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Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT070-C002ME

Version	
Engineer	
Date	

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Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

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General Specifications

NT070-C002ME is a TFT-LCD module. It is composed of a TFT-LCD panel, driver IC, FPC, a back light unit. The 7.0′′ 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	O'Clock	
Operating temperature	-20~+70	℃	
Storage temperature	-30~+80	℃	
Module size	164.00(W)×97.00(H)×3.50(T)	mm	2
Active Area(W×H)	154.2144(W)×85.92(H)	mm	
Number of Dots	1024×RGB×600	dots	
Backlight	21-LEDs (white)	pcs	
Interface	RGB Interface	-	
Driver IC	HX8282+HX8696	-	

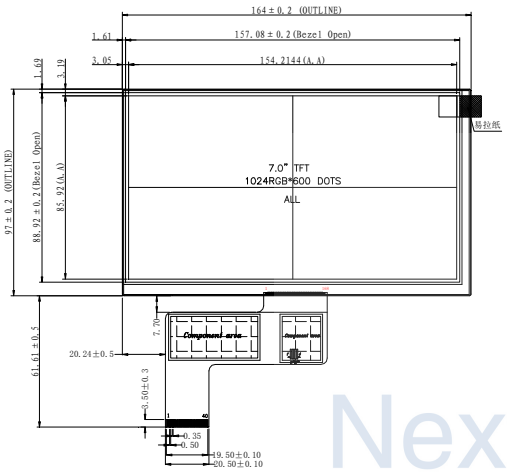
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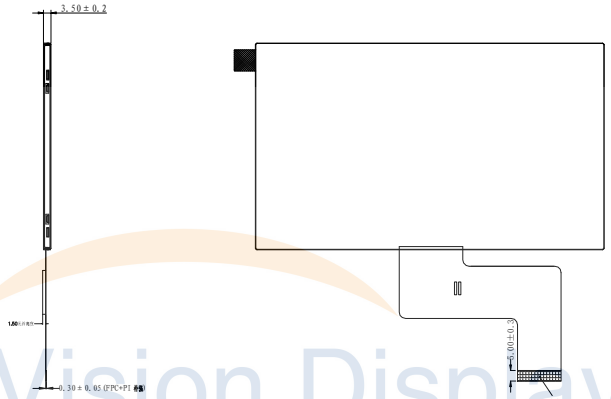
Note 1: Color tune is slightly changed by temperature and driving voltage.

Note 2: Without FPC and Solder.

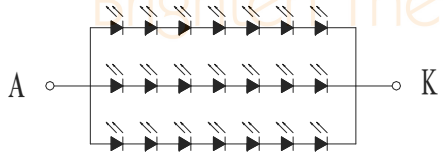
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REV	DESCRIPTION	DATE
A	初版	2019.07.22





1	VLED-
2	VLED+
3	GND
4	VDD
5	R0
6	R1
7	R2
8	R3
9	R4
10	R5
11	R6
12	R7
13	G0
14	G1
15	G2
16	G3
17	G4
18	G5
19	G6
20	G7
21	B0
22	B1
23	B2
24	B3
25	B4
26	B5
27	B6
28	B7
29	GND
30	CLK
31	DISP
32	HSYNC
33	VSYNC
34	DEN
35	NC
36	GND
37	XR(NC)
38	YD(NC)
39	XL(NC)
40	YU(NC)



LED 电路图
Vf 20.3-23.8V
IF=20*3=60mA(定电流测试)

Specification:

1). Display mode: 16.7M, TFT/Transmissive
2). Operating temp.: −20°C~+70°C
Storage temp.: −30°C~+80°C
3). Backlight: 21 chip White LED ,3 Parallel
4). Dimensions with mark "*" are important, with mark "()" are referenced

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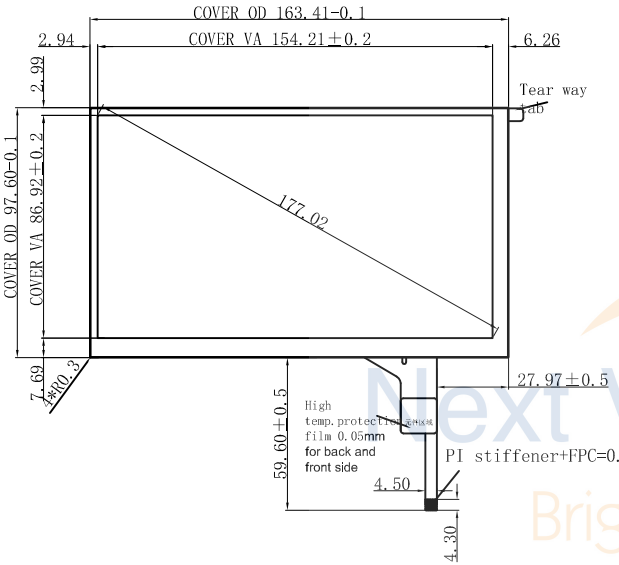
TITLE:	ASSEMBLY	DO NOT SCALE THIS DRAWING, GENERAL TOLERANCE: ±0.2			
MODULE NO.:				REV	A
DRAWN BY:		DATE:		PROJECTION:	
CHECKED BY:		DATE:		SCALE: N.T.S	UNIT: mm
APPROVED BY:		DATE:		SHEET: 1 OF 1	

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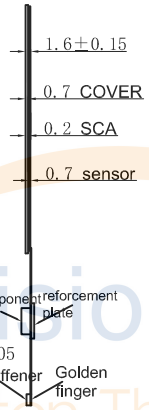
版本	标识	修改内容	修改日期	签名

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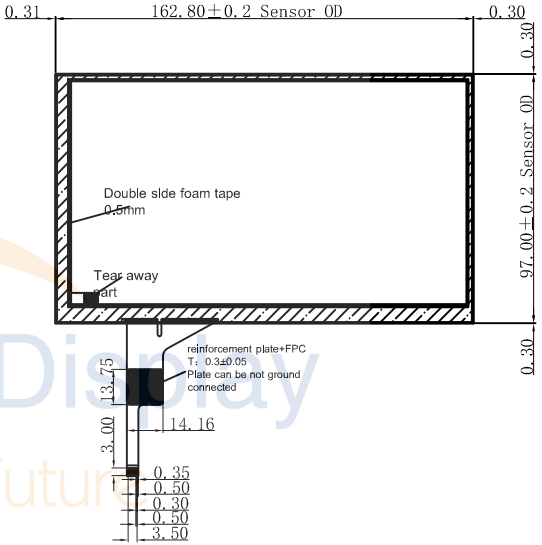
FRONT VIEW



SIDE VIEW



BACK VIEW



Parameters:

1.GLASS+SCA+GLASS+FPC(COF)
IC:GT911(14*26)
2.Working voltage:2.8V
3.Transparency rate:≥87%
4.Surface hardness:≥6H
5.Working temp.:-20℃~+70℃ ,≤90%RH
6.Storage temp.:-30℃~+80℃ ,≤90%RH
7.Unmarked tolerance±0.2mm
8.ROHS compliance
9.The GAP between LCD and CTP should be over 0.3mm

PIN	Connection
1	GND
2	SCL
3	SDA
4	INT
5	RST
6	NC
7	VDD
8	NC

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制 图	zsj	2018.01.20	结 构	G+G	
审 核			比 例	1:1	
批 准			单 位	mm	
		第 1 页 共 1 页		图纸名称	工程图

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Absolute Maximum Ratings(Ta=25℃)

Electrical Absolute Maximum Ratings.(V_{SS}=0V ,Ta=25℃)

Item	Symbol	Min.	Max.	Unit
Digital Supply Voltage	**VDD**	-0.3	3.6	**V**
Analog Supply Voltage	**AVDD**	-0.5	13.5	**V**
TFT Gate ON Voltage	**VGH**	0.3	20	**V**
TFT Gate OFF Voltage	**VGL**	-20	0.3	**V**
TFT Common Electrode Voltage	**VCOM**	0	6	**V**
Operating Temperature	**TOP**	-20	70	**℃**
Storage Temperature	**TST**	-30	80	**℃**

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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4.2 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℃.

5. Electrical Specifications and Timing Characteristics

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

Item	Symbol	Min.	Typ	Max.	Unit
Digital Supply Voltage	**VDD**	3.0	3.3	3.6	**V**
Analog Supply Voltage	**AVDD**	9.4	9.6	9.8	**V**
TFT Gate ON Voltage	**VGH**	17.0	18.0	19.0	**V**
TFT Gate OFF Voltage	**VGL**	-6.6	-6.0	-5.4	**V**
TFT Common Electrode Voltage	**VCOM**	-	-	-	**V**

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5.4 Interface signals

Pin No.	Symbol	I/O	Function
1	VLED-	I	LED back light(Cathode)
2	VLED+	I	LED back light(Anode)
3	GND		GND
4	VDD	I	Power supply
5-12	R0~R7	I	Red data bus
13-20	G0~G7	I	Green data bus
21-28	B0~B7	I	Blue data bus
29	GND		GND
30	PCLK	I	Data clock
31	DISP	I	Standby mode select pin
32	HSYNC	I	Line SYNC signal
33	VSYNC	I	Frame SYNC signal
34	DE	I	Data enable pin
35	NC		NC
36	GND		GND
37	XR	O	Touch Panel Control pin
38	YD	O	
39	XL	O	
40	YU	O	

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6. Optical Characteristics

Item	Symbol		Condition	Min.	Typ.	Max.	Unit	Note
Brightness	Bp		θ=0° Φ=0°	-	300	-	Cd/m²	1
Uniformity	⊿Bp			75	80	-	%	1,2
Viewing Angle	3:00		Cr≥10	80	85	-	Deg	3
	6:00			80	85	-		
	9:00			80	85	-		
	12:00			80	85	-		
Contrast Ratio	Cr		θ=0° Φ=0°	500	800		-	4
Response Time	T_r+T_f				25	40	ms	5
Color of CIE Coordinate	W	x	θ=0° Φ=0°	TYP -0.05	0.303	TYP +0.05	-	1,6
		y			0.333		-	
	R	x			-		-	
		y			-		-	
	G	x			-		-	
		y			-		-	
	B	x			-		-	
		y					-	

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Note：The parameter is slightly changed by temperature, driving voltage and materiel

Note 1: The data are measured after LEDs are turned on for 5 minutes. LCM displays full white. The brightness is the average value of 9 measured spots. Measurement equipment PR-705 (Φ8mm)

Measuring condition:

- Measuring surroundings: Dark room.
- Measuring temperature: Ta=25℃.
- Adjust operating voltage to get optimum contrast at the center of the display.

Measured value at the center point of LCD panel after more than 5 minutes while backlight turning on.