Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT121-N001ME

Version	1.1
Engineer	
Date	

Next Vision Display
Brighten The Future

Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

地址: 中國上海小木橋路600號
ADD: 600 XIAO MU QIAO ROAD, SHANGHAI, CHINA

WEB: www.nextvisiondisplay.com

TECHNICAL: technical@nextvisiondisplay.com
MARKETING: marketing@nextvisiondisplay.com
SALES: sales@nextvisiondisplay.com

1.0 GENERAL DESCRIPTION

Next Vision Display model NT121-N001ME is a color active matrix thin film transistor (TFT) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching device. This model is composed of a TFT LCD panel, a driving circuit and a back light system. This TFT LCD has a 12.1 inch diagonally measured active display area with XGA (1024 horizontal by 768 vertical pixel) resolution.

1.2 Features

- 12.1 (4:3 diagonal) inch configuration
- 16.7M
- ROHS / Halogen Free Compliance

1.3 Applications

- Automobile

1.4 General information

Item		Specification	Unit
Outline Dimension		260.5 (H) x 204 (V) x 8.6 (D) (Typ)	mm
Display area		245.76(H)x184.32(V) (12.1” diagonal)	mm
Number of Pixel		1024(H) x 768(V)	pixels
Pixel pitch		0.2400(H) x 0.2400(V)	mm
Pixel arrangement		RGB Vertical Stripe	
Display mode		Normally Black	
NTSC		70(Typ.)	%
Surface treatment		Antiglare, Hard-Coating (3H)	
Weight		520(Max.)	g
Back-light		Single LED (Side-Light type)	
Power Consumption	Logic System (White Pattern)	Logic 0.8W(typ) 1.2W(max)	W
	B/L System	10.8W(max.)	W

1.5 Mechanical Information

Item		Min.	Typ.	Max.	Unit
Module Size	Horizontal (H)	260.0	260.5	261.0	mm
	Vertical (V)	203.5	204	204.5	mm
	Depth (D)	8.3	8.6	8.9	mm
Weight		—	500	520	g

Next Vision Display
Brighten the Future

2.0 ABSOLUTE MAXIMUM RATINGS

2.1 Electrical Absolute Rating

2.1.1 TFT LCD Module

Item	Symbol	Min.	Max.	Unit	Note
Logic supply voltage	V_{DD}	-0.3	5.0	V	
Back-light supply voltage	V_i	-0.3	28.0	V	

2.2 Environment Absolute Rating

Item	Symbol	Min.	Max.	Unit	Note
Operating Temperature	T_{opa}	-30	80	℃	
Storage Temperature	T_{stg}	-30	80	℃	

Next Vision Display
Brighten The Future

3.0 OPTICAL CHARACTERISTICS

3.1 Optical specification

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast		CR	Θ=0 Normal viewing angle	600	900	—		(1)(2)
Response time	Rising	TR+TF		—	30	40	msec	(1)(3)
	Falling							
White luminance (Center)		Y_L		400	600	—	cd/m^2	(1)(4) (I_L=850mA)
Color chromaticity (CIE1931)	White	W_x		0.251	0.291	0.331		(1)(4)
		W_y		0.288	0.328	0.368		
	Red	R_x		0.613	0.653	0.703		
		R_y		0.302	0.342	0.382		
	Green	G_x		0.264	0.304	0.344		
		G_y		0.581	0.621	0.661		
	Blue	B_x		0.104	0.144	0.184		
		B_y		0.054	0.094	0.134		
Viewing angle	Hor.	Θ_L	CR>10	80	85	—		
		Θ_R		80	85	—		
	Ver.	Θ_U		80	85	—		
		Θ_D		80	85	—		
Brightness uniformity		B_{UNI}	Θ=0	70	80	—	%	(5)
Optima View Direction		Free						(6)

Next Vision Display
Brighten The Future

3.2 Measuring Condition

- Measuring surrounding：dark room
- LED current I_L：850mA
- Ambient temperature：25±2°C
- 15min. warm-up time.

5.0 INTERFACE PIN CONNECTION

5.1 LCM connector pin assignment (CN1) : STARCONN 076B20-0048RA-G4 or JAE FI-SEB20P-HFE (or equivalent)

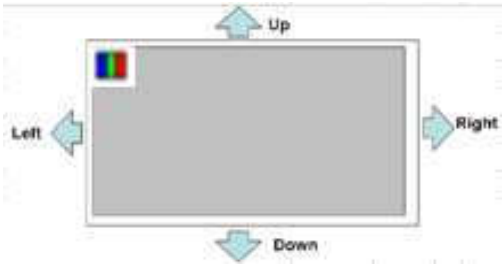
Pin NO.	Symbol	Description	Note
1	RX3+	Differential Data Input, CH3 (Positive)	
2	RX3-	Differential Data Input, CH3 (Negative)	
3	BIST	Normal operation/BIST pattern select. BIST="1" : BIST mode. BIST="0" : Normal operation.	Note*
4	SEL68	6bit/8bit mode select, SELB = “1” : LVDS input data is 8bits SELB = “0” : LVDS input data is 6bits	Note*
5	GND	Ground	
6	RXC+	Differential Clock Input (Positive)	
7	RXC-	Differential Clock Input (Negative)	
8	GND	Ground	
9	RX2+	Differential Data Input , CH2 (Positive)	
10	RX2-	Differential Data Input , CH2 (Negative)	
11	GND	Ground	
12	RX1+	Differential Data Input , CH1 (Positive)	
13	RX1-	Differential Data Input, CH1 (Negative)	
14	GND	Ground	
15	RX0+	Differential Data Input, CH0 (Positive)	
16	RX0-	Differential Data Input, CH0 (Negative)	
17	reLR	Left or right display control SHLR="1" : Right → Left SHLR="0" :Left → Right	Note*
18	reUD	Up / down display control UPDN="1" : Down → Up UPDN="0" : Up → Down	Note*
19	VDD	Power supply, 3.3V	
20	VDD	Power supply, 3.3V	

Note* : The high level voltage “1” is 3.3V, and the low level voltage “0” is GND.

Next Vision Display
Bringing The Future

Note 1：UPDN and SHLR control function

reLR	reUD	Data shifting
0	0	Left→Right, Up→Down
1	0	Right→Left, Up→Down
0	1	Left→Right, Down→Up
1	1	Right→Left, Down→Up



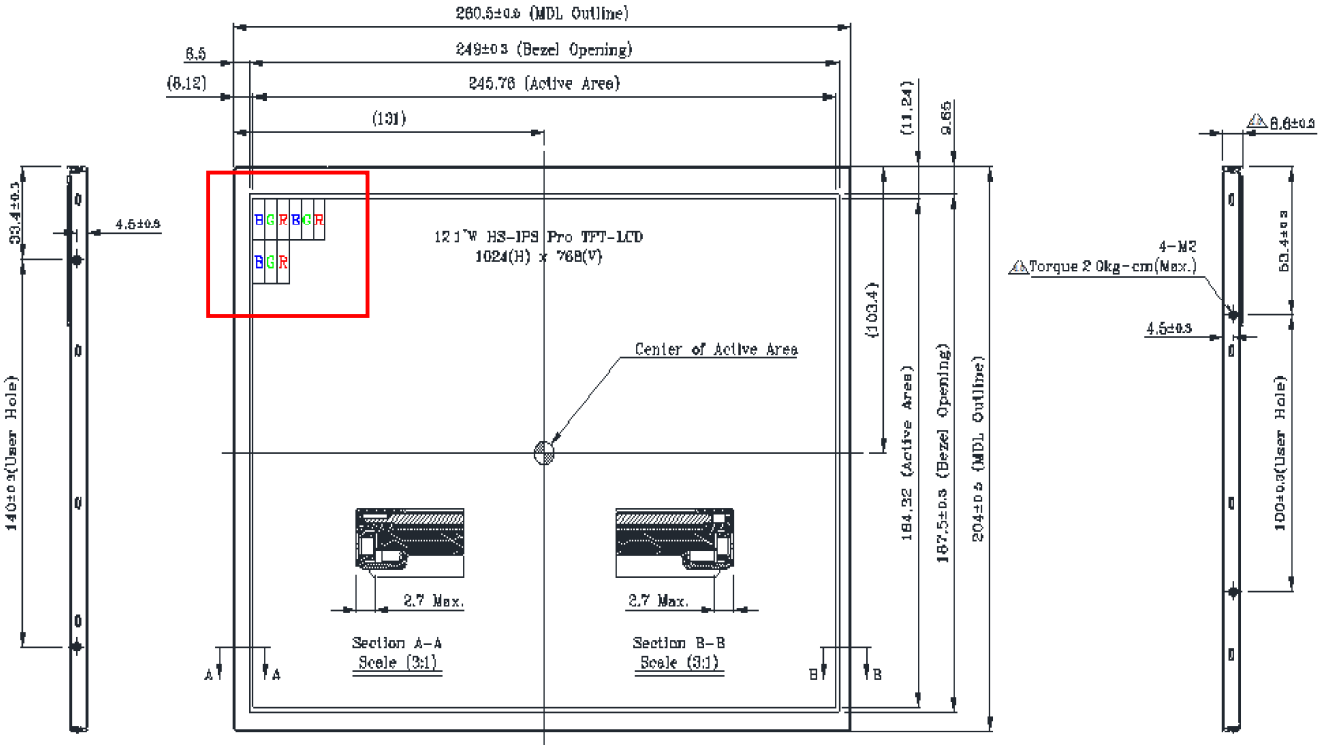
5.2 Backlight Pin Assignment (CN2) : ACES 91208-01001-H01 (or equivalent)

Pin NO.	Symbol	Description	Note
1	Vi	Converter input voltage	12V
2	Vi	Converter input voltage	12V
3	Vi	Converter input voltage	12V
4	Vi	Converter input voltage	12V
5	VGND	Converter ground	Ground
6	VGND	Converter ground	Ground
7	VGND	Converter ground	Ground
8	VGND	Converter ground	Ground
9	EN	Enable pin	3.3V
10	ADJ	Backlight Adjust	PWM Dimming (100Hz-30KHz, Hi: 2.0~3.3V,Lo : 0~0.8V)

Next Vision Display
Beyond The Future

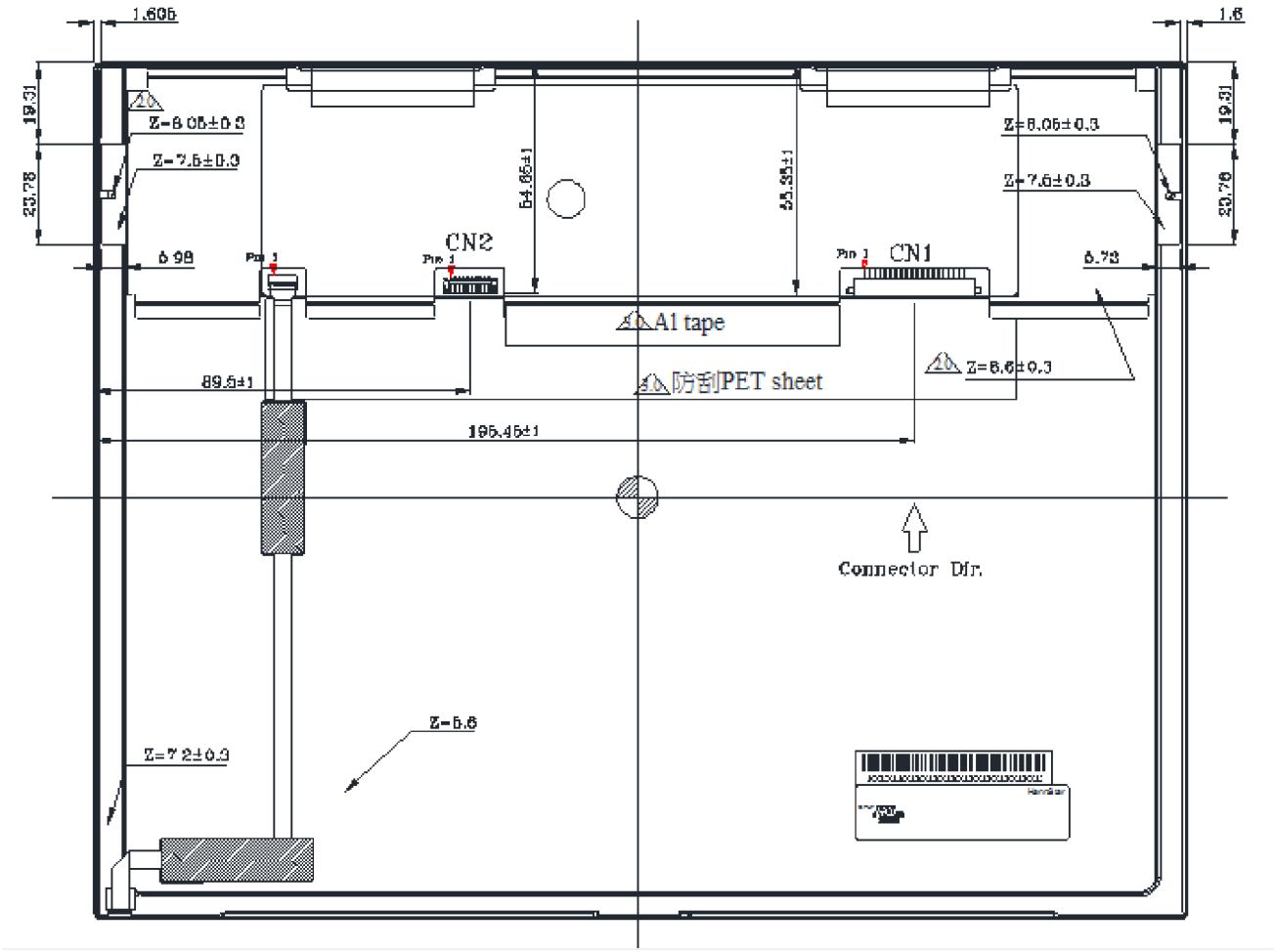
8.0 OUTLINE DIMENSION

8.1 Front View:



General tolerance: ±0.5mm

8.2 Rear View:



General tolerance: ±0.5mm