

INDUSTRIAL STRENGTH... Start Your Application From YOURITECH

Integration support

Obsolescence Management

PCAP

Embedded Systems

Human Machine Interface

Touch Solutions

Software

Quality Management

Open Frame Monitors

LCD Controller

Research & Development

Firmware

EMC tests

on-site service

In-house Manufacturing

Optical Bonding

Cover glass

System solutions

OEM Solutions

Custom Display

Production Custom designs Installation

Mechanical design



SPECIFICATION FOR LCM Module

MODULE No:	ET101WX20-K
CUSTOMER:	

YOURITECH	INITIAL	DATE
PREPARED BY		
CHECKED BY		
APPROVED BY		

CUSTOMER	INITIAL	DATE
APPROVED BY		

Part. No	ET101WX20-K	REV	V1.0	Page 1 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

[illegible]

Part. No	ET101WX20-K	REV	V1.0	Page 2 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

Contents

1. Block Diagram	4
2. Outline dimension	5
3. Input terminal Pin Assignment	6
4. LCD Optical Characteristics	8
4.1 Optical specification	9
5. Electrical Characteristics	12
5.1 Absolute Maximum Rating	12
5.2 DC Electrical Characteristics	12
5.3 LED Backlight Characteristics	13
6. Video Interface and Timing Table	14
7. Power Sequence	15
7.1 Power on sequence	16
7.2 Power off sequence	16
8. LCD Module Out-Going Quality Level	17
8.1 VISUAL & FUNCTION INSPECTION STANDARD	17
8.1.1 Inspection conditions	17
8.1.3 Sampling Plan	18
8.1.4 Criteria (Visual)	19
9. Reliability Test Result	22
10. Cautions and Handling Precautions	23
10.1 Handling and Operating the Module	23
10.2 Storage and Transportation	24
11. Packing	24

Part. No	ET101WX20-K	REV	V1.0	Page 3 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

* Description

This is a color active matrix TFT (Thin Film Transistor) LCD (liquid crystal display) that uses amorphous silicon TFT as a switching device. This module is composed of a Transmissive type TFT-LCD Panel, driver circuit, back-light unit. The resolution of a 10.1" TFT-LCD contains 1280x800 pixels, and can display up to 16.7M colors.

* Features

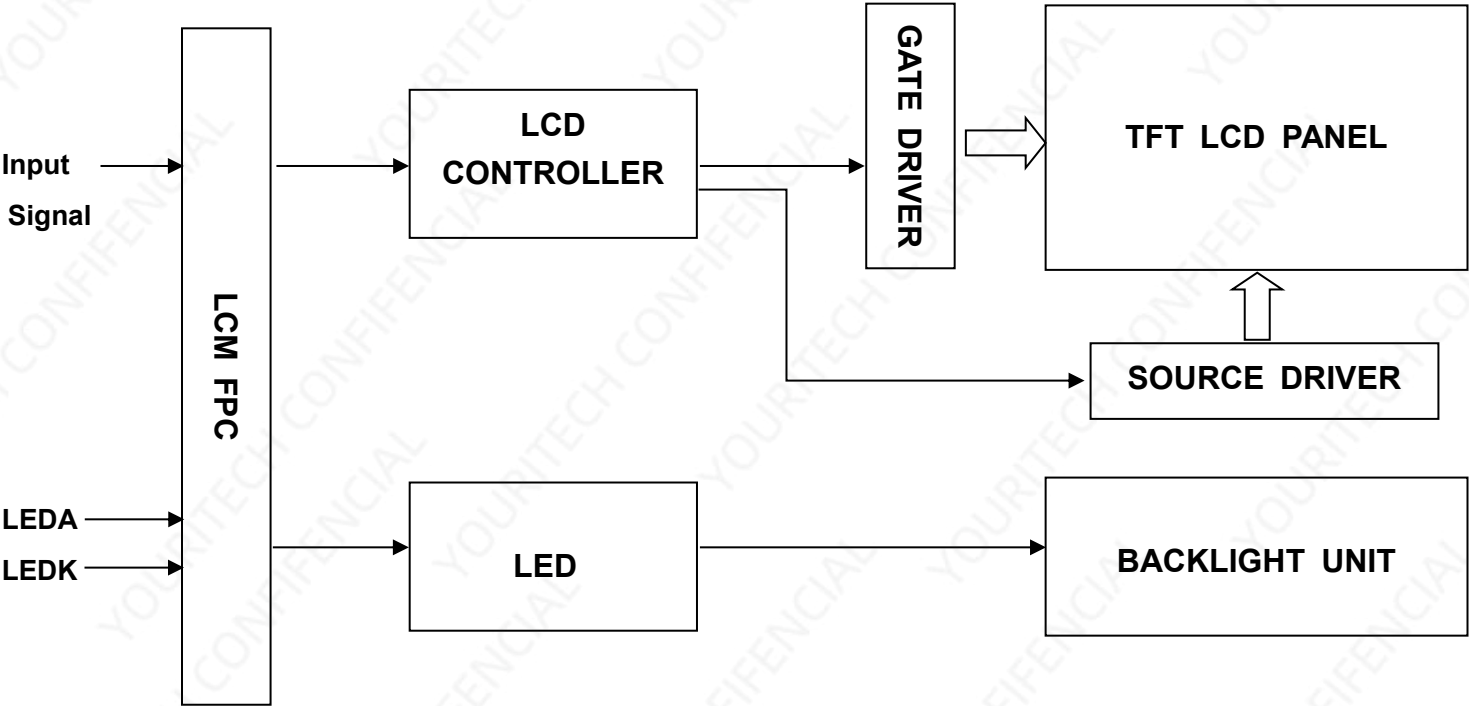
General Information Items	Specification	Unit	Note
	Main Panel		
Display area(AA)	216.96(H)*135.6(V) (10.1 inch)	mm	
Driver element	TFT active matrix	-	
Display colors	16.7M	colors	
Number of pixels	1280(RGB)*800	dots	
Pixel arrangement	RGB vertical stripe	-	
Pixel pitch	0.1692(H)*0.1692(V)	mm	
Viewing angle	ALL	o'clock	
Controller IC	EK79202DA	-	
LCM Interface	4-Lane MIPI	-	
Display mode	Transmissive /Normally Black	-	
Operating temperature	-30~+85	°C	
Storage temperature	-40~+85	°C	

* Mechanical Information

Item		Min.	Typ.	Max.	Unit	Note
Module size	Horizontal(H)	-	229.06	-	mm	
	Vertical(V)	-	148.70	-	mm	
	Depth(D)	-	2.56	-	mm	
Weight		-	TBD	-	g	

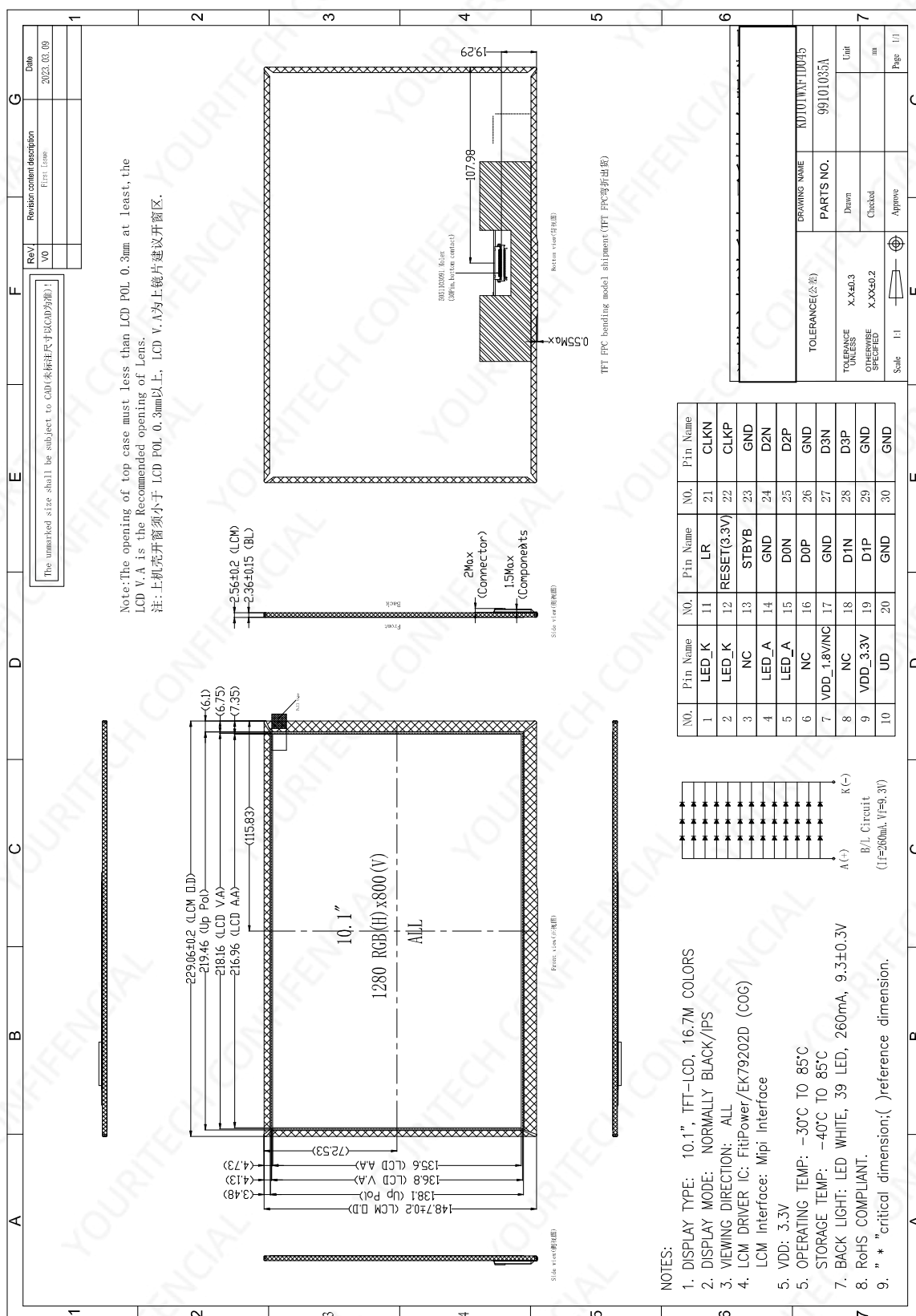
1. Block Diagram

Part. No	ET101WX20-K	REV	V1.0	Page 4 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	



2. Outline dimension

Part. No	ET101WX20-K	REV	V1.0	Page 5 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	



3. Input terminal Pin Assignment

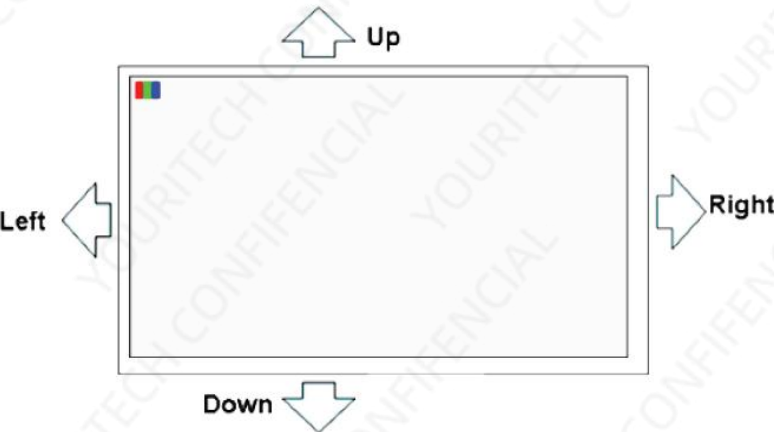
Part. No	ET101WX20-K	REV	V1.0	Page 6 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

30pin connector is used for the module electronics interface. The recommended model is Molex_505110-3091 manufactured by Molex.

NO.	SYMBOL	DISCRIPTION	I/O
1	LED_K	LED Cathode	P
2	LED_K	LED Cathode	P
3	NC	--	--
4	LED_A	LED Anode	P
5	LED_A	LED Anode	P
6	NC	--	--
7	VDD_1.8V/NC	--	--
8	NC	--	--
9	VDD_3.3V	A power supply for analog circuit. VDD=3.3V.	P
10	U/D	Setting flexible GOA scan function.(NOTE1) Normally pulled low.	P
11	L/R	Horizontal shift direction (source output) selection(NOTE1) Normally pulled high.	P
12	RESET	Global reset pin. Active low to enter reset state. IO power supply: 3.3V.	I
13	STBYB	Standby mode, Normally pulled high. STBYB = "1", normal operation STBYB = "0", timing controller, source driver will turn off, all output are High-Z.	I
14	GND	Ground	P
15	D0N	MIPI DSI differential data pair (Data lane 0)	I/O
16	D0P		
17	GND	Ground	P
18	D1N	MIPI DSI differential data pair (Data lane 0)	I/O
19	D1P		
20	GND	Ground	P
21	CLKN	MIPI DSI differential clock pair .	I/O
22	CLKP		
23	GND	Ground	P
24	D2N	MIPI DSI differential data pair (Data lane 2)	I/O
25	D2P		
26	GND	Ground	P

27	D3N	MIPI DSI differential data pair (Data lane 3)	I/O
28	D3P		
29	GND	Ground	P
30	GND	Ground	P

Note1: When L/R="0", set right to left scan direction.
When L/R="1", set left to right scan direction.
When U/D="0", set top to bottom scan direction.
When U/D="1", set bottom to top scan direction.



4. LCD Optical Characteristics

Part. No	ET101WX20-K	REV	V1.0	Page 8 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	

4.1 Optical specification

Item		Symbol	Condition	Min.	Typ.	Max.	Unit.	Note
Contrast Ratio		CR	$\Theta=0$ Normal viewing angle	800	1000	--		CA-310
Response time	Rising	T_R+T_F		--	25	35	msec	*
	Falling							*
Uniformity		S(%)		--	44	--	%	*
Color Filter Chromaticity ((CIE 1931))	White	W_X	-0.04	0.3229	+0.04		CA-310	
		W_Y						0.3539
	Red	R_X						0.5921
		R_Y						0.3571
	Green	G_X						0.3611
		G_Y						0.5548
	Blue	B_X						0.1550
		B_Y						0.1235
Viewing angle	Hor.	Θ_L	CR>10	70	80	--	*	
		Θ_R		70	80	--		
	Ver.	Θ_U		70	80	--		
		Θ_D		70	80	--		
Option View Direction		ALL						

* The data comes from the LCD specification.

Measuring Condition

Measuring surrounding : dark room

Ambient temperature : $25\pm 2^\circ\text{C}$

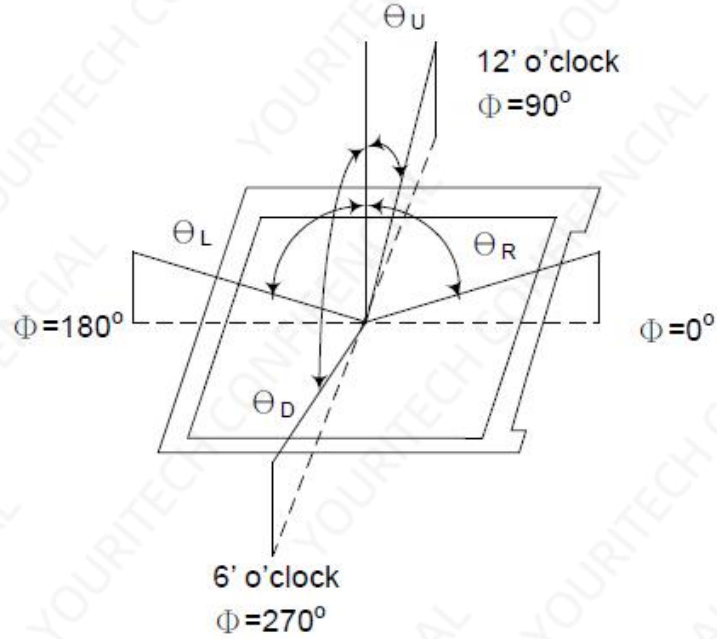
15min. warm-up time.

Measuring Equipment

FPM520 of Westar Display technologies, INC., which utilized SR-3 for Chromaticity and BM-5A for other optical characteristics.

Note (1): Definition of Viewing Angle :

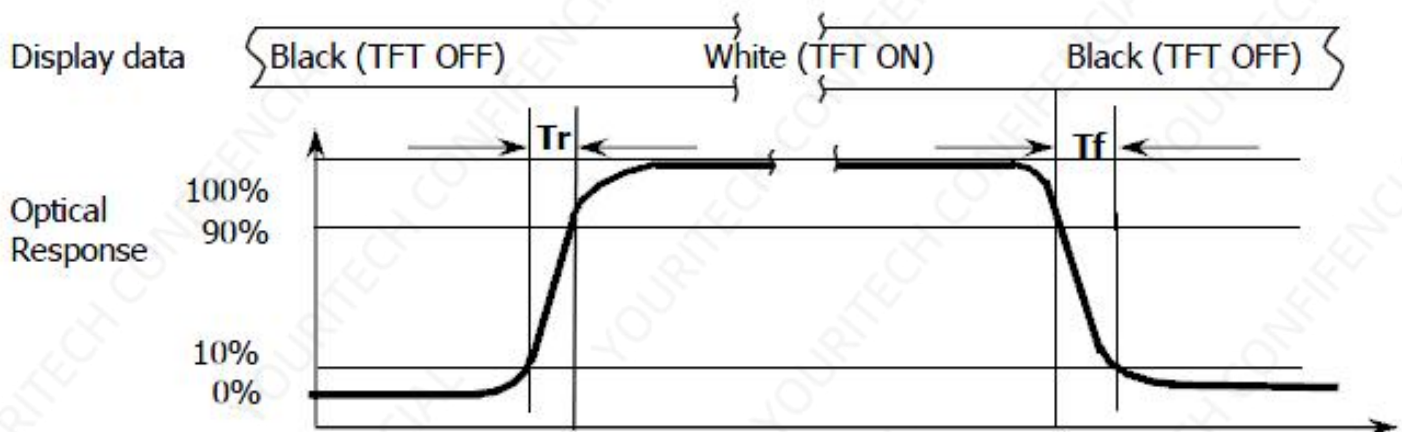
Part. No	ET101WX20-K	REV	V1.0	Page 9 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	



Note (2): Definition of Contrast Ratio(CR) :measured at the center point of panel

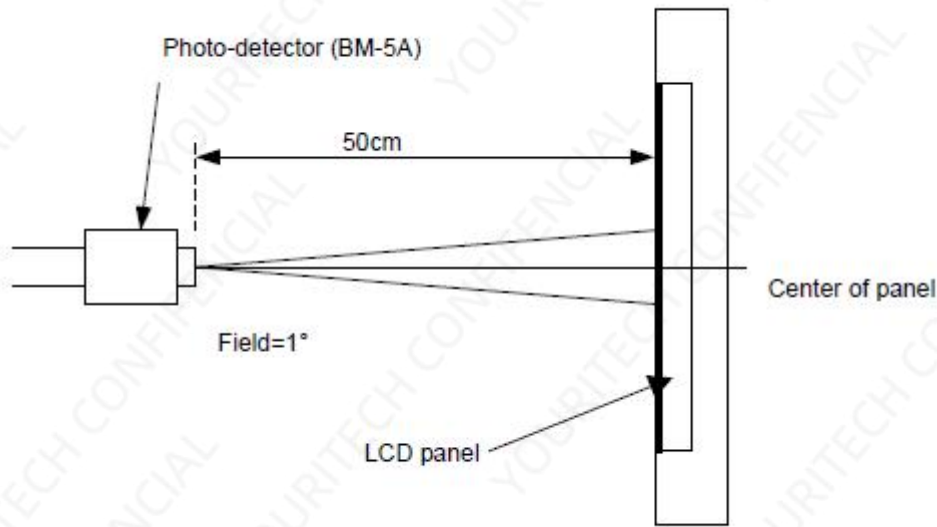
$$CR = \frac{\text{Luminance with all pixels white}}{\text{Luminance with all pixels black}}$$

Note (3): Response Time



Note (4): Definition of optical measurement setup

Part. No	ET101WX20-K	REV	V1.0	Page 10 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	



Part. No	ET101WX20-K	REV	V1.0	Page 11 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支 持 小 量 NO MOQ	品 种 齐 全 In Full Range	

5. Electrical Characteristics

5.1 Absolute Maximum Rating

Characteristics	Symbol	Min.	Max.	Unit	Note
Digital Supply Voltage	VDD	-0.5	4	V	Note1
IO Supply Voltage	VDDIO	-0.5	4	V	
Operating temperature	T _{OP}	-30	+85	°C	
Storage temperature	T _{ST}	-40	+85	°C	

NOTE1: If the absolute maximum rating of even is one of the above parameters is exceeded even momentarily, the quality of the product may be degraded. Absolute maximum ratings, therefore, specify the values exceeding which the product may be physically damaged. Be sure to use the product within the range of the absolute maximum ratings.

5.2 DC Electrical Characteristics

Characteristics	Symbol	Min.	Typ.	Max.	Unit	Note	
Digital Supply Voltage	VDD	3.0	3.3	3.6	V		
IO Supply Voltage	VDDIO	2.3	3.3	3.6	V		
Normal mode Current	IDD	--	220	440	mA		
Level input voltage	V _{IH}	0.8*VDDIO	--	VDDIO	V		
	V _{IL}	GND	--	0.2*VDDIO	V		

5.3 LED Backlight Characteristics

The back-light system is edge-lighting type with 39 chips LED

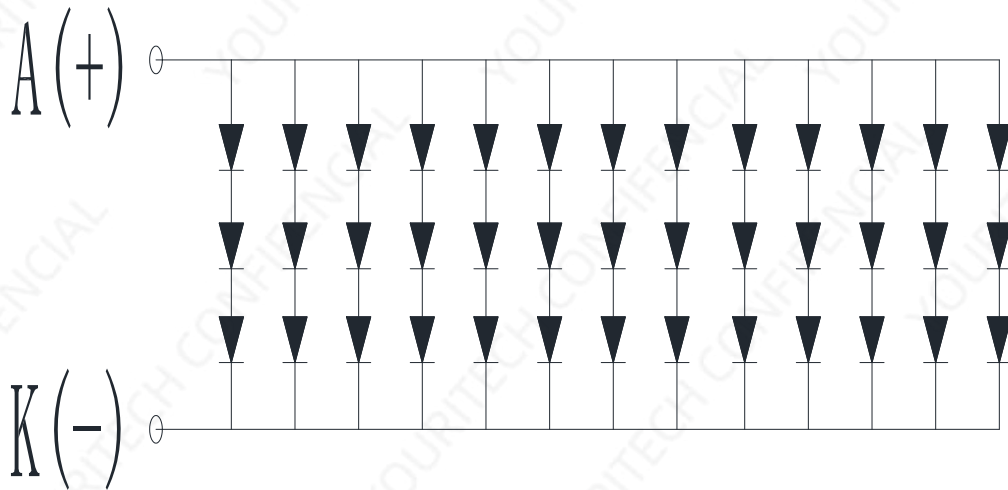
Item	Symbol	Min.	Typ.	Max.	Unit	Note
Forward Current	I_F	--	260	--	mA	
Forward Voltage	V_F	--	9.3	--	V	
LCM Luminance	LV	500	550	--	cd/m ²	Note3
LED life time	Hr	50000	--	--	Hour	Note1,2
Uniformity	Avg	70	80	--	%	Note3

Note1: LED life time (Hr) can be defined as the time in which it continues to operate under the condition:

$T_a = 25 \pm 3^\circ\text{C}$, typical IL value indicated in the above table until the brightness becomes less than 50%.

Note 2: The “LED life time” is defined as the module brightness decrease to 50% original brightness at

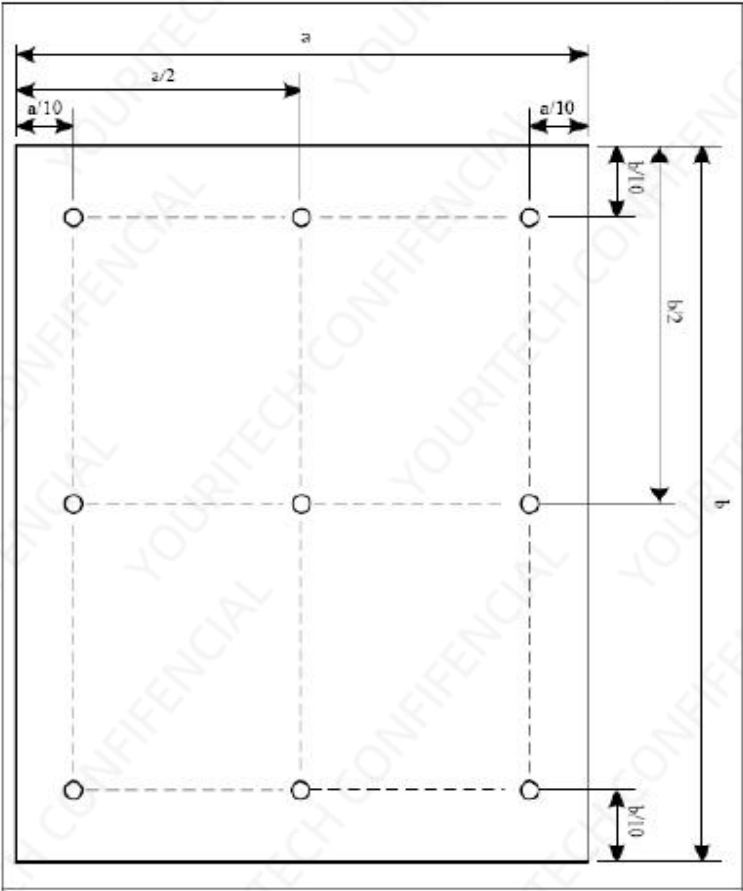
$T_a = 25^\circ\text{C}$ and $I_L = 260\text{mA}$. The LED lifetime could be decreased if operating I_L is larger than 260mA. The constant current driving method is suggested.



B/L Circuit ($I_f = 260\text{mA}$, $V_f = 9.3\text{V}$)

Part. No	ET101WX20-K	REV	V1.0	Page 13 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

Note (3) Luminance Uniformity of these 9 points is defined as below:



$$\text{Uniformity} = \frac{\text{minimum luminance in 9 points (1-9)}}{\text{maximum luminance in 9 points (1-9)}}$$

$$\text{Luminance} = \frac{\text{Total Luminance of 9 points}}{9}$$

6. Video Interface and Timing Table

Part. No	ET101WX20-K	REV	V1.0	Page 14 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

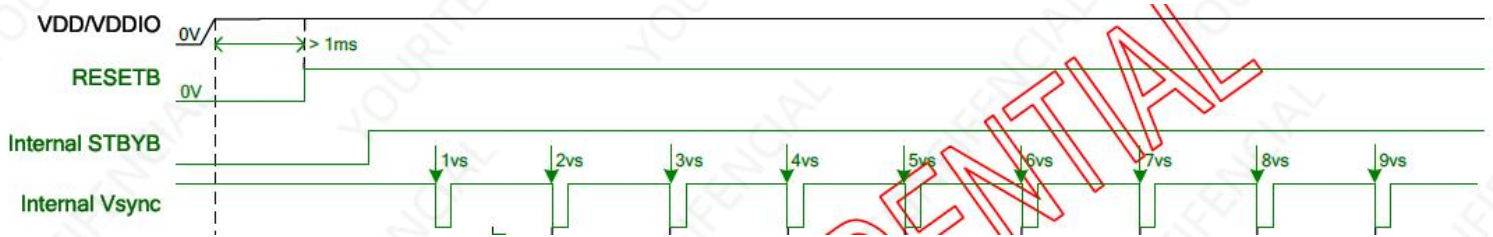
For 1280RGBx800

Parameter		Symbol	Value			Unit
			Min.	Typ.	Max.	
DCLK frequency @Frame rate=60Hz (LVDS)		F _{DCLK}	66.3	72.4	78.9	MHz
HSYNC period time		T _H	1380	1440	1500	DCLK
Horizontal display area		T _{HD}	1280			DCLK
HSYNC pulse width	Min.	T _{HPW}	2			
	Typ.		-			
	Max.		40			
HSYNC back porch(with pulse width)		T _{HBP}	88	88	88	DCLK
HSYNC front porch		T _{HFP}	12	72	132	DCLK
VSYNC period time		T _V	824	838	872	H
Vertical display area		T _{VD}	800			H
VSYNC pulse width	Min.	T _{VPW}	2			H
	Typ.		-			
	Max.		20			
VSYNC back porch(with pulse width)		T _{VBP}	23	23	23	H
VSYNC front porch		T _{VFP}	1	15	49	H

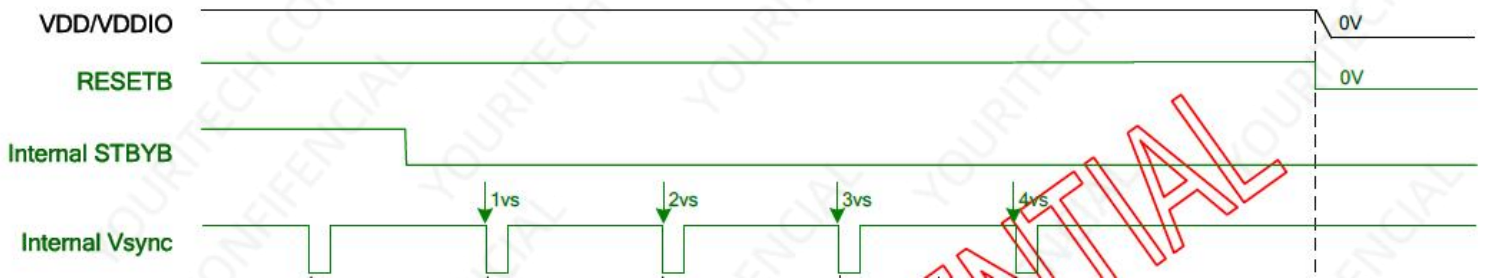
7. Power Sequence

Part. No	ET101WX20-K	REV	V1.0	Page 15 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	

7.1 Power on sequence



7.2 Power off sequence



Part. No	ET101WX20-K	REV	V1.0	Page 16 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	

8. LCD Module Out-Going Quality Level

8.1 VISUAL & FUNCTION INSPECTION STANDARD

8.1.1 Inspection conditions

Inspection performed under the following conditions is recommended.

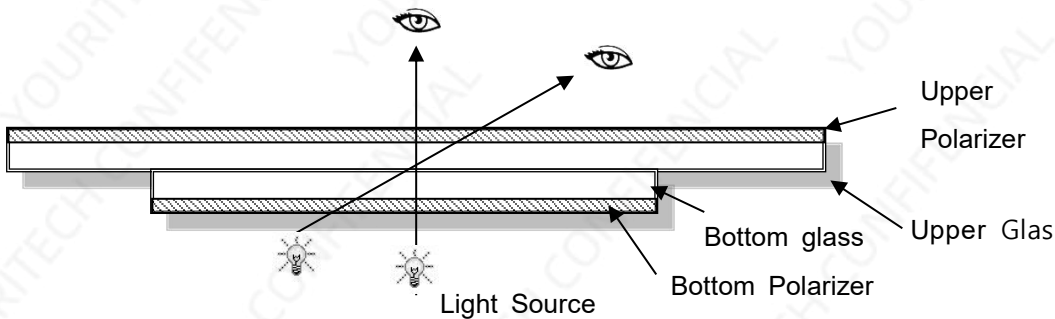
Temperature : $25\pm5^{\circ}\text{C}$

Humidity : $65\%\pm 10\%\text{RH}$

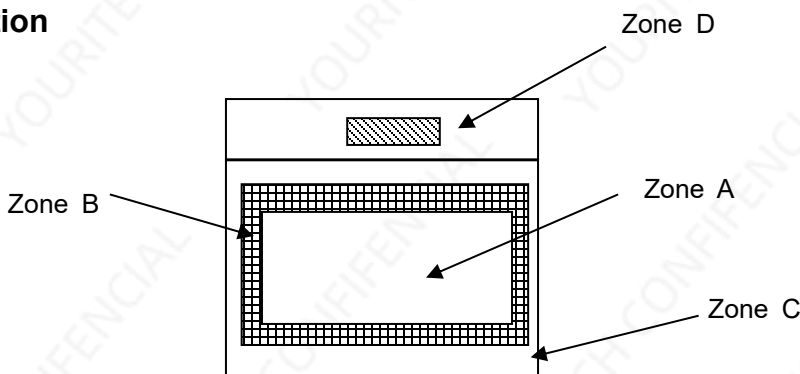
Viewing Angle : Normal viewing Angle.

Illumination: Single fluorescent lamp (300 to 700Lux)

Viewing distance:30-50cm



8.1.2 Definition



Zone A : Effective Viewing Area(Character or Digit can be seen)

Zone B : Viewing Area except Zone A

Zone C : Outside (Zone A+Zone B) which can not be seen after assembly by customer .)

Zone D : IC Bonding Area

Note:As a general rule ,visual defects in Zone C can be ignored when it doesn't effect product function or appearance after assembly by customer

Part. No	ET101WX20-K	REV	V1.0	Page 17 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	

8.1.3 Sampling Plan

According to GB/T 2828.1-2003 ; , normal inspection, Class II

AQL:

Major defect	Minor defect
0.65	1.5

LCD: Liquid Crystal Display , TP: Touch Panel , LCM: Liquid Crystal Module

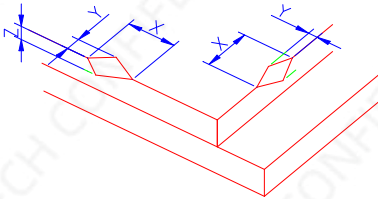
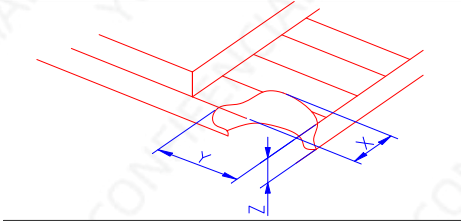
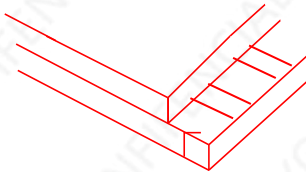
No	Items to be inspected	Criteria	Classification of defects
1	Functional defects	1) No display, Open or miss line 2) Display abnormally, Short 3) Backlight no lighting, abnormal lighting.	Major
2	Missing	Missing component	
3	Outline dimension	Overall outline dimension beyond the drawing is not allowed	
4	Color tone	Color unevenness, refer to limited sample	Minor
5	Spot Line defect	Light dot, Dim spot, Polarizer Bubble ; Polarizer accidented spot.	
6	Soldering appearance	Good soldering , Peeling off is not allowed.	
7	LCD/Polarizer	Black/White spot/line, scratch, crack, etc.	

Note1: a) Light dot: Dots appear bright and unchanged in size in which LCD panel is displaying under black pattern.

b) Dim dot: Dots appear dark and unchanged in size in which LCD panel is displaying under pure red, green, blue picture.

Part. No	ET101WX20-K	REV	V1.0	Page 18 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	

8.1.4 Criteria (Visual)

Number	Items	Criteria(mm)						
1.0 LCD Crack/Broken NOTE: X: Length Y: Width Z: Height L: Length of IT O, T: Height of LCD	(1) The edge of LCD broken	 <table><tr><td>X</td><td>Y</td><td>Z</td></tr><tr><td>≤3.0mm</td><td><Inner border line of the seal</td><td>≤T</td></tr></table>	X	Y	Z	≤3.0mm	<Inner border line of the seal	≤T
X	Y	Z						
≤3.0mm	<Inner border line of the seal	≤T						
	(2)LCD corner broken	 <table><tr><td>X</td><td>Y</td><td>Z</td></tr><tr><td>≤3.0mm</td><td>≤L</td><td>≤T</td></tr></table>	X	Y	Z	≤3.0mm	≤L	≤T
X	Y	Z						
≤3.0mm	≤L	≤T						
	(3) LCD crack	 Crack Not allowed						

2.0

Spot defect

$$\Phi=(X+Y)/2$$

① light dot (black/white spot , pinhole, stain, etc.)

Zone Size (mm)	Acceptable Qty		
	A	B	C
$\Phi \leq 0.15$	Ignore	Ignore	
$0.15 < \Phi \leq 0.25$	3(distance $\geq 10\text{mm}$)		
$0.25 < \Phi \leq 0.4$	2(distance $\geq 10\text{mm}$)		
$\Phi > 0.4$	0		

② Dim spot (light leakage、dent、dark spot, etc)

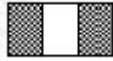
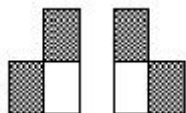
Zone Size (mm)	Acceptable Qty		
	A	B	C
$\Phi \leq 0.15$	Ignore	Ignore	
$0.15 < \Phi \leq 0.25$	3(distance $\geq 10\text{mm}$)		
$0.25 < \Phi \leq 0.4$	2(distance $\geq 10\text{mm}$)		
$\Phi > 0.4$	0		

③ Polarizer accidented spot

Zone Size (mm)	Acceptable Qty			
	A	B	C	
$\Phi \leq 0.2$	Ignore		Ignore	
$0.2 < \Phi \leq 0.5$	2(distance $\geq 10\text{mm}$)			
$\Phi > 0.5$	0			

④ Polarizer Bubble

Zone Size (mm)	Acceptable Qty			
	A	B	C	
$\Phi \leq 0.2$	Ignore		Ignore	
$0.2 < \Phi \leq 0.4$	3(distance $\geq 10\text{mm}$)			
$\Phi > 0.4$	0			

3.0	LCD Pixel defect	Pixel bad points																							
		<table> <tr> <th>Item</th><th>Zone A</th><th>Acceptable Qt</th></tr> <tr> <td rowspan="3">Bright dot</td><td>Random</td><td>$N \leq 2$</td></tr> <tr> <td>2 dots adjacent</td><td>$N \leq 0$</td></tr> <tr> <td>3 dots adjacent</td><td>$N \leq 0$</td></tr> <tr> <td rowspan="3">Dark dot</td><td>Random</td><td>$N \leq 2$</td></tr> <tr> <td>2 dots adjacent</td><td>$N \leq 0$</td></tr> <tr> <td>3 dots adjacent</td><td>$N \leq 0$</td></tr> <tr> <td>Distance</td><td> 1. Minimum Distance Between Bright dots. 2. Minimum Distance Between dark dots 3. Minimum Distance Between dark and bright dot. </td><td>5mm</td></tr> <tr> <td colspan="2">Total bright and dark dot</td><td>$N \leq 4$</td></tr> </table> Note: A) Bright dot: Dots appear bright and unchanged in size in which LCD panel is displaying under black pattern. B) Dark dot: Dots appear dark and unchanged in size in which LCD panel is displaying under pure red, green, blue picture. C) 2 dot adjacent = 1 pair = 2 dots Picture:     2 dot adjacent 2 dot adjacent 2 dot adjacent (vertical) 2 dot adjacent (slant)	Item	Zone A	Acceptable Qt	Bright dot	Random	$N \leq 2$	2 dots adjacent	$N \leq 0$	3 dots adjacent	$N \leq 0$	Dark dot	Random	$N \leq 2$	2 dots adjacent	$N \leq 0$	3 dots adjacent	$N \leq 0$	Distance	1. Minimum Distance Between Bright dots. 2. Minimum Distance Between dark dots 3. Minimum Distance Between dark and bright dot.	5mm	Total bright and dark dot		$N \leq 4$
Item	Zone A	Acceptable Qt																							
Bright dot	Random	$N \leq 2$																							
	2 dots adjacent	$N \leq 0$																							
	3 dots adjacent	$N \leq 0$																							
Dark dot	Random	$N \leq 2$																							
	2 dots adjacent	$N \leq 0$																							
	3 dots adjacent	$N \leq 0$																							
Distance	1. Minimum Distance Between Bright dots. 2. Minimum Distance Between dark dots 3. Minimum Distance Between dark and bright dot.	5mm																							
Total bright and dark dot		$N \leq 4$																							

4.0	Line defect (LCD /Polarizer backlight black/white line, scratches, stain)																											
																												
	W: width, L : length																											
	N : Count																											
		<table><tr><th rowspan="2">Width(mm)</th><th rowspan="2">Length(m m)</th><th colspan="3">Acceptable Qty</th></tr><tr><th>A</th><th>B</th><th>C</th></tr><tr><td>$\Phi \leq 0.05$</td><td>Ignore</td><td colspan="2">Ignore</td><td rowspan="3">Ignore</td></tr><tr><td>$0.05 < W \leq 0.06$</td><td>$L \leq 4.0$</td><td colspan="2">$N \leq 3$</td></tr><tr><td>$0.06 < W \leq 0.08$</td><td>$L \leq 3.0$</td><td colspan="2">$N \leq 2$</td></tr><tr><td>$W > 0.08$</td><td colspan="4">Define as spot defect</td></tr></table>	Width(mm)	Length(m m)	Acceptable Qty			A	B	C	$\Phi \leq 0.05$	Ignore	Ignore		Ignore	$0.05 < W \leq 0.06$	$L \leq 4.0$	$N \leq 3$		$0.06 < W \leq 0.08$	$L \leq 3.0$	$N \leq 2$		$W > 0.08$	Define as spot defect			
Width(mm)	Length(m m)	Acceptable Qty																										
		A	B	C																								
$\Phi \leq 0.05$	Ignore	Ignore		Ignore																								
$0.05 < W \leq 0.06$	$L \leq 4.0$	$N \leq 3$																										
$0.06 < W \leq 0.08$	$L \leq 3.0$	$N \leq 2$																										
$W > 0.08$	Define as spot defect																											
5.0	Electronic Components SMT.	Not allow missing parts, solderless connection, cold solder joint, mismatch, The positive and negative polarity opposite																										
6.0	Display color& Brightness.	1. Color: Measuring the color coordinates, The measurement standard according to the datasheet or samples. 2. Brightness: Measuring the brightness of White screen, The measurement standard according to the datasheet or Samples.																										
7.0	LCD Mura/Waving/ Hot spot	Not visible through 5% ND filter in 50% gray or judge by limit sample if necessary.																										

Criteria (functional items)

Number	Items	Criteria (mm)
1	No display	Not allowed
2	Missing segment	Not allowed
3	Short	Not allowed
4	Backlight no lighting	Not allowed

9. Reliability Test Result

Part. No	ET101WX20-K	REV	V1.0	Page 22 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	

Remark:

1.The test samples should be applied to only one test item.

Item	Condition	Inspection after test
High Temperature Operating	85°C,96H	Inspection after 2~4hours storage at room temperature, the sample shall be free from defects: 1.Air bubble in the LCD; 2.Non-display; 3.Missing segments/line; 4.Glass crack; 5.Current IDD is twice higher than initial value.
Low Temperature Operating	-30°C, 96HR	
High Temperature Storage	85°C, 96HR	
Low Temperature Storage	-40°C, 96HR	
High Temperature & High	+60°C, 90% RH ,96 hours.	
Thermal Shock (Non-operation)	-40°C,30 min ↔ +85°C,30 min, Change time:5min 20CYC.	
ESD test	C=150pF, R=330,5points/panel Air:±6KV, 5times; Contact:±4KV, 5 times; (Environment: 15°C~35°C, 30%~60%).	
Vibration (Non-operation)	Frequency range:10~55Hz, Stroke:1.5mm Sweep:10Hz~55Hz~10Hz 2 hours for each direction of X.Y.Z. (6 hours for total) (Package condition).	
Box Drop Test	1 Corner 3 Edges 6 faces,80cm(MEDIUM BOX)	

2.Sample size for each test item is 5~10pcs.

3.For Damp Proof Test, Pure water(Resistance > 10MΩ) should be used.

4.In case of malfunction defect caused by ESD damage, if it would be recovered to normal state after resetting, it would be judged as a good part.

5.Failure Judgment Criterion: Basic Specification, Electrical Characteristic, Mechanical Characteristic, Optical Characteristic.

10. Cautions and Handling Precautions

10.1 Handling and Operating the Module

Part. No	ET101WX20-K	REV	V1.0	Page 23 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	

(1) When the module is assembled, it should be attached to the system firmly.

Do not warp or twist the module during assembly work.

(2) Protect the module from physical shock or any force. In addition to damage, this may cause improper operation or damage to the module and back-light unit.

(3) Note that polarizer is very fragile and could be easily damaged. Do not press or scratch the surface.

(4) Do not allow drops of water or chemicals to remain on the display surface.

If you have the droplets for a long time, staining and discoloration may occur.

(5) If the surface of the polarizer is dirty, clean it using some absorbent cotton or soft cloth.

(6) The desirable cleaners are water, IPA (Isopropyl Alcohol) or Hexane.

Do not use ketene type materials (ex. Acetone), Ethyl alcohol, Toluene, Ethyl acid or Methyl chloride. It might permanent damage to the polarizer due to chemical reaction.

(7) 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.

(8) Protect the module from static; it may cause damage to the CMOS ICs.

(9) Use finger-stalls with soft gloves in order to keep display clean during the incoming inspection and assembly process.

(10) Do not disassemble the module.

(11) Protection film for polarizer on the module shall be slowly peeled off just before use so that the electrostatic charge can be minimized.

(12) Pins of I/F connector shall not be touched directly with bare hands.

(13) Do not connect, disconnect the module in the "Power ON" condition.

(14) Power supply should always be turned on/off by the item 6.1 Power On Sequence & 6.2 Power Off Sequence

10.2 Storage and Transportation.

(1) Do not leave the panel in high temperature, and high humidity for a long time.

It is highly recommended to store the module with temperature from 0 to 35 °C and relative humidity of less than 70%

(2) Do not store the TFT-LCD module in direct sunlight.

(3) The module shall be stored in a dark place. When storing the modules for a long time, be sure to adopt effective measures for protecting the modules from strong ultraviolet radiation, sunlight, or fluorescent light.

(4) It is recommended that the modules should be stored under a condition where no condensation is allowed. Formation of dewdrops may cause an abnormal operation or a failure of the module.

In particular, the greatest possible care should be taken to prevent any module from being operated where condensation has occurred inside.

(5) This panel has its circuitry FPC on the bottom side and should be handled carefully in order not to be stressed.

11. Packing

-----TBD-----

Part. No	ET101WX20-K	REV	V1.0	Page 24 of 25
常 备 库 存 Stock For Sale	长 期 供 货 Long Time supply	支持小量 NO MOQ	品 种 齐 全 In Full Range	



深圳市优瑞泰克科技有限公司
SHENZHEN YOURITECH TECHNOLOGY CO.,LTD

Part. No	ET101WX20-K	REV	V1.0	Page 25 of 25
常备库存 Stock For Sale	长期供货 Long Time supply	支持小量 NO MOQ	品种齐全 In Full Range	