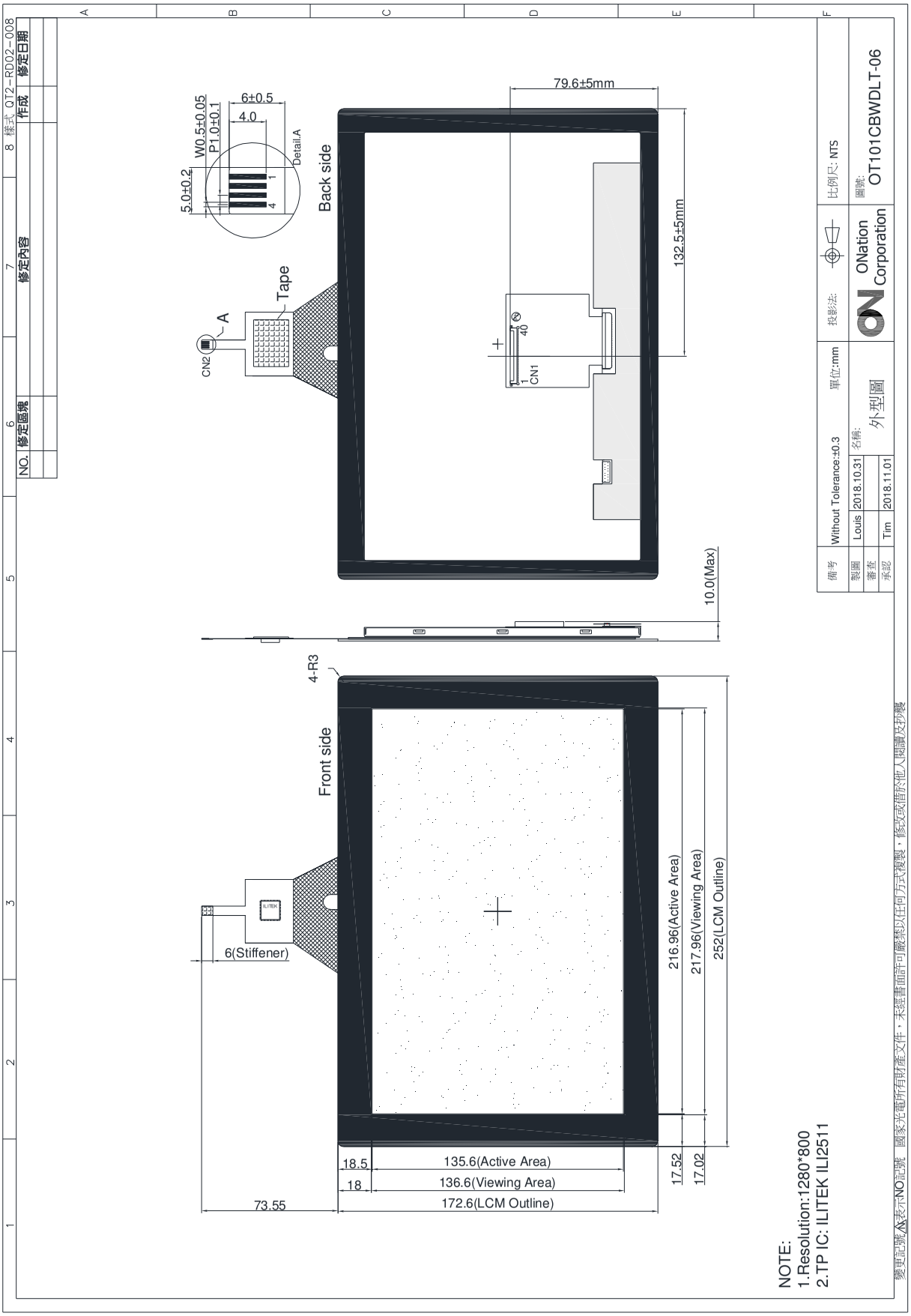
(4)	Pixel Pitch(mm)	0.0565(H) X 0.1695(V)
(5)	LCD / Polarizer Model	TFT , Transmissive, Normally Black
(6)	Backlight Color	White LED
(7)	Viewing Direction	Wide Viewing Angle
(8)	Electrical Interface	LVDS
(9)	Touch Panel Type	CTP,USB interface
(10)	Module Weight(g)	TBD±5%

3. OUTLINE DIMENSIONS



4. INTERFACE PIN CONNECTION

4.1 LCM PANEL DRIVING SECTION

CN1 Connector: I-PEX 20455 (Without lock bar) or Equivalent

PIN NO.	SIGNAL	I/O	FUNCTION	REMARK
1	VCC	P	Power Supply For Digital Circuit	
2	VCC	P	Power Supply For Digital Circuit	
3	VCC	P	Power Supply For Digital Circuit	
4	NC	-	No Connection	
5	NC	-	No Connection	
6	NC	-	No Connection	
7	NC	-	No Connection	
8	RxIN0-	I	Negative LVDS differential Data input	
9	RxIN0+	I	Positive LVDS differential Data input	
10	GND	P	Ground	
11	RxIN1-	I	Negative LVDS differential Data input	
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16	GND	P	Ground	
17	CKIN-	I	Negative LVDS differential Clock input	
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20	RxIN3-	I	Negative LVDS differential Data input	
21	RxIN3+	I	Positive LVDS differential Data input	
22	GND	P	Ground	
23	NC	-	No Connection	
24	NC	-	No Connection	
25	GND	P	Ground	
26	GND	P	Ground	
27	ADJ	I	PWM Frequency Adjust	
28	EN	I	Enable control.	
29	VSS	P	Backlight Circuit Ground	
30	VSS	P	Backlight Circuit Ground	

Note :'P'stand for power , 'I'stand for input , 'O'stand for output

PIN NO.	SIGNAL	I/O	FUNCTION	REMARK
31	VSS	P	Backlight Circuit Ground	
32	VSS	P	Backlight Circuit Ground	
33	VSS	P	Backlight Circuit Ground	
34	NC	-	No Connection	
35	NC	-	No Connection	
36	VLED	P	Power for Backlight Circuit	
37	VLED	P	Power for Backlight Circuit	
38	VLED	P	Power for Backlight Circuit	
39	VLED	P	Power for Backlight Circuit	
40	VLED	P	Power for Backlight Circuit	

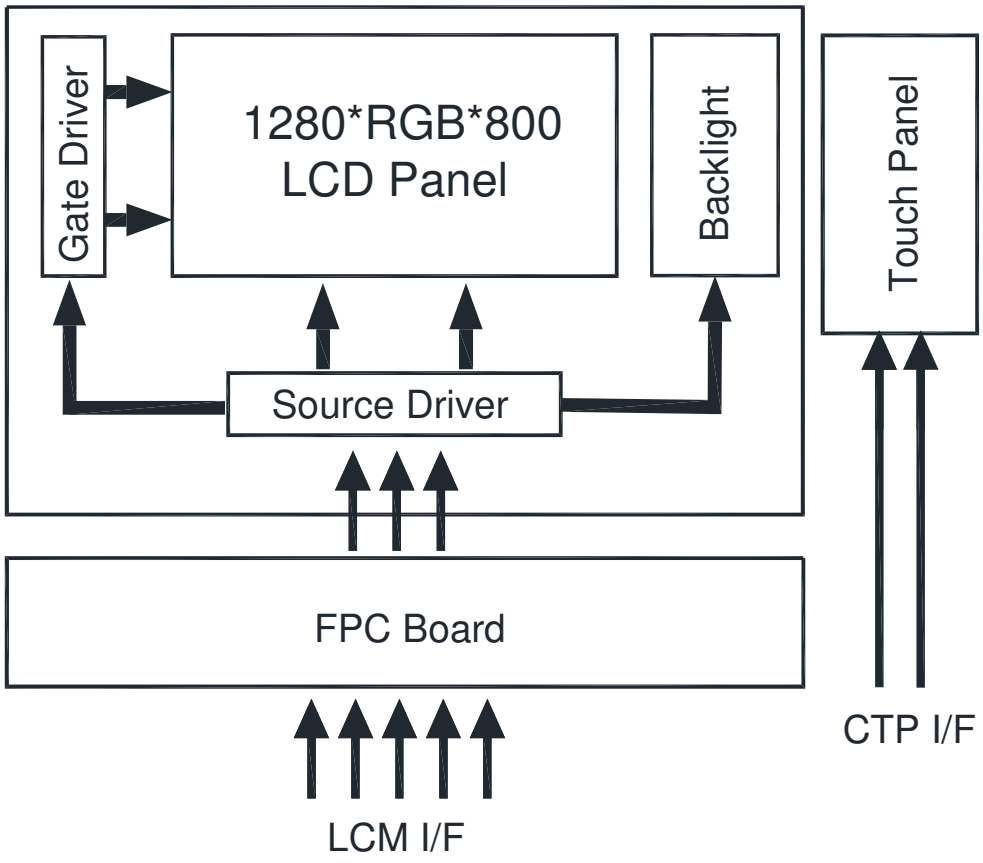
Note :'P'stand for power , 'I'stand for input , 'O'stand for output

CN2 Interface:

PIN NO.	SIGNAL	I/O	FUNCTION	REMARK
1	VBUS	P	Power for CTP Circuit 5V	
2	D-	I/O	Series Data Signal	
3	D+	I/O	Series Data Signal	
4	GND	P	CTP Circuit Ground	

Note :'P'stand for power , 'I'stand for input , 'O'stand for output

5. BLOCK DIAGRAM



6. ABSOLUTE MAXIMUM RATINGS

6.1 ELECTRICAL ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	MAX.	UNIT	REMARK
Power Supply Voltage	VCC	-0.3	+5.0	V	
Logic Output Voltage	V_I	-0.3	VCC+0.3	V	

Note：The absolute maximum rating values of this product not allowed to be exceeded at any times. Should be module be used with any of absolute maximum ratings exceeded. The characteristics of the module may not be recovered, or in an extreme case the module may be permanently destroyed.

6.2 ENVIRONMENTAL ABSOLUTE MAXIMUM RATINGS

ITEM	OPERATING		STORAGE		REMARK
	MIN.	MAX.	MIN.	MAX.	
Ambient Temperature(℃)	Ta=-20	Ts=70	Ta=-30	Ta=80	Note 1,2.
Humidity(% RH)	5~90		5~90		

Note 1：The response time will become lower when operated at low temperature.

Note 2：Background color changes slightly depending on ambient temperature.

Note 3：Operation Ta=60℃ & RH=90% ≦ 240Hrs.

7. ELECTRICAL CHARACTERISTICS

7.1 LCM ELECTRICAL CHARACTERISTICS

Ta=25℃

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Power Voltage For LCD	VCC	2.5	3.3	3.6	V	
	ICC	-	240	300	mA	VCC=3.3V White Pattern
Input High Voltage	V_{IH}	0.7*VCC	-	VCC	V	
Input Low Voltage	V_{IL}	0	-	0.3*VCC	V	

7.2 BACKLIGHT UNITS

Ta=25℃

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
LED Driving Voltage	VLED	5.0	12.0	13.2	V	
LED Driving Current	ILED	-	750	900	mA	VLED=12V
ADJ Input Voltage	VIH	3.0	3.3	3.6	V	
	VIL	0	-	1.0	V	
ADJ Frequency	-	100	-	2000	Hz	
LED Life Time	-	20,000	-	-	Hrs	

Note 1: The “LED dice life time” is defined as the brightness decrease to 50% original brightness that ambient temperature is 25℃

8. OPTICAL CHARACTERISTICS

Ta=25℃

ITEM		SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT	REMARK
Contrast Ratio		CR	Viewing Normal Angle	600	800	-	-	Note 1
Response Time		T_{ON}		-	10	20	ms	Note 2
		T_{OFF}		-	15	30		
Chromaticity	White	X	θx=θy=0°	0.26	0.31	0.36	-	Note 4
		Y		0.26	0.31	0.36	-	
Viewing Angle	Hor.	θx+	Center CR≧10	75	85	-	Deg.	Note 3
		θx -		75	85	-		
	Ver.	θy+		75	85	-		
		θy -		75	85	-		
Luminance		L	PWM=100% θx=θy=0°	600	800	-	cd/m^2	Note 5
Uniformity		YU			70	-	%	

Note 1：Definition of Contrast Ratio (CR)：

The contrast ratio can be calculated by the following expression.

Contrast Ratio (CR) = L63/L0

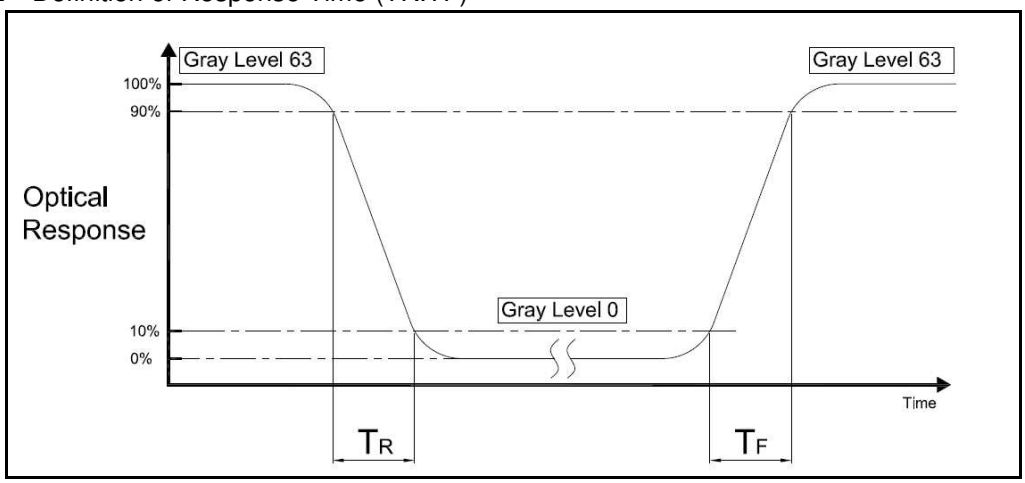
L63：Luminance of gray level 63

L0：Luminance of gray level 0

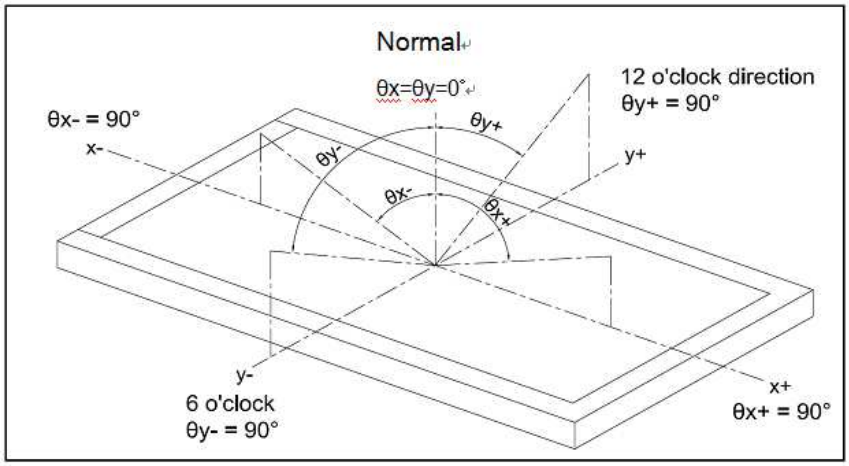
CR = CR(5)

CR(X) is corresponding to the Contrast Ratio of the point X at Figure in Note 5

Note 2：Definition of Response Time (TR.TF)

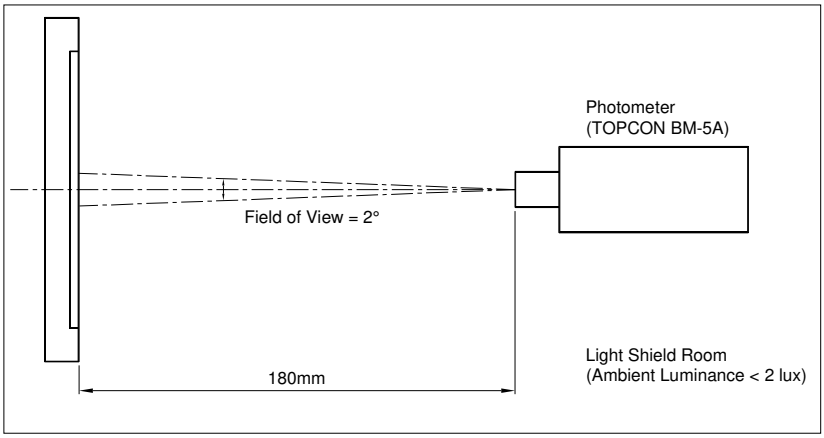


Note 3：Definition of Viewing Angle

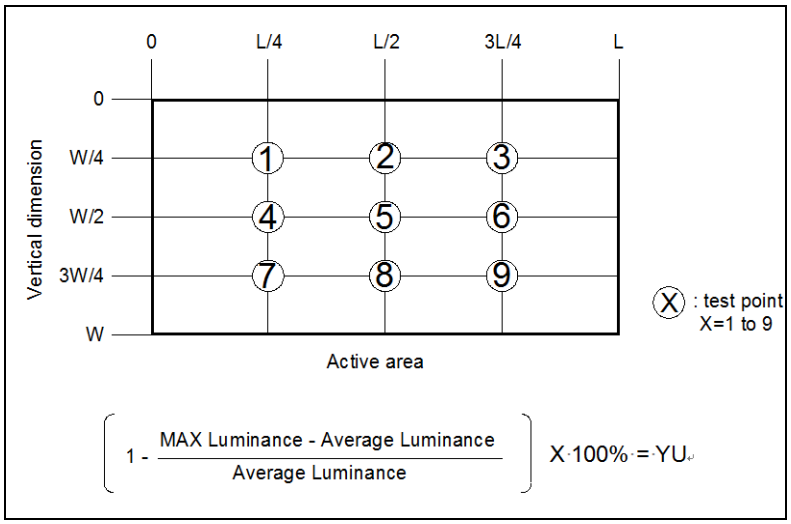


Note 4：Measurement Set-Up:

The LCD module should be stabilized at a given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.



Note 5：



9. TOUCH PANEL SPECIFICATIONS

9.1 Type :

Projected capacitive Touch Panel

9.2 STRUCTURE :

Glass +Glass

9.3 IC MODEL :

9.3.1 IC manufacture : ILITEK
9.3.2 IC part number : ILI2511
9.3.3 Interface：USB
Regards the specification, please refer the IC data sheet from supplier

9.4 ELECTRICAL CHARACTERISTICS :

9.4.1 Operating Voltage : DC 3.3V
9.4.2 Response：According to Integration time of controller
9.4.3 Accuracy ：ILI2511 meets all Windows 8.1 and Windows 10 requirements with best user touch experience and highest noise immunity performance.
9.4.4 Multi-Touch Fingers Pitch：Between the Fingers Pitch > 10mm
(Note: Channel Pitch Should be 5mm~7mm)
9.4.5 Accuracy : ±1.5%

9.5 MECHANICAL CHARACTERISTICS :

9.5.1 Input Mode： Finger or Conductive Pen
9.5.2 Surface hardness：≥6H
9.5.3 Multi-touch : 5 points

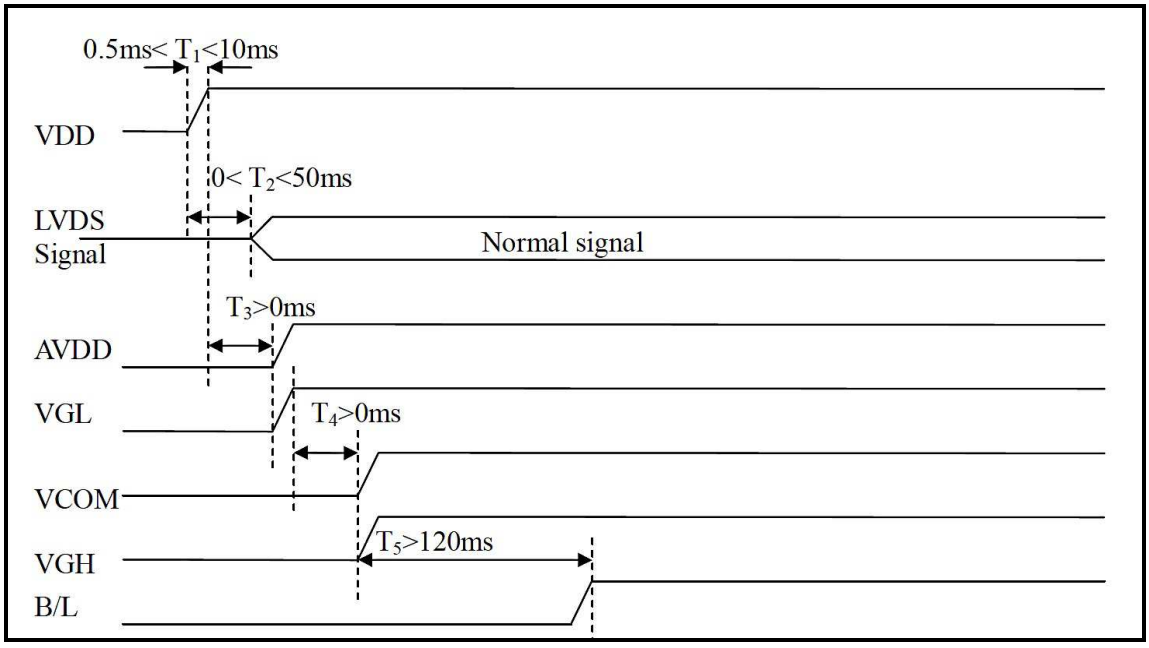
9.6 OPTICAL CHARACTERISTICS :

9.6.1 Transparency：85±3%
9.6.2 Haze : ≦1%

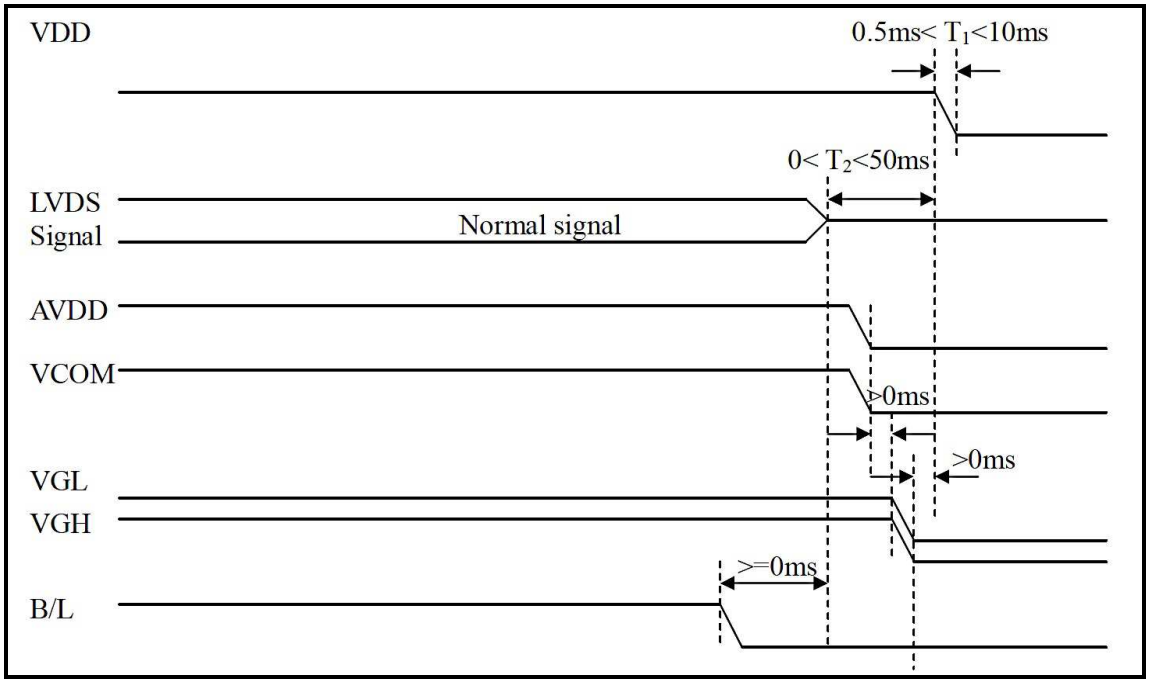
10. TIMING SPECIFICATIONS

10.1 POWER SIGNAL SEQUENCE

• Power ON

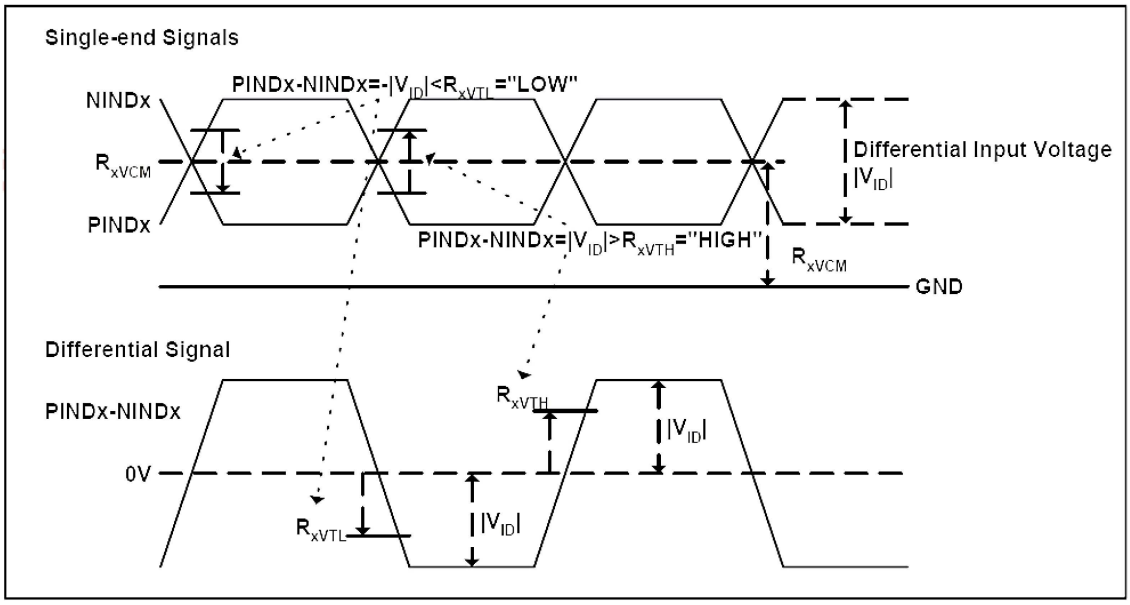


• Power OFF



10.2 AC Electrical Characteristics

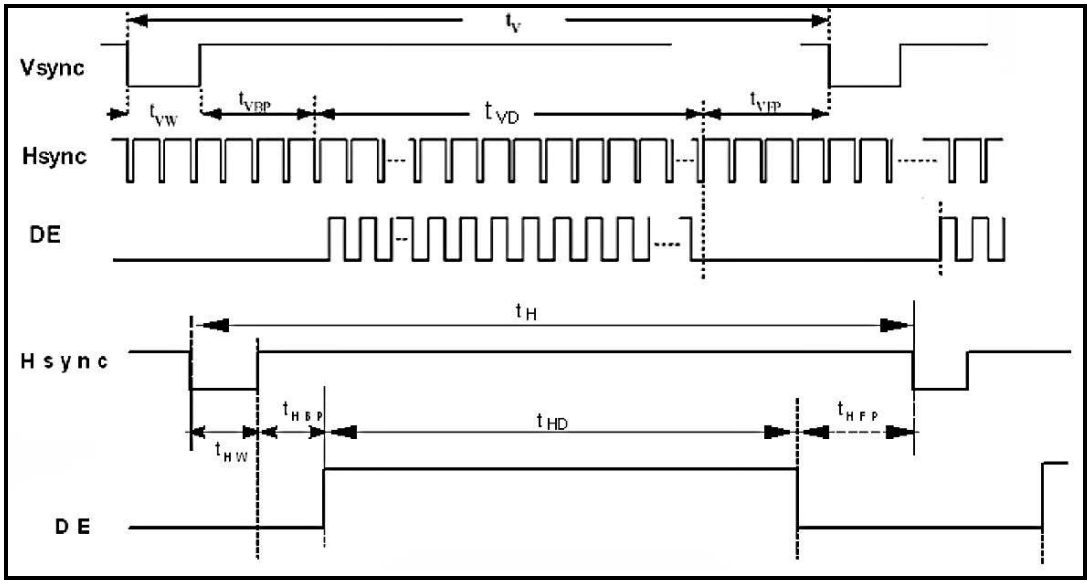
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
LVDS Differential Input High Threshold Voltage	R_{XVTH}	-	-	+100	mV	R_{XVCM}=1.2V
LVDS Differential Input Low Threshold Voltage	R_{XVTL}	-100	-	-	mV	
LVDS Differential Input Common mode Voltage	R_{XVCM}	0.7	-	1.6	V	
LVDS Differential Voltage	$\|V_{ID}\|$	200	-	600	mV	



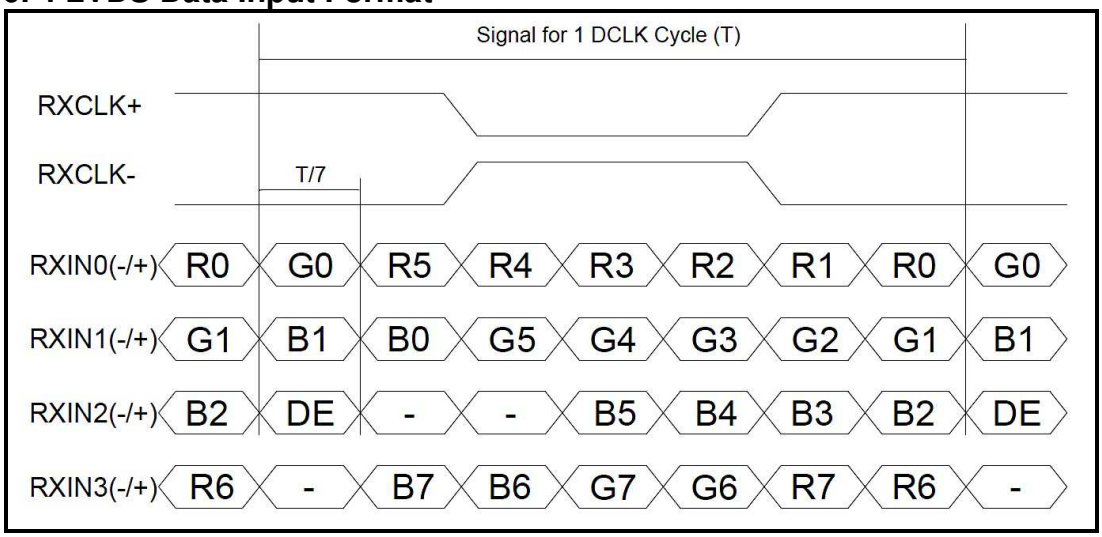
10.3 Timing Table

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	Remark
Clock Frequency	1/Tc	68.9	71.1	73.4	MHz	Note1
Horizontal display area	t_{HD}		1280		T_C	
HS period time	t_H	1410	1440	1470	T_C	
HS Width +Back Porch+Front Porch	t_{HW}+ H_{BP} +t_{HFP}	130	160	190	T_C	
Vertical display area	t_{VD}		800		T_H	
VS period time	t_V	815	823	833	T_H	
VS Width +Back Porch +Front Porch	t_{VW}+ t_{VBP} +t_{VFP}	15	23	33	T_H	

Note1:Frame rate =60Hz



10. 4 LVDS Data Input Format



11 RELIABILITY TEST

ENVIRONMENTAL TEST				
NO.	ITEM	CONDITIONS	TIME PERIOD	REMARK
1	High Temperature Storage	Ta=80℃	240HRS	
2	Low Temperature Storage	Ta=-30℃	240HRS	
3	High Temperature Operation	Ts=70℃	240HRS	
4	Low Temperature Operation	Ta=-20℃	240HRS	
5	Storage Temperature Cycle	Ta=-30℃~ 80℃	1H each cycle 100CYCLE	
6	High Temperature Humidity Operation	60℃ 90%RH	240HRS	

Note1 : Ta is the ambient temperature of samples.
Note2 : Ts is the temperature of panel's surface.
Note3 : In the standard condition, there shall be no practical problem that may affect the display function. After the reliability test, the product only guarantees operation, but don't guarantee all of the cosmetic specification.
Note4 : Before cosmetic and function test, the product must have enough recovery time, at least 2 hours at room temperature.

12. LCM INSPECTION STANDARD

Inspection specifications refer Document Number：OT101CBWDLT-06-IIS VER1.0

13. PACKAGE INFORMATION

LCM Model	LCM Qty. in the box	Outside Box Size	Weight
OT101CBWDLT-06	-	-	-

14.PRECAUTIONS FOR USE

14.1 SAFETY

(1) Do not swallow any liquid crystal, even if there is no proof that liquid crystal is poisonous.
(2) If the LCD panel breaks, be careful not to get liquid crystal to touch your skin.
(3) If skin is exposed to liquid crystal, wash the area thoroughly with alcohol or soap.

14.2 STORAGE CONDITIONS

(1) Store the panel or module in a dark place where the temperature is 23±5°C and the humidity is below 50±20%RH.
(2) Store in anti-static electricity container.
(3) Store in clean environment, free from dust, active gas, and solvent.
(4) Do not place the module near organics solvents or corrosive gases.
(5) Do not crush, shake, or jolt the module.

14.3 HANDLING PRECAUTIONS

(1) Avoid static electricity which can damage the CMOS LSI.
(2) The polarizing plate of the display is very fragile. So, please handle it very carefully.
(3) Do not give external shock.
(4) Do not apply excessive force on the surface.
(5) Do not wipe the polarizing plate with a dry cloth, as it may easily scratch the Surface of plate.
(6) Do not use ketonic solvent & Aromatic solvent, use with a soft cloth soaked with a cleaning naphtha solvent.
(7) Do not operate it above the absolute maximum rating.
(8) Do not remove the panel or frame from the module.
(9) When the module is assembled, it should be attached to the system firmly, Be careful not to twist and bend the module.
(10) Wipe off water droplets or oil immediately . If you leave the droplets for a long time, staining and discoloration may occur.
(11) If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, legs or clothes, it must be washed away thoroughly with soap.

14.4 WARRANTY

(1) Acceptance inspection period.
(2) The period is within one month after the arrival of contracted commodity at the buyer's factory site.
(3) Applicable warrant period
(4) The period is within 12 months since the date of shipping out under normal using and storage conditions.