# Specification for 7.3''EPD

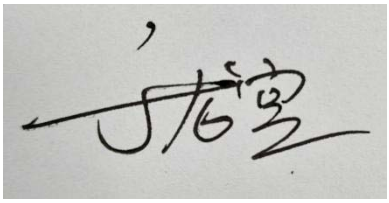
# Model NO.: T073A01

# Product VER: A3

## Customer Approval

| | |
|---|---|
| Customer | |
| Approval By | |
| Date Of Approval | |

**It will be agreed by the receiver, if not sign back the Specification within 15days.**

| Prepared By | Checked By | Approval By |
|---|---|---|
| 周涛涛 |  | |

| Version | Content | Date | Producer |
|---|---|---|---|
| A0 | New release | 2025/12/08 | Leslie |
| A1 | Update Optical Characteristics | 2025/12/12 | Leslie |
| A2 | Update Reliability Test | 2026/3/5 | Leslie |
| A3 | Update Display Resolution DPI | 2026/05/08 | Leslie |
| | | | |

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## 1. General Description

T073A01 is a reflective electrophoretic E Ink® SpectraTM 6 technology display module on an active matrix TFT substrate. The panel is capable of displaying black, white, yellow, red, green and blue images depending on the associated lookup table used. The circuitry on the panel includes an integrated gate and source driver, timing controller, oscillator, DC-DC boost circuit, and memory to store the frame buffer and lookup tables, and additional circuitry to control VCOM and BORDER settings.

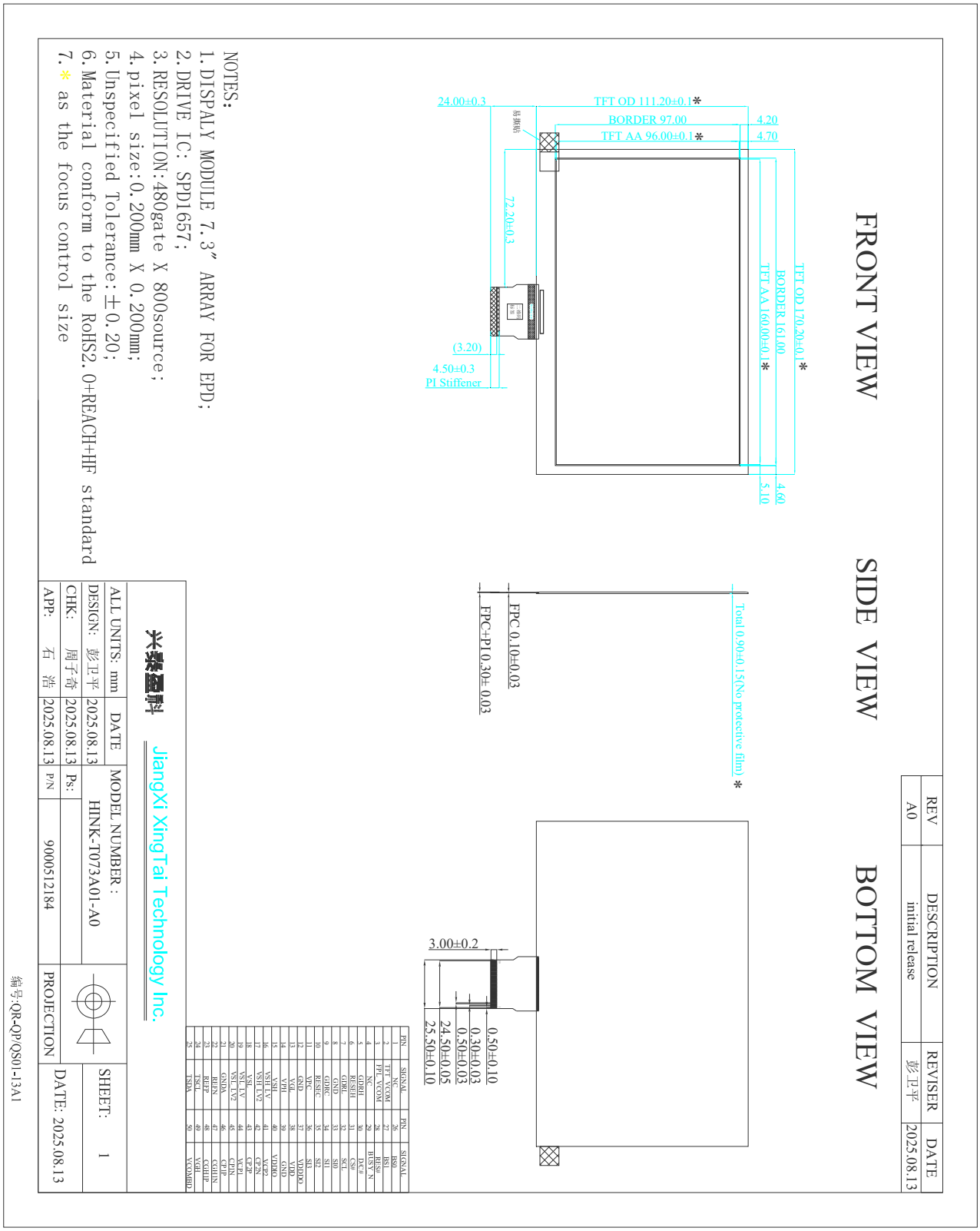
## 2. Features

- 800×480 pixels display
- High contrast
- High reflectance
- Ultra wide viewing angle
- Ultra low power consumption
- Display Black/White/Red/Yellow/Blue/Green colors
- High contrast electrophoretic imaging film
- Pure reflective mode
- Bi-stable image
- Portrait mode

## 3. General Specifications

| Parameter | Specifications | Unit | Remark |
|---|---|---|---|
| Screen Size | 7.3 | Inch | 3:4 |
| Display Resolution | 800(H) x 480(V) | Pixel | Dpi:127 |
| Active Area | 160 (H) × 96 (V) | mm | |
| Pixel Pitch | 0.2 (H) ×0. 2 (V) | mm | |
| Pixel Configuration | Rectangle | | |
| Outline Dimension | 170.2 (H) × 111.2 (V) × 0.9 (D) | mm | Without masking film |
| Weight | TBD | g | |

## 4. Mechanical Drawing of EPD module



# 5. Input / Output Interface

**5-1)**Connector type: FH34SRJ-50S-0.5SH(50)

**Pin Assignment (50-pin)**

Pin Assignment

| Pin # | Type | Single | Description |
|---|---|---|---|
| 1 | | NC | No connection and do not connect with other NC pins |
| 2 | P | TFT_VCOM | TFT_VCOM driving voltage |
| 3 | P | FPL_VCOM | FPL_VCOM driving voltage |
| 4 | | NC | NC |
| 5 | I/O | GDRH | N-Channel MOSFET Gate Drive Control |
| 6 | I/O | RESEH | Current Sense Input for the Control Loop |
| 7 | | GDRL | Reserved |
| 8 | P | GND | Ground |
| 9 | I/O | GDRC | P-Channel MOSFET Gate Drive Control |
| 10 | I/O | RESEC | Current Sense Input for the Control Loop |
| 11 | P | VPC | VPC driving voltage |
| 12 | P | GND | Ground |
| 13 | P | VGL | Negative Gate driving voltage |
| 14 | P | VPH | VPH driving voltage |
| 15 | P | VSH | Positive Source driving voltage |
| 16 | P | VSH_LV | Positive Source driving voltage |
| 17 | P | VSH_LV2 | Positive Source driving voltage |
| 18 | P | VSL | Negative Source driving voltage |
| 19 | P | VSL_LV | Negative Source driving voltage |
| 20 | P | VSL_LV2 | Negative Source driving voltage |
| 21 | P | GNDA | Ground ; Connect to GND |

| | | | |
|---|---|---|---|
| 22 | | REFN | Reserved |
| 23 | | REFP | Reserved |
| 24 | O | TSCL | I2C Interface to digital temperature sensor Clock pin |
| 25 | I/O | TSDA | I2C Interface to digital temperature sensor Data pin |
| 26 | I | BS0 | Bus selection pin; L: 4-wire IF. H: 3-wire IF. (Default) |
| 27 | I | BS1 | Bus selection pin; L: refer to BS0. (Default) H: Standard 4-wire SPI/dual SPI/quad SPI |
| 28 | I | RES# | Reset |
| 29 | O | BUSY_N | Busy state output pin |
| 30 | I | D/C# | Data /Command control pin (D/C) |
| 31 | I | CS# | Chip Select input pin (CSB) |
| 32 | I | SCL | Serial clock pin (SPI) |
| 33 | I/O | SI0 | serial data pin (SPI) |
| 34 | I/O | SI1 | serial data pin ; Reserved |
| 35 | I/O | SI2 | serial data pin ; Reserved |
| 36 | I/O | SI3 | serial data pin ; Reserved |
| 37 | P | VDDDO | Core logic power pin; Connect to VDDD |
| 38 | P | VDD | Supply voltage |
| 39 | P | GND | Ground; Connect to GNDA |
| 40 | P | VDDIO | Supply voltage |
| 41 | P | VCP2 | Charge Pump Pin |
| 42 | P | CP2N | Charge Pump Pin |
| 43 | P | CP2P | Charge Pump Pin |

| | | | |
|---|---|---|---|
| 44 | P | VCP1 | Charge Pump Pin |
| 45 | P | CP1N | Charge Pump Pin |
| 46 | P | CP1P | Charge Pump Pin |
| 47 | | CGH1N | Charge Pump Pin; Reserved |
| 48 | | CGH1P | Charge Pump Pin; Reserved |
| 49 | P | VGH | Positive Gate driving voltage |
| 50 | P | VCOMBD | VCOMBD driving voltage |

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

Note 5-2: This pin (D/C#) 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 (RES#) is reset signal input. The Reset is active Low.

Note 5-4: This pin (BUSY_N) is Busy state output pin. When Busy 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 pin low when the driver IC is working such as:

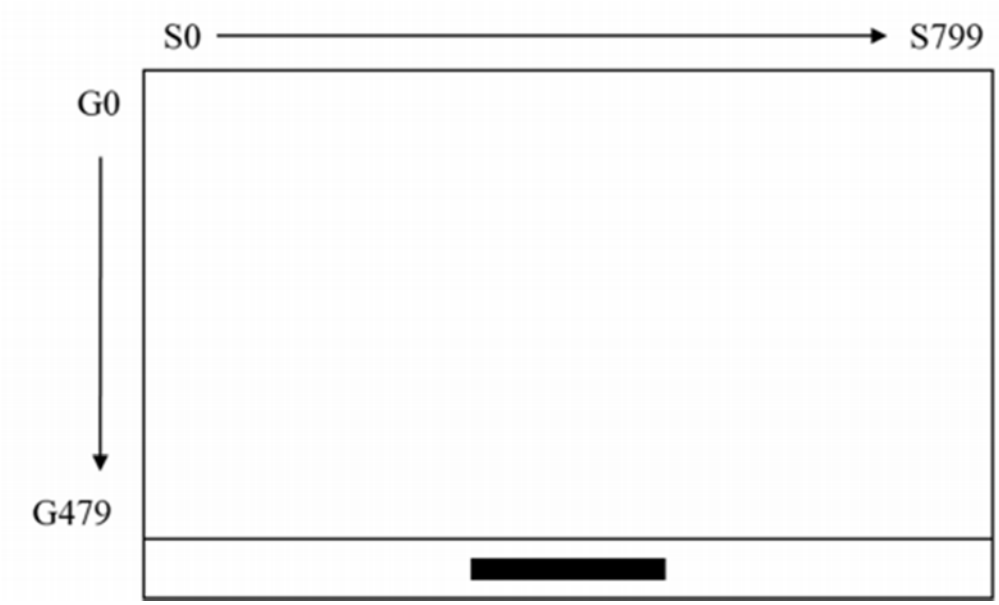
- Outputting display waveform; or
- Programming with OTP
- Communicating with digital temperature sensor

Note 5-5: This pin (BS0) 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**

| BS1 | MPU Interface |
|---|---|
| L | 4-lines serial peripheral interface (SPI) |
| H | 3-lines serial peripheral interface (SPI) – 9 bits SPI |

**Panel Scan direction**



# 6. Command Table

W/R: 0: Write cycle 1: Read cycle C/D: 0: Command 1: Data D7~D0: -: Don't care

| | Command | W/R | C/D | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | Registers | Setting |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Power OFF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | 02h |
| | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 00h |
| 2 | Power ON | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 04h |
| 3 | Deep Sleep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | | 07h |
| | | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | | A5h |
| 4 | Data Start transmission | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 10h |
| | | 0 | 1 | # | # | # | # | # | # | # | # | | -- |
| | | 0 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | | -- |
| | | 0 | 1 | # | # | # | # | # | # | # | # | | -- |
| 5 | Data Refresh | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | | 12h |
| | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 00h |

Note: Maximum ratings are those values beyond which damages to the device may occur.

Functional operation should be restricted to the limits in the Electrical Characteristics chapter.

# 7. Electrical Characteristics

### 7-1 Absolute Maximum Ratings:

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Analog power | VDD | -0.5 to +3.6 | V |
| Operating Temp. range | $T_{OPR}$ | 0 to +50 | ℃ |
| Storage Temp. range | $T_{STG}$ | -25 to +60 | ℃ |

Note: Maximum ratings are those values beyond which damages to the device may occur.

Functional operation should be restricted to the limits in the Electrical Characteristics chapter.

### 7-2 Display Module DC characteristics

The following specifications apply for: VDD = 3.0V, TA = 25℃

DIGITAL DC CHARACTERISTICS

| Symbol | Parameter | Conditions | MIN. | TYP. | MAX. | Unit |
|---|---|---|---|---|---|---|
| VDD | Logic supply voltage | | 2.4 | 3.0 | 3.6 | V |
| VGH | Positive Gate driving voltage | | 19 | 20 | 21 | V |
| VGL | Negative Gate driving voltage | | -21 | -20 | -19 | V |
| VSH | Positive source driving voltage | | 14.5 | 15 | 15.5 | V |
| VSL | Negative source driving voltage | | -15.5 | -15 | -14.5 | V |
| VCOM_DC | VCOM_DC output voltage | | -4.0 | Adjusted | -0.3 | V |
| VCOM_AC | VCOM_AC output voltage | | VSL+ VCOM_DC | -- | VSH+ VCOM_DC | V |
| $V_{IL}$ | Low level input voltage | Digital input pins | GND | -- | 0.2xVDD | V |
| $V_{IH}$ | High level input voltage | Digital input pins | 0.8xVDD | -- | VDD | V |
| $V_{OH}$ | High level output voltage | Digital output pins, $I_{OUT}$ = 1 mA,VDD = 2.4V | 0.8xVDD | -- | -- | V |
| $V_{OL}$ | Low level output voltage | Digital output pins, $I_{OUT}$ = 1 mA,VDD = 2.4V | GND | -- | 0.2xVDD | V |
| $I_{MSTB}$ | Module stand-by current | Stand-by mode | -- | 59.9 | -- | uA |
| $I_{MDS}$ | Module deep sleep current | Deep sleep mode | -- | 1 | -- | uA |
| $I_{NC}$ | Inrush Current | Booster on | -- | 84.7 | 115.5 | mA |

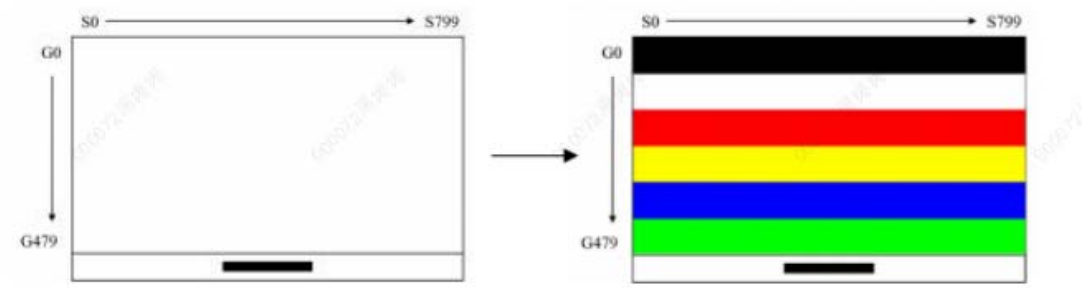
| | | | | | | |
|---|---|---|---|---|---|---|
| $I_{PC}$ | Driving Peak Current | TYP Loading Pattern | -- | 92.0 | 142.2 | mA |
| | | High Loading Pattern | -- | 135.4 | 180.8 | mA |
| $I_{MOPR}$ | Module operating current | TYP Loading Pattern | -- | 16.9 | 20.6 | mA |
| | | High Loading Pattern | -- | 59.3 | 74.6 | mA |
| P | Operation Power Dissipation | TYP Loading Pattern VDD=3.0V with DC-DC | -- | 50.7 | 61.8 | mW |
| | | High Loading Pattern VDD=3.0V with DC-DC | -- | 177.9 | 223.8 | mW |
| $P_{STBY}$ | Standby Power Dissipation | VDD=3.0V | -- | **0.18** | -- | uW |

Note: The Module operating current data is measured by using Oscilloscope, and extract the Mean value.

- The typical power consumption is measured using associated 25C waveform with following pattern transition: from full white pattern to color stripe pattern. (Note 7-1)
- The high loading power consumption is measured using associated 25C waveform with following pattern transition: from full white pattern to noise pattern (including random scattering of 4 colors) (Note 7-2)
- The minimum VDD value by 2.4V is based on typical application pattern with stable and continuing power supply. It does not apply on high loading pattern such as Note 7-2.
- The listed electrical/optical characteristics are only guaranteed under the controller & waveform provided by E Ink
- Vcom value has been set in the IC chip on the panel.

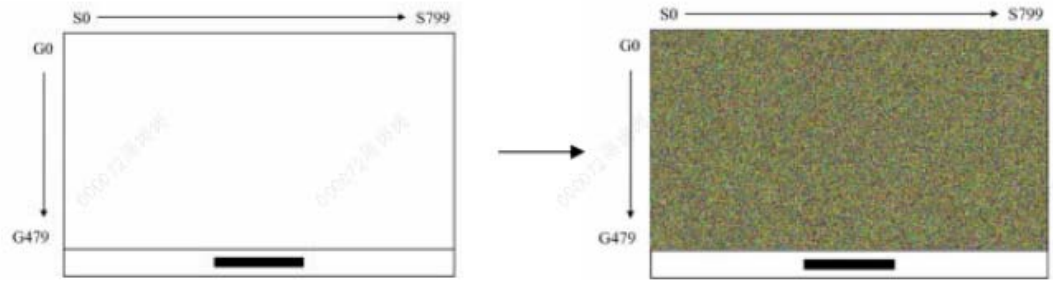
Note 7-1

The typical power consumption




Note 7-2

The high loading power consumption



### 7-3-1-2 MCU Serial Interface (4-wire SPI)

The 4-wire SPI consists of serial clock SCLK, serial data SDA, D/C#, CS#.

| Function | CS# | D/C# | SCLK |
|---|---|---|---|
| Write Command | L | L | ↑ |
| Write data | L | H | ↑ |

**Table 7-2:** Control pins of 4-wire Serial Peripheral interface

Note 7-5: ↑stands for rising edge of signal

SDA is shifted into an 8-bit shift register in the order of D7, D6, ... D0. The data byte in the shift register is written to the Graphic Display Data RAM (RAM) or command register in the same clock. Under serial mode, only write operations are allowed.

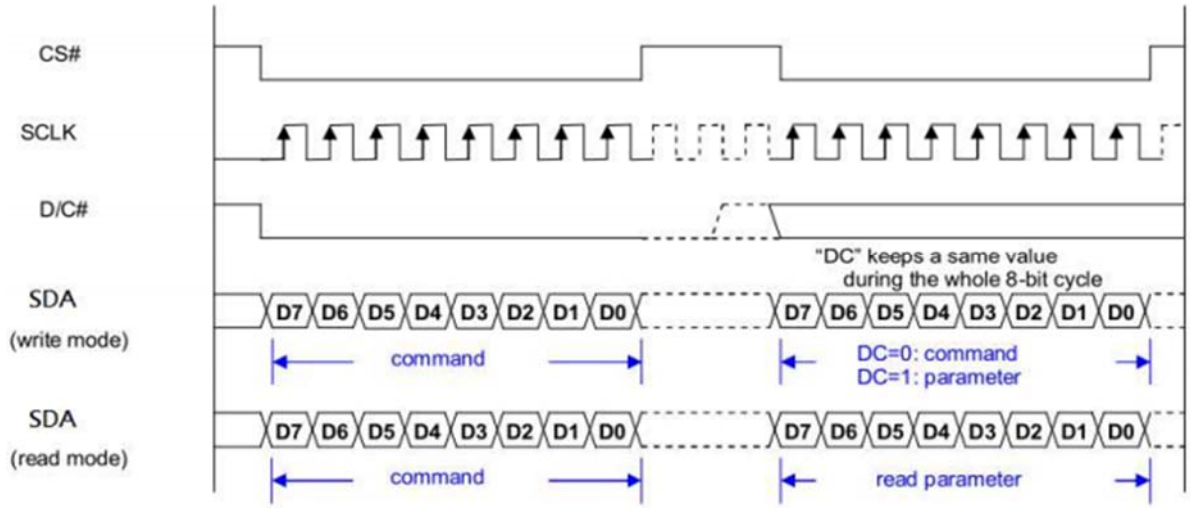



**Figure 7-1:** Write procedure in 4-wire Serial Peripheral Interface mode

### 7-3-1-3 MCU Serial Interface (3-wire SPI)

The 3-wire serial interface consists of serial clock SCLK, serial data SDA and CS#.

In 3-wire SPI mode, the pin D/C# can be connected to an external ground.

The operation is similar to 4-wire serial interface while D/C# pin is not used. There are altogether 9-bits will be shifted into the shift register on every ninth clock in sequence: D/C# bit, D7 to D0 bit. The D/C# bit (first bit of the sequential data) will determine the following data byte in shift register is written to the Display Data RAM (D/C# bit = 1) or the command register (D/C# bit = 0).Under serial mode, only write operations are allowed.

| Function | CS# | D/C# | SCLK |
|---|---|---|---|
| Write Command | L | Tie LOW | ↑ |
| Write data | L | Tie LOW | ↑ |

**Table 7-3:** Control pins of 3-wire Serial Peripheral Interface

Note 7-6: ↑stands for rising edge of signal

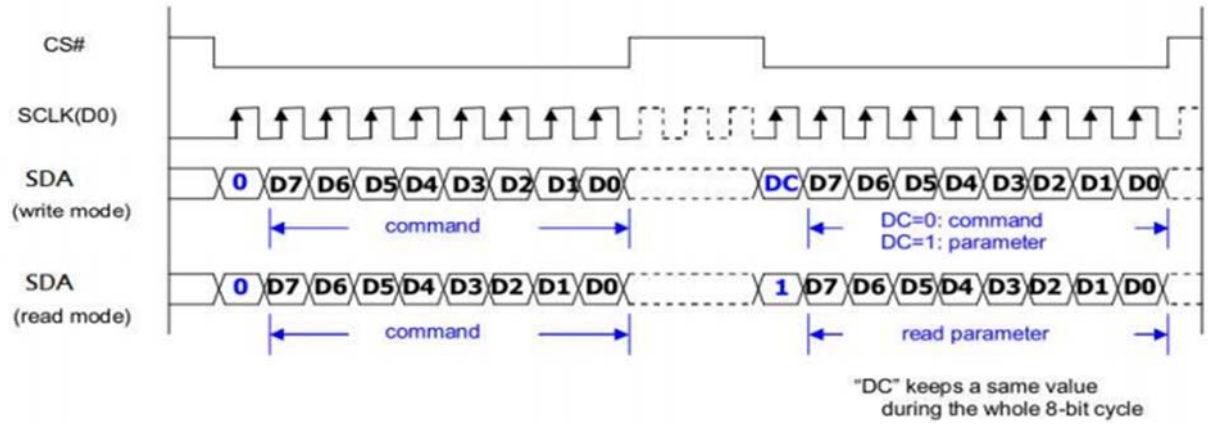



**Figure 7-2:** Write procedure in 3-wire Serial Peripheral Interface mode

### 7-3-2 Timing Characteristics of Series Interface

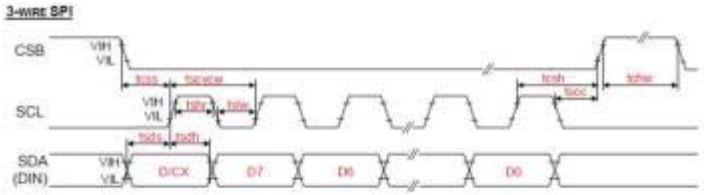



Figure : 3-wire Serial Interface – Write

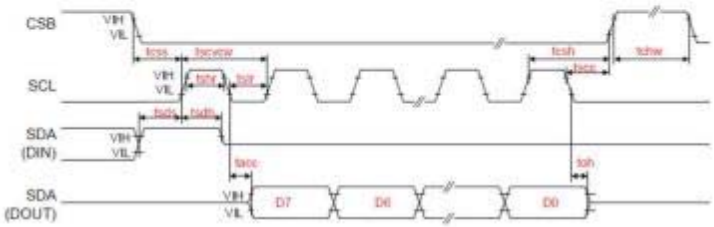


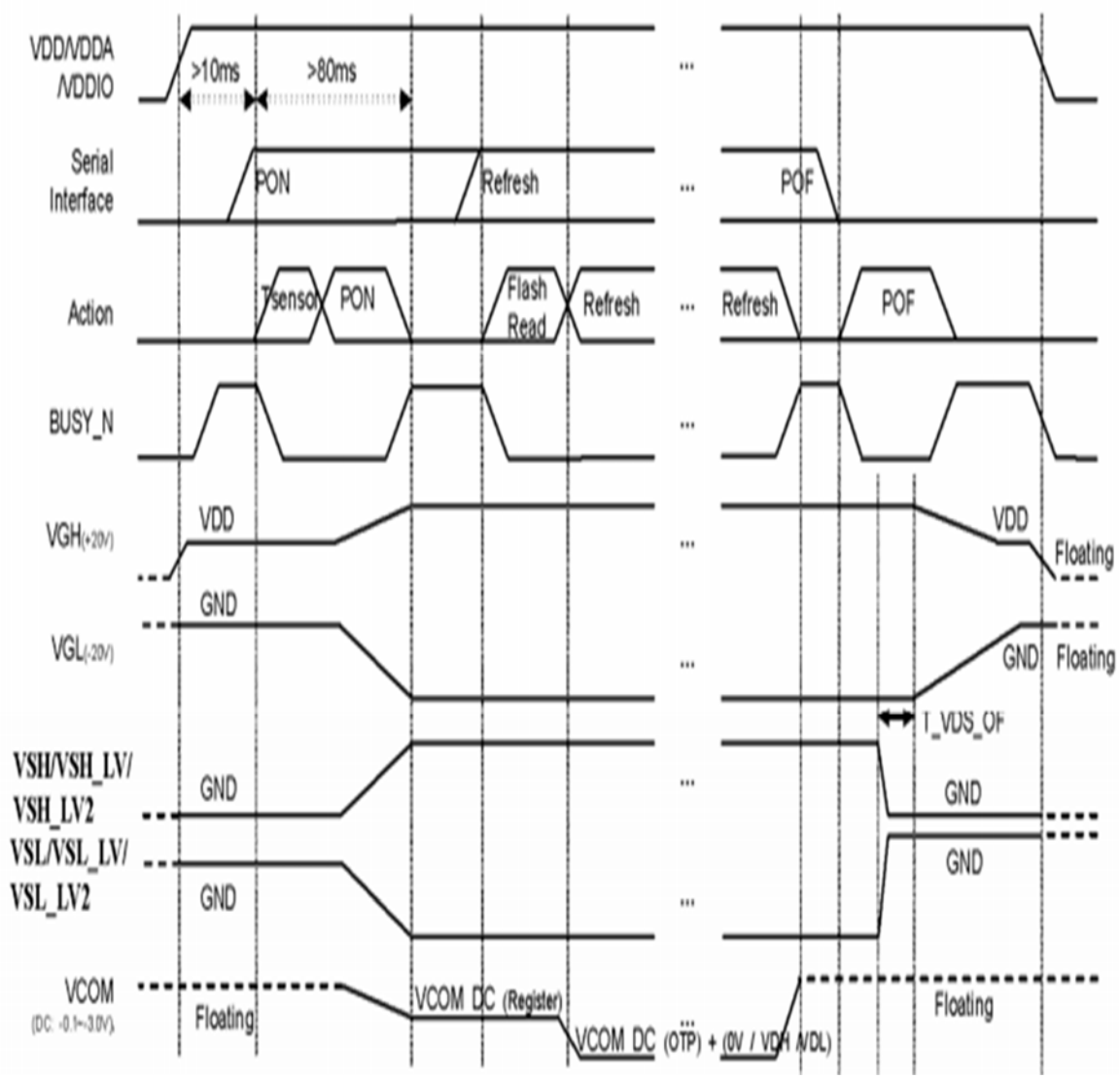

Figure : 3-wire Serial Interface – Read

| Symbol | Signal | | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| SERIAL COMMUNICATION | | | | | | | |
| tCSS | CSB | Chip select setup time | | 60 | | | ns |
| tCSH | | Chip select hold time | | 65 | | | ns |
| tSCC | | Chip deselect setup time | | 20 | | | ns |
| tCHW | | Chip deselect setup time | | 40 | | | ns |
| tSCYCW | | Serial clock cycle (Write) | | 50 | | | ns |
| tSHW | | SCL “H” pulse width (Write) | | 25 | | | ns |
| tSLW | | SCL “L” pulse width (Write) | | 25 | | | ns |

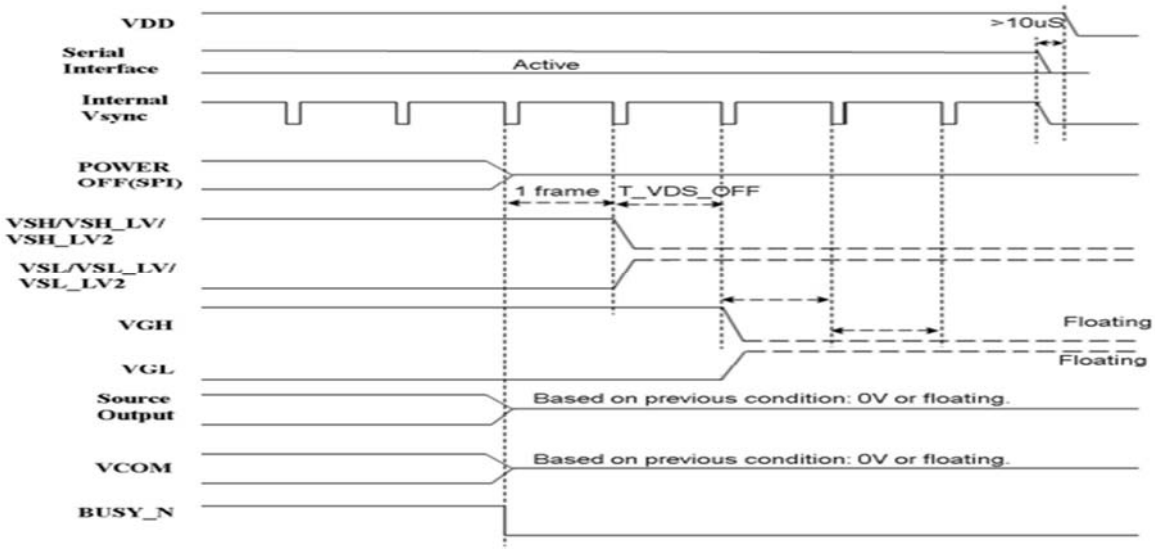
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| tSCYCR | SCL | Serial clock cycle (Read) | | 600 | | | ns |
| tSHR | | SCL “H” pulse width (Read) | | 150 | | | ns |
| tSLR | | SCL “L” pulse width (Read) | | 400 | | | ns |
| tSDS | SDA (DIN) (DOUT) | Data setup time | | 30 | | | ns |
| tSDH | | Data hold time | | 30 | | | ns |
| tACC | | Access time | | | | 200 | ns |
| tOH | | Output disable time | | 15 | | | ns |

**7-3-3) Power On/Off Characteristics**

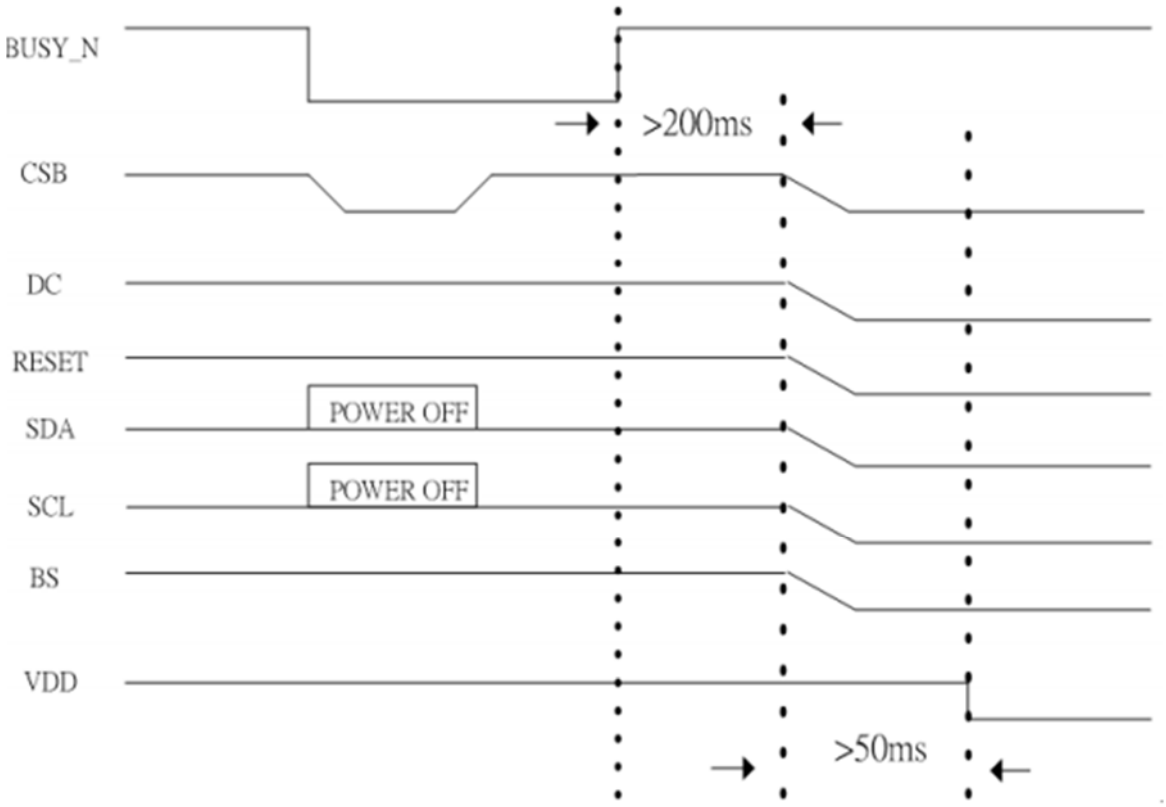
**Power ON Sequence**




**Power OFF Sequence**




**External GPIO Power On/Off Sequence**




## 8. Optical Characteristics

### 8-1 Specifications

Measurements are made with that the illumination is under an angle of 45 degrees, the detector is perpendicular unless otherwise specified.

| Symbol | Parameter | Conditions | Temperature | L* Typ. | a* Typ. | b* Typ. | △E2000 Max. | Note |
|---|---|---|---|---|---|---|---|---|
| WS | White State L*/a*/b* value | White | 25°C | 66.5 | -4 | -2 | 6 | Note 8-1 |
| DS | Dark State L*/a*/b* value | Dark | 25°C | 10 | 10 | -12 | 6 | Note 8-1 |
| RS | Red State L*/a*/b* value | Red | 25°C | 26 | 41 | 30 | 6 | Note 8-1 |
| YS | Yellow State L*/a*/b* value | Yellow | 25°C | 65 | -12 | 67.5 | 6 | Note 8-1 |
| BS | Blue State L*/a*/b* value | Blue | 25°C | 30 | 6 | -39 | 6 | Note 8-1 |
| GS | Green State L*/a*/b* value | Green | 25°C | 35 | -24 | 10 | 8 | Note 8-1 |

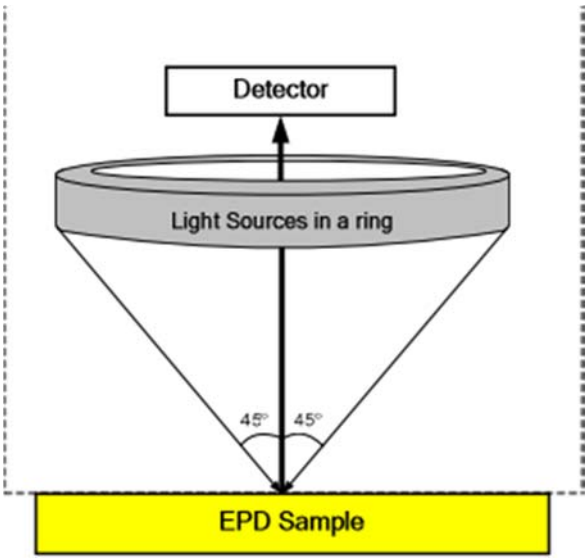
WS: White state, DS: Dark state, RS: Red state, YS: Yellow state, BS: Blue state, GS:Green state

Note 8-1 ： Luminance meter ： Eye - One Pro3 plus Spectrophotometer

### 8-2 Definition of contrast ratio

The contrast ratio (CR) is the ratio between the reflectance in a full white area (Rl) and the reflectance in a dark area (Rd) ：

CR = Rl/Rd




**8-3 Reflection Ratio**

The reflection ratio is expressed as：

R = Reflectance Factor white board x ( Lcenter / Lwhite board )

$L_{center}$ is the luminance measured at center in a white area (R=G=B=1). $L_{white\ board}$ is the luminance of a standard white board. Both are measured with equivalent illumination source. The viewing angle shall be no more than 2 degrees.

# 9.Handling,Safety, and Environment Requirements and Remark

| WARNING |
|---|
| The display may break when it is dropped or bumped on a hard surface. Handle with care. Should the display break, do not touch the electrophoretic material. In case of contact with electrophoretic material, wash with water and soap. |

| CAUTION |
|---|
| The display module should not be exposed to harmful gases, such as acid and alkali gases, which corrode electronic components. |
| Disassembling the display module can cause permanent damage and invalidate the warranty agreements. |
| IPA solvent can only be applied on active area and the back of a glass. For the rest part, it is not allowed. |

| Mounting Precautions |
|---|
| (1) It`s recommended that you consider the mounting structure so that uneven force (ex. Twisted stress) is not applied to the module. |
| (2) It`s recommended that you attach a transparent protective plate to the surface in order to protect the EPD. Transparent protective plate should have sufficient strength in order to resist external force. |
| (3) You should adopt radiation structure to satisfy the temperature specification. |
| 4) Acetic acid type and chlorine type materials for the cover case are not desirable because he former generates corrosive gas of attacking the PS at high temperature and the latter cause's circuit break by electro-chemical reaction. |
| (5) Do not touch, push or rub the exposed PS with glass, tweezers or anything harder than HB pencil lead. And please do not rub with dust clothes with chemical treatment. Do not touch the surface of PS for bare hand or greasy cloth. (Some cosmetics deteriorate the PS) |
| (6) When the surface becomes dusty, please wipe gently with absorbent cotton or other soft materials like chamois soaks with petroleum benzene. Normal-hexane is recommended for cleaning the adhesives used to attach the PS. Do not use acetone, toluene and alcohol because they cause chemical damage to the PS. |
| (7) Wipe off saliva or water drops as soon as possible. Their long time contact with PS causes deformations and color fading. |

| Limiting values |
|---|
| Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other condition these are stress ratings only |

| Application information |
|---|
| Where application information is given, it is advisory and does not form part of the specification |

## 10.Reliability Test

| | TEST | CONDITION | REMARK |
|---|---|---|---|
| 1 | High Temperature Storage | T = 60℃40% RH, 240Hrs Test in White pattern | |
| 2 | Low Temperature Storage | T = -25℃, 240Hrs Test in White pattern | |
| 3 | High Temperature Operation | T = 50℃30% RH, 240Hrs 150s interval between updates | |
| 4 | Low Temperature Operation | T = 0℃, 240Hrs<br>150s interval between updates | |
| 5 | High-Temperature, High-Humidity Operation | T = +40℃, RH = 90%, 240Hrs 150s interval between updates | |
| 6 | High Temperature, High-Humidity Storage | T = 60℃ 80% RH, 240Hrs Test in White pattern | |
| 7 | Heat Shock | -25℃(30 min) ~60℃(30 min)<br>50 cycle, 1Hr/cycle Test in White pattern | |
| 8 | Electrostatic Discharge | (Machine model) +/- 200V ; 0Ω, 200pF | |

Actual EMC level to be measured on customer application.

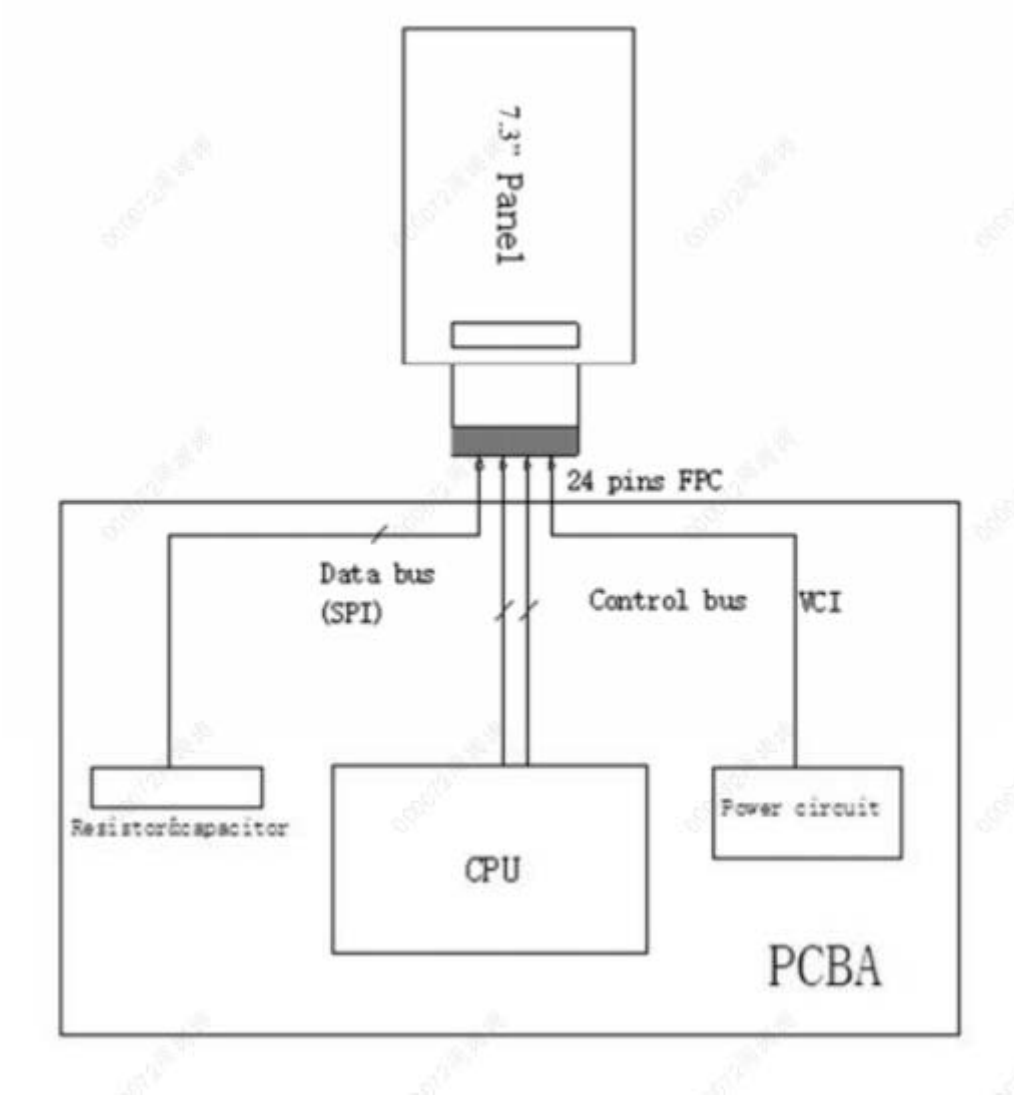
Note：

1. The protective film must be removed before temperature test.
2. For operation test, image update interval time 150s

< Criteria >

In the standard conditions, there is not display function NG issue occurred. All the cosmetic specification is judged before the reliability stress.

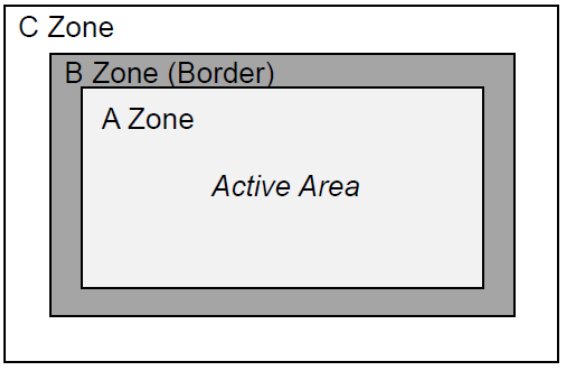
## 11. Block Diagram



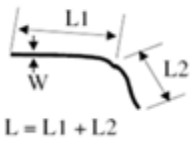
# 12. Shipment inspection specification

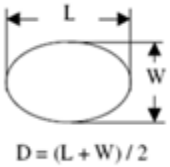
## 12.1 Zone Definition

A Zone: Active Area
B Zone: Border Area
C Zone: From B Zone edge to panel edge

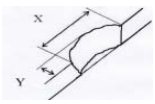
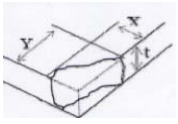
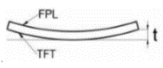



## 12.2 Line/Spot defect size



## 12.3 Point and line standard

| Shipment Inspection Standard | | | | | | |
|---|---|---|---|---|---|---|
| Equipment：Electrical test fixture, Point gauge | | | | | | |
| **Outline dimension** | 170.2 (H) × 111.20 (V) × 0.9 (D) | **Unit：** ㎜ | **Part-A** | Active area | **Part-B** | Border area |
| | | | | | | |
| **Environment** | **Temperature** | **Humidity** | **illuminance** | **Distance** | **Time** | **Angle** |
| | 19℃～25℃ | 50±5%RH | 1000~1500Lux | 300 ㎜ | 35Sec | 45° |
| | | | | | | |
| **Defect type** | **Inspection method** | **Standard** | | **Part-A** | | **Part-B** |
| Spot | Electric Display | D≤0.25 ㎜ | | Ignore | | Ignore |
| | | 0.25 ㎜＜D≤0.6 ㎜ | | N≤5 | | Ignore |
| | | D＞0.60 mm | | Not Allow | | Ignore |
| Display malfunction | Electric Display | Not Allow | | Not Allow | | Ignore |
| Display error | Electric Display | Not Allow | | Not Allow | | Ignore |
| Scratch or line defect(include dirt) | Visual/Film card | L≤2 ㎜，W≤0.1 ㎜ | | Ignore | | Ignore |
| | | 2.0mm＜L≤5mm，0.1＜W≤0.5mm, | | N≤4 | | Ignore |
| | | L＞5.0 ㎜，W＞0.5 ㎜ | | Not Allow | | Ignore |
| PS B ubble | Visual/Film card | D≤0.4mm | | Ignore | | Ignore |
| | | 0.4mm≤D≤0.6mm，DS>10mm | | N≤4 | | Ignore |
| | | D＞0.6 mm | | Not Allow | | Ignore |
| Corner /Edge chipping | Visual/Film card | It shall not affect the electrode circuit. The edge of the chipped corner shall be ≤ 8mm;<br>The length X ≤ 8mm, the width Y ≤ 1mm. There shall be no cracks, and it shall not be an acute angle. And it shall not affect the electrode circuit. Only one such defect is allowed on each side. | | | | |
| | |   | | | | |
| TFT warping | T≤3mm  | | | | | |
| Remark | 1.Cannot be defect & failure cause by appearance defect; | | | | | |
| | 2.Cannot be larger size cause by appearance defect; | | | | | |

| | L=long W=wide D=point size N=Defects NO |
|---|---|
| Mura | Refer to limit samples defined by E-INK |

## 12.4 Barcode

FF

ABBBBBBBBB

CCCDDDEEEE

What is the QR code after picture being scanned and read? It consist of 30 numbers and letters, here is explanation for it.

QR Code: ABBBBBBBBBFFCCCDDDEEEEGHIJKKLL

① A means Factory code, e.g.: H (HINK)
② BBBBBBBBB refers to product model name, which is in consistent with specification part number. E.g.: E0213A189 or E0266A120; when the total code is less than 9, it would be added suffix with **. e.g.: E027A45** or E0154A78*
③ FF means production workshop
④ CCC means date of production
⑤ DDD means production batch
⑥ EEEE means FPL lot
⑦ G means MP/Sample/Trial/Repair
⑧ HIJ:(H——TFT;I——PS;J——EC Glue)
⑨ KK means IC type
⑩ LL means serial number

## 13. Packing

Full carton: 12 pcs tray with products and 1 pcs empty tray.
Last carton: less 12pcs tray with products and 1 pcs empty tray. The packager will add the right amount of EPE to box so that the added EPE's height approximately close to the EPE height around the inside of the box.