Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT101-C002ME

Version	A
Engineer	
Date	2019-05-10

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Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

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1. General Specifications

Module composed of a TFT-LCD panel, driver IC, FPC, a back light unit. The 10.1′′ display area contains 1024 x 600 pixels and can display up to 16.7M colors. This product accords with RoHS environmental criterion.

Item	Contents	Unit	Note
LCD Type	Normally Black,Transmissive	-	
Display color	16.7M		1
Viewing Direction	ALL	-	
Operating temperature	-20~+70	℃	
Storage temperature	-30~+80	℃	
Module size	235.00(W)×143.00(H)×5.20(T)	mm	2
Active Area(W×H)	222.72(W)×125.28(H)	mm	
Number of Dots	1024×RGB×600	dots	
Backlight	42-LEDs (white)	pcs	
Data Transfer	RGB 24-bit	-	
Driver IC	HX8282-A11+HX8696	-	

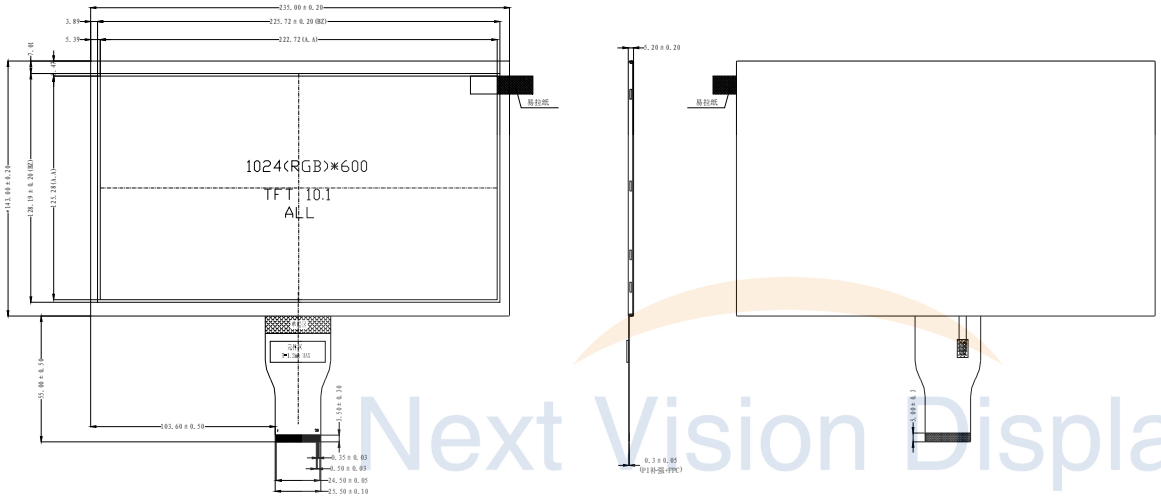
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Note 1: Color tune is slightly changed by temperature and driving voltage.

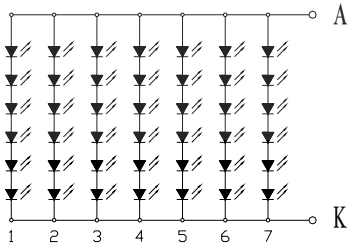
Note 2: Without FPC and Solder.

2.Outline Drawing

REV	DESCRIPTION	DATE
A	初版	2019.5.10



PIN	SYMBOL	PIN	SYMBOL
1	VLED+	26	G1
2	VLED+	27	G0
3	VLED-	28	R7
4	VLED-	29	R6
5	GND	30	R5
6	VCOM	31	R4
7	DVDD	32	R3
8	MODE	33	R2
9	DE	34	R1
10	VSYNC	35	R0
11	HSYNC	36	GND
12	B7	37	DCLK
13	B6	38	GND
14	B5	39	SHLR
15	B4	40	UPDN
16	B3	41	VGH
17	B2	42	VGL
18	B1	43	AVDD
19	B0	44	RESET
20	G7	45	NC
21	G6	46	VCOM
22	G5	47	DITHB
23	G4	48	GND
24	G3	49	NC
25	G2	50	NC



LED 电路图

Vf 16.8-20.4V

IF=20*7=140mA(定电流测试)

Specification:

1). Display mode: TFT/Transmissive
2). Operating temp.: -20°C~+70°C
Storage temp.: -30°C~+80°C
3). Backlight: 33 chip White LED ,11 Parallel
4). Dimensions with mark "*" are important, with mark "()" are referenced

TITLE:	ASSEMBLY	DO NOT SCALE THIS DRAWING, GENERAL TOLERANCE:±0.2			
MODULE NO.:				REV	A
DRAWN BY:		DATE:		PROJECTION:	
CHECKED BY:		DATE:		SCALE:N.T.S	UNIT: mm
APPROVED BY:		DATE:		SHEET: 1 OF 1	

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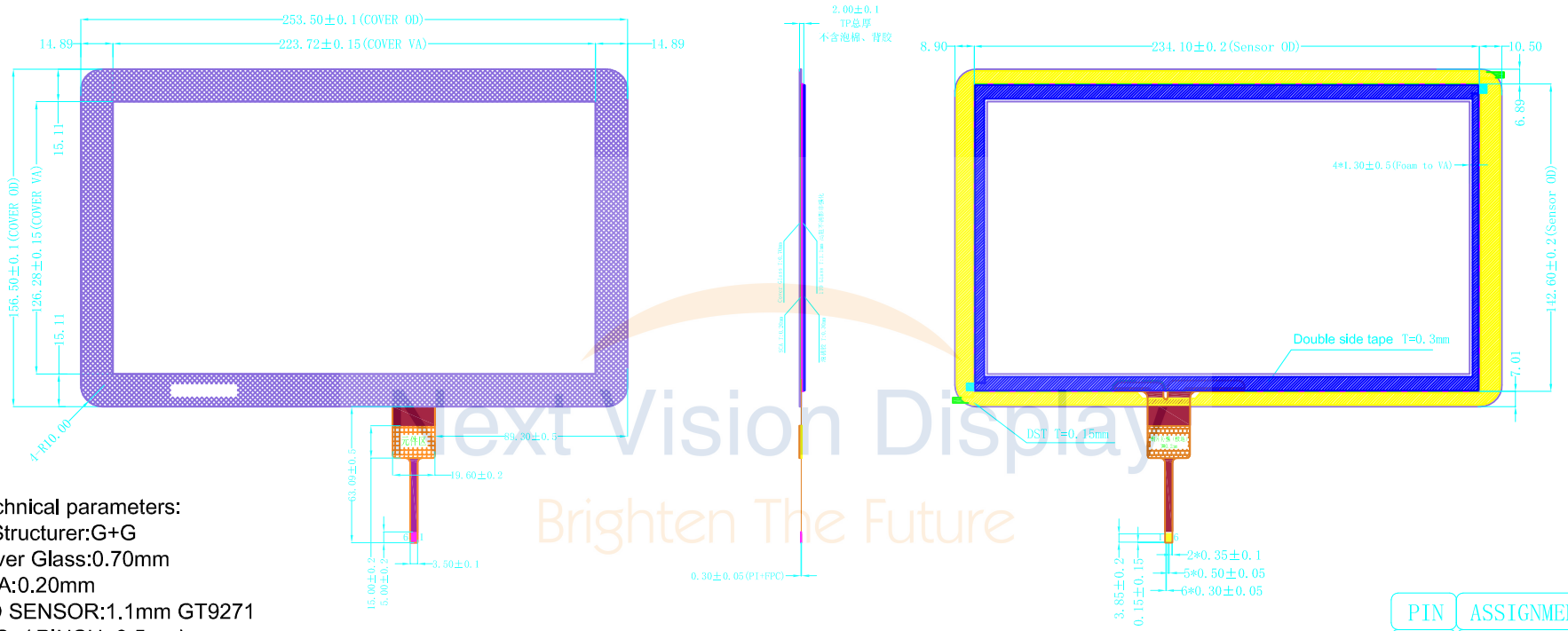
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客户签名：
日期：

FRONT VIEW

SIDE VIEW

BACK VIEW



Technical parameters:
1. Structurer:G+G
Cover Glass:0.70mm
SCA:0.20mm
ITO SENSOR:1.1mm GT9271
FPC （PINCH=0.5mm)
Total Thickness:2.0±0.1mm
2.Working volt.:2.8-3.3 V
3.Transparency≥82%
4.Surface Hardness:6H
5.Working temp.:-20℃~+70℃，≤90%RH
6.Storage temp.-30℃~+80℃，≤90%RH
7.Unmarked tolerance±0.2mm

PIN	ASSIGNMENT
1	RESET
2	SDA
3	SCL
4	INT
5	VDD(3.3V)
6	GND

TX31*RX17

物料	NO.	更改内容	日期
	1		
	2		
	3		
	4		
	5		
	6		
	7		

工 程 确 认 图

方向			公司编号		未注公差	±0.20
绘图	审核	日期	客户编号		单位	mm
周慧		20180608	版本号		比例	1 : 1

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3. Absolute Maximum Ratings(Ta=25℃)

3.1 Electrical Absolute Maximum Ratings.(Vss=0V ,Ta=25℃)

Item	Symbol	Min.	Max.	Unit
Digital Supply Voltage	**DVDD**	-0.3	3.6	**V**
Analog Supply Voltage	**AVDD**	0	13.5	**V**
TFT Gate ON Voltage	**VGH**	-0.3	20	**V**
TFT Gate OFF Voltage	**VGL**	-20	0.3	**V**
Operating Temperature	**TOP**	-20	70	**°C**
Storage Temperature	**TST**	-30	80	**°C**

Notes:

1. If the module is above these absolute maximum ratings. It may become permanently damaged. Using the module within the following electrical characteristic conditions are also exceeded, the module will malfunction and cause poor reliability.
2. VDD>V_{SS} must be maintained.
3. Please be sure users are grounded when handing LCD Module.

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3.2 Environmental Absolute Maximum Ratings.

Item	Storage		Operating		Note
	MIN.	MAX.	MIN.	MAX.	
Ambient Temperature	-30℃	80℃	-20℃	70℃	1,2
Humidity	-	-	-	-	3

1. The response time will become lower when operated at low temperature.
2. Background color changes slightly depending on ambient temperature.
   The phenomenon is reversible.
3. Ta<=40℃:85%RH MAX.
   Ta>=40℃:Absolute humidity must be lower than the humidity of 85%RH at 40℃.

4. Electrical Specifications and Timing Characteristics

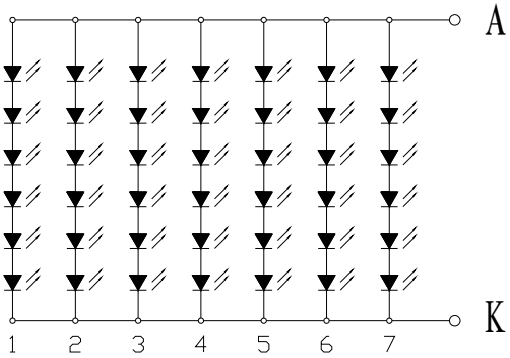
4.1 Electrical characteristics(V_{SS}=0V ,Ta=25℃)

Item	Symbol	Min.	Typ	Max.	Unit
Digital Supply Voltage	**DVDD**	3.0	3.3	3.6	**V**
Analog Supply Voltage	**AVDD**	9.5	9.6	9.7	**V**
TFT Gate ON Voltage	**VGH**	17.6	18	18.4	**V**
TFT Gate OFF Voltage	**VGL**	-6.4	-6	-5.6	**V**
TFT Common Electrode Voltage	**VCOM**	4.0	4.2	4.4	**V**

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4.2 LED backlight specification(V_{SS}=0V ,Ta=25℃)

Item	Symbol	Condition	Min	Typ	Max	Unit	Note
Supplyvoltage			-	-	18.6		
Supply current	I_f	-	-	140	-	mA	2



Note:

1: V_{LED}=V_{LED}(+)-V_{LED}(-).

2:The current of LED is 20mA.
A LED drive in constant current mode is recommended.

4.3 Interface signals

Pin NO.	SYMBOL	I/O	DESCRIPTION	Remark
1	VLED+	-	Power for LED backlight (Anode)	
2	VLED+	-	Power for LED backlight (Anode)	
3	VLED-	-	Power for LED backlight (Cathode)	
4	VLED-	-	Power for LED backlight (Cathode)	
5	GND	P	Power ground	
6	VCOM	I	Common Voltage	
7	DVDD	P	Digital Power	
8	MODE	I	DE/SYNC mode select.	Note 1
9	DE	I	Data Enable signal	
10	VSYNC	I	Vertical sync input	
11	HSYNC	I	Horizontal sync input	
12	B7	I	Blue data (MSB)	
13	B6	I	Blue data	
14	B5	I	Blue data	
15	B4	I	Blue data	
16	B3	I	Blue data	
17	B2	I	Blue data	
18	B1	I	Blue data	Note 2
19	B0	I	Blue data (LSB)	Note 2
20	G7	I	Green data (MSB)	
21	G6	I	Green data	
22	G5	I	Green data	
23	G4	I	Green data	
24	G3	I	Green data	
25	G2	I	Green data	
26	G1	I	Green data	Note 2
27	G0	I	Green data (LSB)	Note 2

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28	R7	I	Red data (MSB)	
29	R6	I	Red data	
30	R5	I	Red data	
31	R4	I	Red data	
32	R3	I	Red data	
33	R2	I	Red data	
34	R1	I	Red data	Note 2
35	R0	I	Red data (LSB)	Note 2
36	GND	P	Power ground	
37	DCLK	I	Clock input	Note 3
38	GND	P	Power ground	
39	SHLR	I	Left / Right Selection	Note 4,5
40	UPDN	I	Up / Down Selection	Note 4,5
41	VGH	P	Gate ON Voltage	
42	VGL	P	Gate OFF Voltage	
43	AVDD	P	Power for Analog Circuit	
44	RESET	I	Global reset pin	Note 6
45	NC	-	Not connection	
46	VCOM	I	Common Voltage	
47	DITH	I	Dithering function enable control	Note 7
48	GND	P	Power ground	
49	NC	-	Not connection	
50	NC	-	Not connection	

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I: input, O: output, P: Power

Note 1: DE / SYNC mode select under TTL mode. Normally pull high
H : DE mode.
L : HSD/VSD mode.
Note 2: When input 18 bits RGB data,the two low bits of R,G and B data must be grounded
Note 3: Data shall be latched at the falling edge of DCLK