Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT043-R001JD

Version	V1
Engineer	
Date	2024-08-20

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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 electronics.

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

General Information

TFT

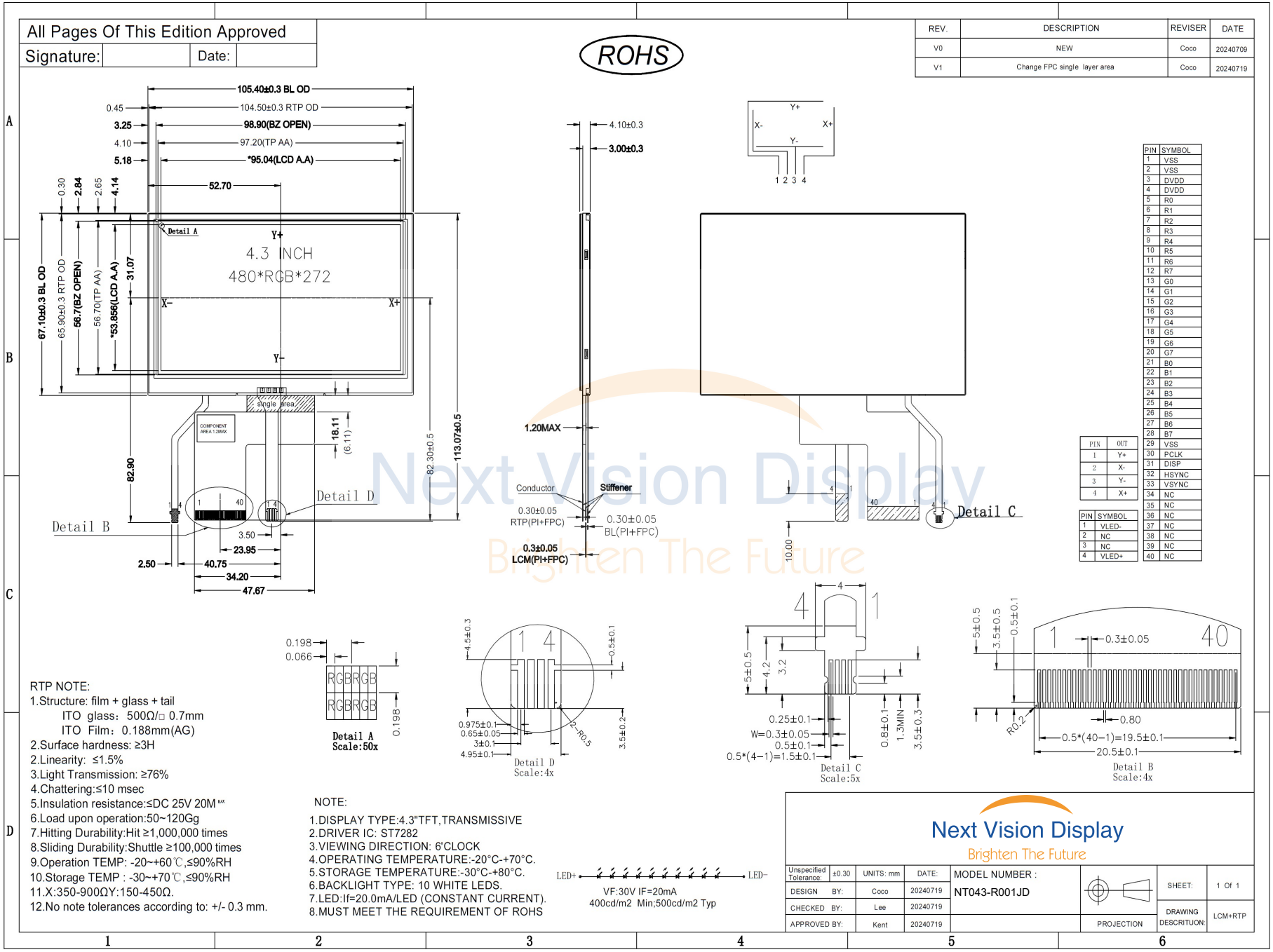
Item	Standard Values	Unit
LCD type	4.3" TFT	
Dot arrangement	480×R.G.B.×272	dots
Color filter array	RGB vertical stripe	
Display mode	Normally white	
Gray Scale Inversion Direction	6 O'clock	
Eyes Viewing Direction	12 O'clock	
Module size	105.4(W)×67.1(H)×4.1(T)	mm
Active area	95.04(W)×53.856(H)	mm
Interface	RGB 24 bit	
Operating temperature	-20 ~ +70	°C
Storage temperature	-30 ~ +80	°C
Weight	50.8	g

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RTP

Item	Standard Values	Unit
RTP type	Film + Glass + FPC	--
Surface hardness	3H	--
Transmittance	≥76%	--
RTP size	104.8(W)×64.8(H)×1.1(T)	mm
Active area	97.41(W)×55.6(H)	mm
Response Time	≤10ms	ms
Linearity	≤1.5%	%
Line writing life	10000	times
Operation force	50~120g	g
Resistance	X:350Ω ~ 900Ω Y:150Ω ~ 450Ω	Ω

External Dimensions



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Pin Assignment

LCM PIN

Pin	Pin Name	Description	Remark
1	VSS	Ground	
2	VSS	Ground	
3	DVDD	Power supply: + 3.3V	
4	DVDD	Power supply: + 3.3V	
5	R0	Red Data Input (LSB).	
6	R1	Red Data Input.	
7	R2	Red Data Input.	
8	R3	Red Data Input.	
9	R4	Red Data Input.	
10	R5	Red Data Input.	
11	R6	Red Data Input.	
12	R7	Red Data Input (MSB).	
13	G0	Green Data Input (LSB).	
14	G1	Green Data Input.	
15	G2	Green Data Input.	
16	G3	Green Data Input.	
17	G4	Green Data Input.	
18	G5	Green Data Input.	
19	G6	Green Data Input.	
20	G7	Green Data Input (MSB).	
21	B0	Blue Data Input (LSB).	
22	B1	Blue Data Input.	
23	B2	Blue Data Input.	
24	B3	Blue Data Input.	
25	B4	Blue Data Input.	
26	B5	Blue Data Input.	
27	B6	Blue Data Input.	
28	B7	Blue Data Input (MSB).	
29	VSS	Ground	
30	PCLK	Clock input.	
31	DISP	Display on/off	
32	HSYNC	Horizontal sync input. Negative polarity.	
33	VSYNC	Vertical sync input. Negative polarity.	
34	NC	No connection	
35	NC	No connection	
36	NC	No connection	
37	NC	No connection	
38	NC	No connection	
39	NC	No connection	
40	NC	No connection	

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RTP PIN

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

B/L PIN

Pin	Pin Name	Description	Remark
1	VLED-	LED backlight (Cathode).	
2	NC	No connection	
3	NC	No connection	
4	VLED+	LED backlight (Anode).	

Absolute Maximum Ratings

Item	Symbol	Min.	Max.	Unit	Remark
Supply Voltage	DVDD	-0.3	4.0	V	

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DC Characteristics

Parameters

Item	Symbol	Min.	Typ.	Max.	Unit	Remark
Power Voltage	DVDD	2.5	2.8	3.6	V	
Input logic high voltage	V_{IH}	0.7*DVDD	-	DVDD	V	
Input logic low voltage	V_{IL}	GND	-	0.3*DVDD	V	
Output High Voltage	V_{OH}	0.8*DVDD	-	DVDD	V	
Output Low Voltage	V_{OL}	GND	-	0.2*DVDD	V	
Current for Power	I_{DVDD}	-	12	25	mA	DVDD=2.8V

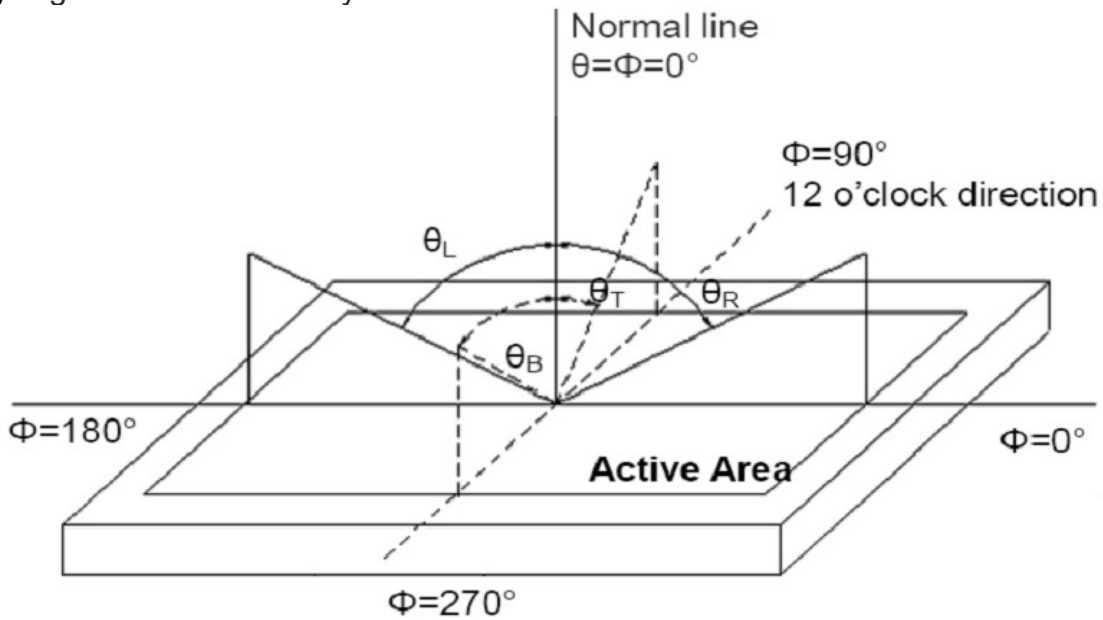
Optical Characteristics

Item	Conditions		Min.	Typ.	Max.	Unit	Remark
Viewing Angle (CR>10)	Horizontal	θ_L	-	70	-	degree	(1) (4)
		θ_R	-	70	-		
	Vertical	θ_T	-	50	-		
		θ_B	-	70	-		
Contrast Ratio	Center		400	500	-	-	(1) (2) (4) (6)
Response Time	Rising		-	25	-	ms	(3) (4) (6)
	Falling			25	-	ms	
CF Color Chromaticity (CIE1931)	Red x		0.53	0.58	0.63	-	(4) (5) (6)
	Red y		0.33	0.38	0.43	-	
	Green x		0.29	0.34	0.39	-	
	Green y		0.51	0.56	0.61	-	
	Blue x		0.13	0.18	0.23	-	
	Blue y		0.00	0.05	0.10	-	
	White x		0.25	0.30	0.35	-	
	White y		0.25	0.30	0.35	-	
NTSC	CIE 1931		-	52	-	%	(4) (5) (6)

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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