Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT070-R001JD

Version	V1
Engineer	
Date	2024-08-30

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Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

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Scope

This specification defines general provisions as well as inspection standards for TFT module supplied by Next Vision Display.

If the event of unforeseen problem or unspecified items may occur, naturally shall negotiate and agree to solution.

General Information

LCM

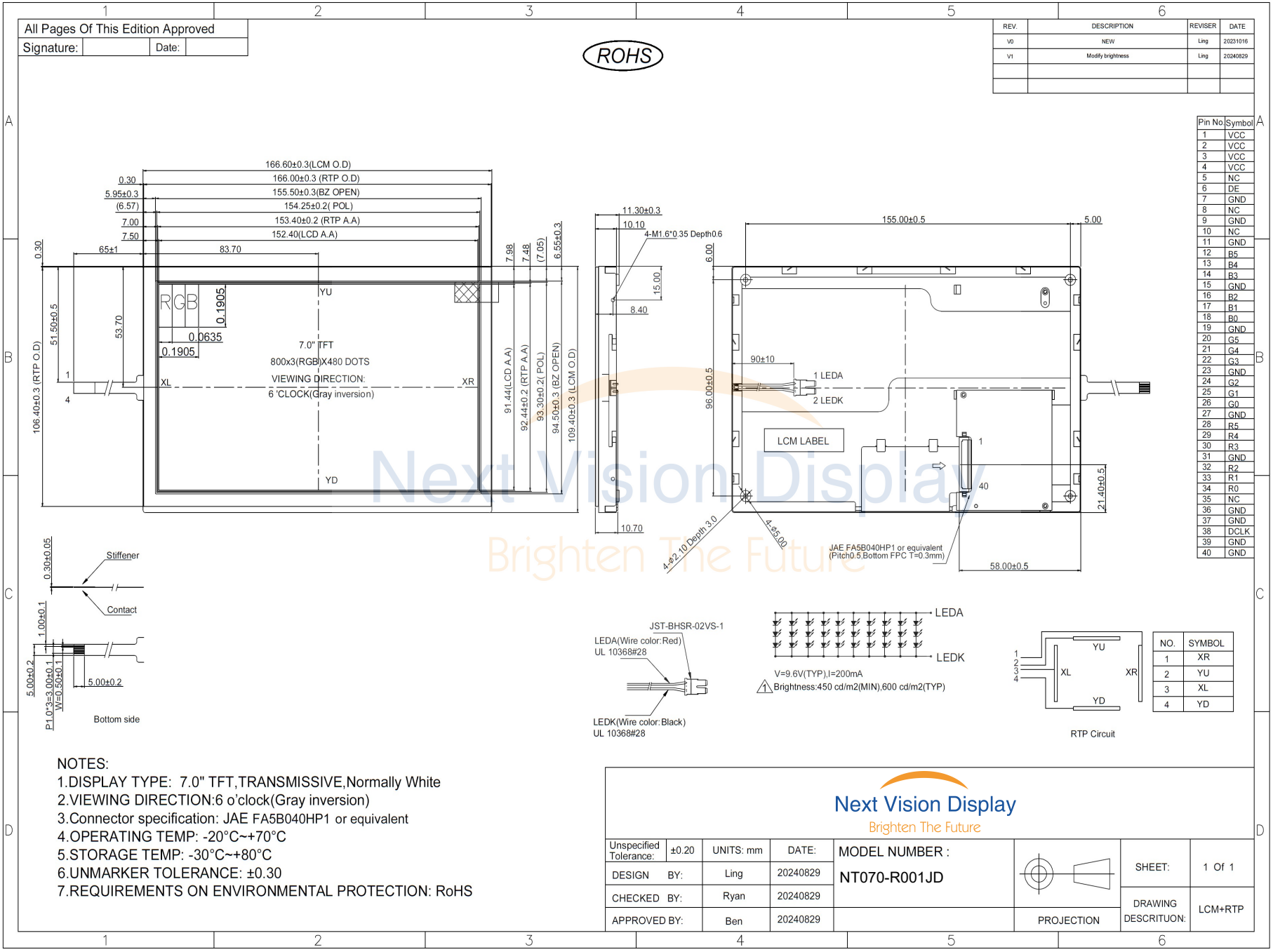
Item	Standard Values	Unit
LCD type	7" TFT	
Dot arrangement	800×R.G.B.×480	dots
Color filter array	RGB vertical stripe	
Display mode	Normally white	
Gray Scale Inversion Direction	6 O'clock	
Eyes Viewing Direction	12 O'clock	
Module size	166.6(W)×109.4(H)×11.3(T)	mm
Active area	152.4(W)×91.44(H)	mm
Interface	RGB 18 bit	
Operating temperature	-20 ~ +70	°C
Storage temperature	-30 ~ +80	°C
Weight	202	g

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RTP

Item	Standard Values	Unit
RTP type	Film + Glass + FPC	--
Surface hardness	3H	--
Transmittance	≥76%	--
RTP size	166.0(W)×106.4(H)×1.4(T)	mm
Active area	153.4(W)×92.44(H)	mm
Response Time	≤10ms	ms
Linearity	≤1.5%	%
Line writing life	10000	times
Operation force	50~120g	g
Resistance	X:450Ω ~ 950Ω Y:140Ω ~ 560Ω	Ω

External Dimensions



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Pin Assignment
LCM PIN: JAE FA5B040HP1

Pin	Pin Name	Description	Remark
1	VCC	Power supply: +3.3V	
2	VCC	Power supply: +3.3V	
3	VCC	Power supply: +3.3V	
4	VCC	Power supply: +3.3V	
5	NC	No connection	
6	DE	Data Enable signal.	
7	GND	Ground	
8	NC	No connection	
9	GND	Ground	
10	NC	No connection	
11	GND	Ground	
12	B5	Blue Data Input (MSB).	
13	B4	Blue Data Input.	
14	B3	Blue Data Input.	
15	GND	Ground	
16	B2	Blue Data Input.	
17	B1	Blue Data Input.	
18	B0	Blue Data Input (LSB).	
19	GND	Ground	
20	G5	Green Data Input (MSB).	
21	G4	Green Data Input.	
22	G3	Green Data Input.	
23	GND	Ground	
24	G2	Green Data Input.	
25	G1	Green Data Input.	
26	G0	Green Data Input (LSB).	
27	GND	Ground	
28	R5	Red Data Input (MSB).	
29	R4	Red Data Input.	
30	R3	Red Data Input.	
31	GND	Ground	
32	R2	Red Data Input.	
33	R1	Red Data Input.	
34	R0	Red Data Input (LSB).	
35	NC	No connection	
36	GND	Ground	
37	GND	Ground	
38	DCLK	Clock input.	
39	GND	Ground	
40	GND	Ground	

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RTP PIN: CVILUX CF25941D0R0-10

Pin	Pin Name	Description	Remark
1	XR	TP Right	
2	YU	TP Up	
3	XL	TP Left	
4	YD	TP Bottom	

Backlight PIN: JST BHSR-02VS-1(N)

Pin	Pin Name	Description	Remark
1	LED A	LED backlight (Anode).	
2	LED K	LED backlight (Cathode).	

Absolute Maximum Ratings

Item	Symbol	Min.	Max.	Unit	Remark
Supply Voltage	VCC	-0.3	4.3	V	

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DC Characteristics
LCM Parameters

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Power Voltage	VCC	3.0	3.3	3.6	V	
Input logic high voltage	VIH	0.7*VCC	-	VCC	V	
Input logic low voltage	VIL	GND	-	0.3*VCC	V	
Current for Power	ICC	-	190	270	mA	VCC= 3.3V

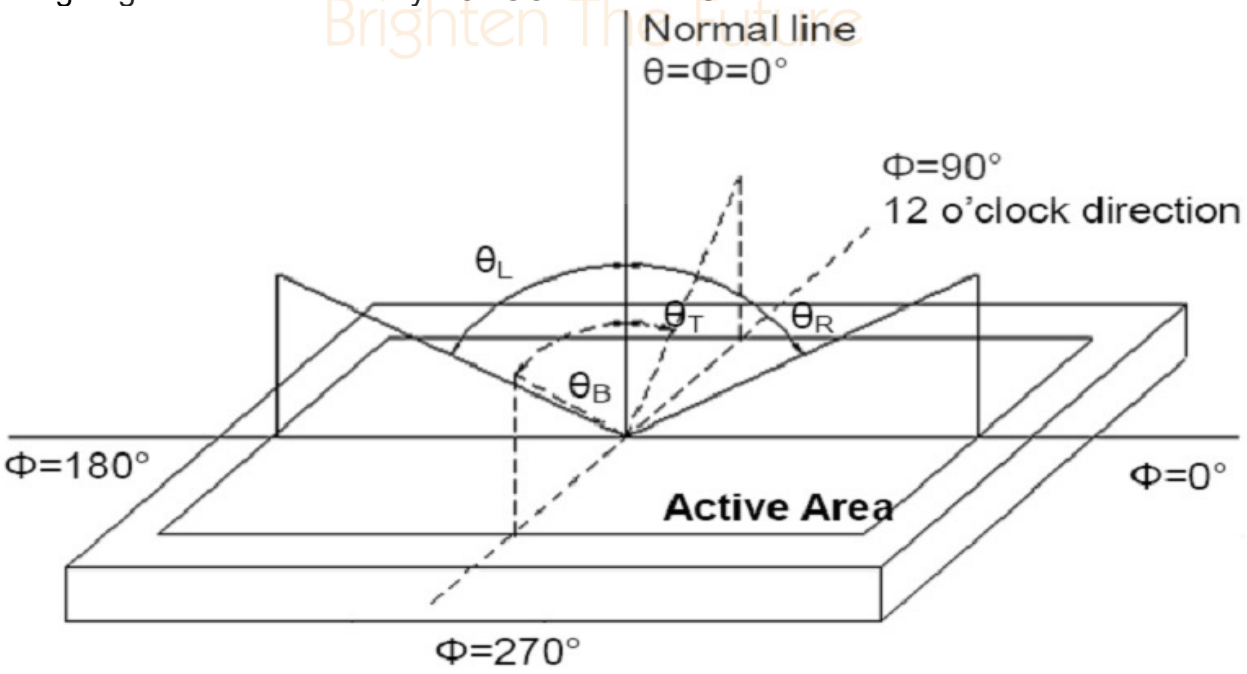
Optical Characteristics

Item	Conditions		Min.	Typ.	Max.	Unit	Remark
Viewing Angle (CR>10)	Horizontal	θ_L	55	65	-	degree	(1) (4)
		θ_R	55	65	-		
	Vertical	θ_T	45	55	-		
		θ_B	55	65	-		
Contrast Ratio	Center		200	350	-	-	(1) (2) (4) (6)
Response Time	Rising		-	15	20	ms	(3) (4) (6)
	Falling			35	40	ms	
CF Color Chromaticity (CIE1931)	Red x		0.54	0.59	0.64	-	(4) (5) (6)
	Red y		0.32	0.37	0.42	-	
	Green x		0.29	0.34	0.49	-	
	Green y		0.53	0.58	0.63	-	
	Blue x		0.13	0.18	0.23	-	
	Blue y		0.05	0.10	0.15	-	
	White x		0.27	0.32	0.37	-	
	White y		0.30	0.35	0.40	-	

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Note:

1. Definition of Viewing Angle:
   Viewing angles are measured by TOPCON BM7-7AC



2. 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