Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

SPECIFICATION

CUSTOMER : _____

MODULE NO.: NE027-N001GD

Version	
Engineer	
Date	

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Customer:
Approved by

NEXT VISION DISPLAY CO., LTD.

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1. Over View

The display is a TFT active matrix electrophoretic display, with interface and a reference system design. The 2.7" active area contains 264 ×176 pixels, and has 1-bit white/black full display capabilities. An integrated circuit contains gate buffer, source buffer, interface, timing control logic, oscillator, DC-DC, SRAM, LUT, VCOM, and border are supplied with each panel.

2. Features

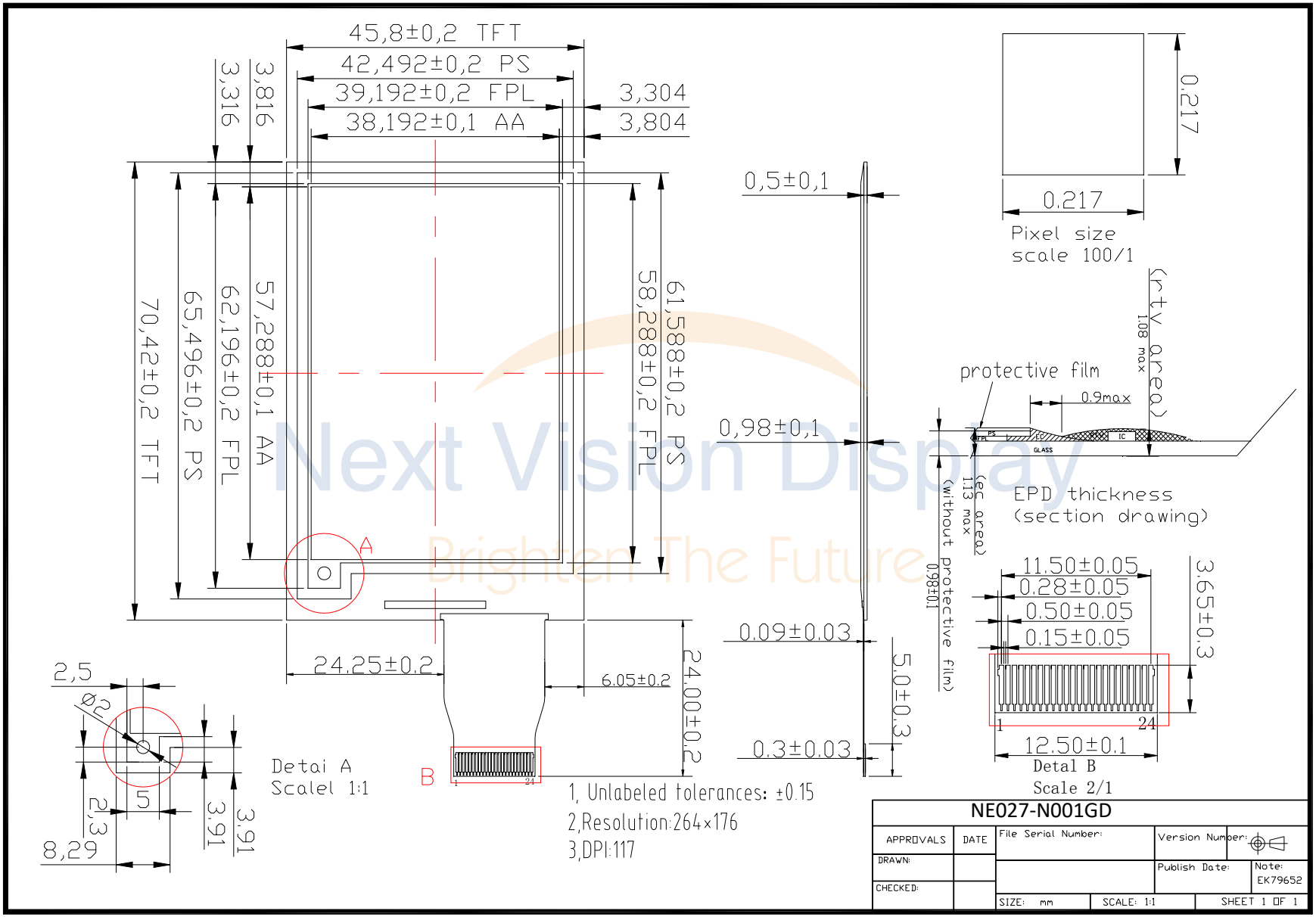
- High contrast
- High reflectance
- Ultra wide viewing angle
- Ultra low power consumption
- Pure reflective mode
- Bi-stable
- Commercial temperature range
- Landscape, portrait mode
- Antiglare hard-coated front-surface
- Low current deep sleep mode
- On chip display RAM
- Waveform stored in On-chip OTP
- Serial peripheral interface available
- On-chip oscillator
- On-chip booster and regulator control for generating VCOM, Gate and source driving voltage
- I^2C Signal Master Interface to read external temperature sensor
- Available in COG package IC thickness 280um

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3. Mechanical Specifications

Parameter	Specifications	Unit	Remark
Screen Size	2.7	Inch	
Display Resolution	264(H)×176(V)	Pixel	Dpi: 117
Active Area	57.288(H)×38.192(V)	mm	
Pixel Pitch	0.217×0.217	mm	
Pixel Configuration	Square		
Outline Dimension	70.42(H)×45.8(V) ×0.98(D)	mm	
Weight	6.08±0.5	g	

4. Mechanical Drawing of EPD module



5. Input/Output Terminals

5-1) Pin out List

Pin #	Type	Single	Description	Remark
1		NC	No connection and do not connect with other NC pins	Keep Open
2	O	GDR	This pin is N-MOS gate control	
3	P	RESE	Current Sense Input for the Control Loop	
4	P	VSLR	Negative source voltage for Red	
5	P	VSL	Negative source voltage	
6	O	TSCL	I^2C clock for external temperature sensor	
7	I/O	TSDA	I^2C data for external temperature sensor	
8	I	BS	Input interface setting	Note 5-5
9	O	BUSY_N	This pin indicates the driver status	Note 5-4
10	I	RST_N	Reset	Note 5-3
11	I	DC	Serial communication Command / Data input	Note 5-2
12	I	CSB	Serial communication chip Select	Note 5-1
13	I	SCL	Serial communication clock input	
14	I/O	SDA	Serial communication date input	
15	P	VDDIO	I/O voltage supply	
16	P	VDD	Digital/Analog power	
17	P	VSS	Digital ground	
18	P	VDD	Voltage input & output	
19	P	VOTP	OTP Program power	
20	P	VSH	Positive Source voltage	
21	P	VGH	Positive gate voltage	
22	P	VSHR	Positive Source voltage for Red	
23	P	VGL	Negative gate voltage	
24	O	VCOM	VCOM output	

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Note 5-1: This pin (CSB) is the chip select input connecting to the MCU. The chip is enabled for MCU communication only when CSB is pulled Low.

Note 5-2: This pin (DC) is Data/Command control pin connecting to the MCU. When the pin is pulled HIGH, the data will be interpreted as

data. When the pin is pulled Low, the data will be interpreted as command.

Note 5-3: This pin (RST_N) is reset signal input. The Reset is active Low.

Note 5-4: This pin (BUSY_N) is BUSY_N state output pin. When BUSY_N is low, the operation of chip should not be interrupted and any commands should not be issued to the module. The driver IC will put BUSY_N pin low when the driver IC is working such as:

- Outputting display waveform; or
- Programming with OTP
- Communicating with digital temperature sensor

Note 5-5: This pin (BS) is for 3-line SPI or 4-line SPI selection. When it is "Low", 4-line SPI is selected. When it is "High", 3-line SPI (9 bits SPI) is selected. Please refer to below Table.

Table: Bus interface selection

BS	MPU Interface
L	4-lines serial peripheral interface (SPI)
H	3-lines serial peripheral interface (SPI) – 9 bits SPI

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