Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NT024-R001ME

Version	V01
Engineer	
Date	2022-03-11

Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

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General Specification

Item	Contents	Unit
LCD TYPE	TFT/TRANSMISSIVE	
MODULE SIZE (W*H*T)	42.72x60.26x3.61	MM
ACTIVE SIZE (W*H)	36.72*48.96	MM
PIXEL PITCH (W*H)	0.153*0.153	MM
NUMBER OF DOTS	240*320	
DIVER IC	ST7789V2	
INTERFACE TYPE	MCU	
TOP POLARIZER TYPE	ANTI-GLARE	
RECOMMEND VIEWING DIRECTION	6	O'CLOCK
GRAY SCALE INVERSION DIRECTION	12	O'CLOCK
BACKLIGHT TYPE	4-DIES WHITE LED	
TOUCH PANEL TYPE	RESISTIVE	

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Interface Pin Function

Pin No.	Symbol	Description
1	GND	No connect
2	YU	Y- input position of touch panel.
3	XL	X+ input position of touch panel
4	YD	Y+ input position of touch panel
5	XR	X- input position of touch panel.
6	GND	Power ground
7	IM0	The MCU interface mode select.(NOTE)
8	IM1	The MCU interface mode select.(NOTE)
9	NC	No connect
10	NC	No connect
11	NC(LCD-ID)	No connect
12	RESET	Reset pin
13	D9	Data bus
14	D0	Data bus
15	D17	Data bus
16	D16	Data bus
17	D15	Data bus
18	D14	Data bus
19	D13	Data bus
20	D12	Data bus
21	D11	Data bus
22	D10	Data bus
23	D8	Data bus
24	D7	Data bus
25	D6	Data bus
26	D5	Data bus
27	D4	Data bus
28	D3	Data bus
29	D2	Data bus
30	D1	Data bus
31	RD	Read data signal
32	WR	Write data signal
33	RS	Data or command select
34	CS	Chip select input pin (“Low” enable).
35	GND	Power ground
36	IOVCC	Power supply for digital circuit
37	VCC	Power supply
38	VCC	Power supply
39	LED K4	Cathode of LED backlight
40	LED K3	Cathode of LED backlight

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41	LED K2	Cathode of LED backlight
42	LED K1	Cathode of LED backlight
43	LEDA	Anode of LED backlight
44	GND	Power ground

NOTE:The MCU interface mode select.

IM3	IM2	IM1	IM0	MPU Interface Mode	Data pin
1	0	0	0	80-16bit parallel I/F Ⅱ	DB[17:10], DB[8:1]
1	0	0	1	80-8bit parallel I/F Ⅱ	DB[17:10]
1	0	1	0	80-18bit parallel I/F Ⅱ	DB[17:0],
1	0	1	1	80-9bit parallel I/F Ⅱ	DB[17:9]

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Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply voltage for analog	VCC	-0.3	4.6	V
Supply voltage for logic	IOVCC	-0.3	4.6	V
Supply current (One LED)	I_{LED}		30	mA
Operating temperature	T_{OP}	-20	+70	°C
Storage temperature	T_{ST}	-30	+80	°C

Note: The absolute maximum rating values of this product are not allowed to be exceeded at any times. Should a module be used with any of the absolute maximum ratings exceeded, the characteristics of the module may not be recovered, or in an extreme case, the module may be permanently destroyed.

Electrical Characteristics

6.1 Input Power

Item	Symbol	Min	Typ.	Max	Unit	Applicable terminal
Supply Voltage for Analog	VCC	2.5	2.8	3.3	V	
Supply Voltage for Logic	IOVCC	1.65	2.8	3.3	V	
Input Voltage	V_{IL}	GND	-	0.3 IOVCC	V	
	V_{IH}	0.8 IOVCC	-	IOVCC		
Input leakage Current	I_{LKG}	-1		1	μA	

6.2 Backlight Driving Conditions

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Item	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Voltage for LED Backlight	V_F	2.8	3.2	3.4	V	I_L =80mA
Current for LED Backlight	I_L		80	-	mA	
Power Consumption	P		0.256		W	
LED Life Time		30,000	50,000		Hr	Note

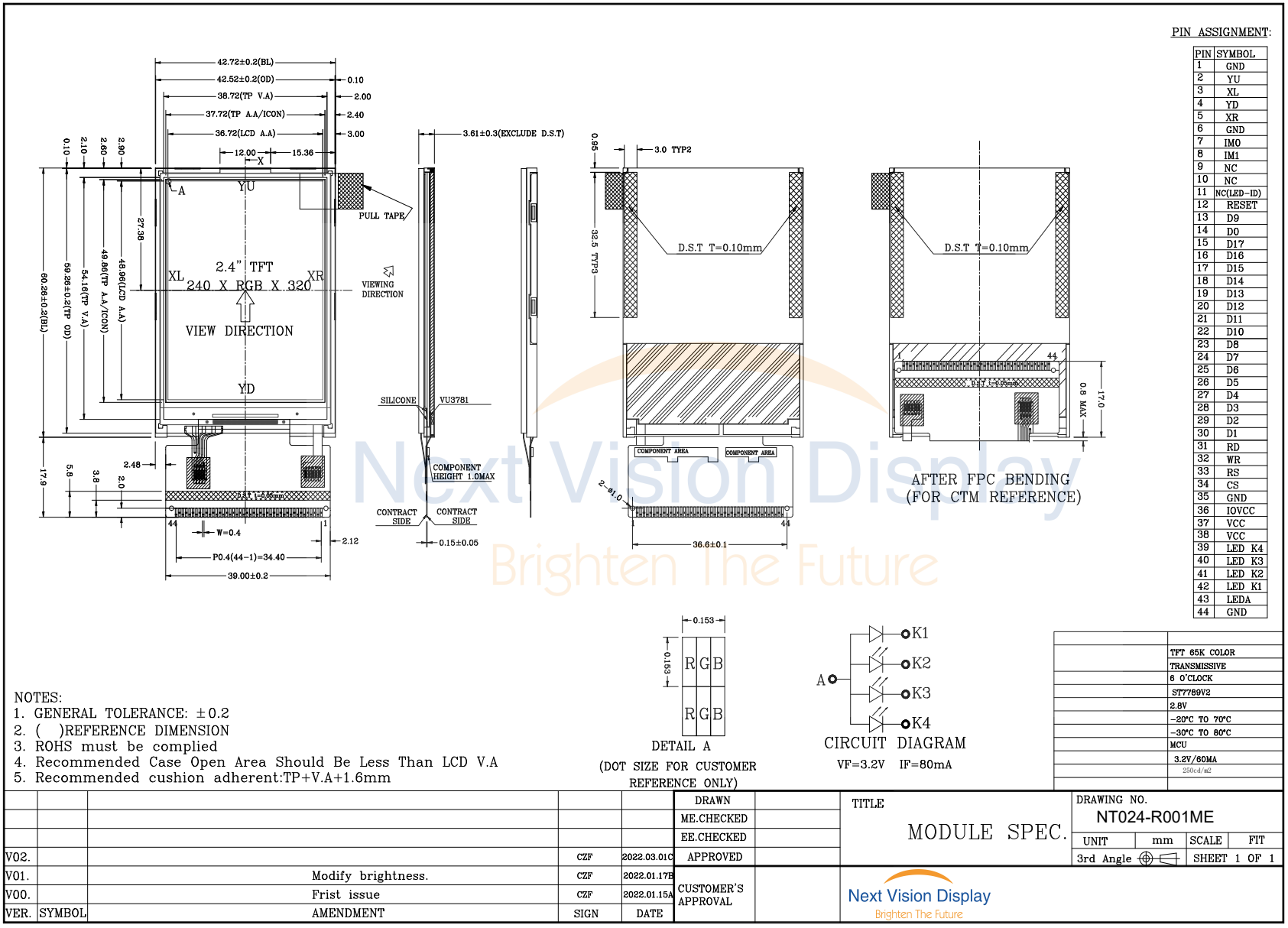
Note: Brightness to be decreased to 50% of the initial value at ambient temperature TA=25℃

Optical Characteristics

ITEM		SYMBOL	CONDITIONS	SPECIFICATIONS			UNIT	NOTE
				MIN	TYP.	MAX		
Luminance		L	I_L =80mA	200	250	350	Cd/m^2	
Contrast Ratio		CR	θ=0°		250			
Response Time		T_{ON}	25℃		30		ms	
		T_{OFF}						
CIE Color Coordinate	Red	X_R	Viewing normal angle					
		Y_R						
	Green	X_G						
		Y_G						
	Blue	X_B						
		Y_B						
	White	X_W						
		Y_W						
Viewing Angle	Hor.	θ_{X+}	CR≥10		60		Degree	
		θ_{X-}			60			
	Ver.	θ_{Y+}			60			
		θ_{Y-}			50			
Uniformity	Un			80			%	

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Mechanical Drawing



NOTES:
1. GENERAL TOLERANCE: ±0.2
2. ( )REFERENCE DIMENSION
3. ROHS must be complied
4. Recommended Case Open Area Should Be Less Than LCD V.A
5. Recommended cushion adherent:TP+V.A+1.6mm

VER.	SYMBOL	AMENDMENT	SIGN	DATE
V02.			CZF	2022.03.01C
V01.		Modify brightness.	CZF	2022.01.17B
V00.		Frist issue	CZF	2022.01.15A

DRAWN	
ME.CHECKED	
EE.CHECKED	
APPROVED	
CUSTOMER'S APPROVAL	

TITLE: MODULE SPEC.

DRAWING NO. NT024-R001ME

UNIT mm | SCALE FIT | 3rd Angle | SHEET 1 OF 1

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