

# 液晶模组说明书

## LCD Module Instructions

☒初定规格 Preliminary specification

☐正式规格 Official specifications

|                                                                                                                                                                                                                           |                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 项目编号<br>Project No.                                                                                                                                                                                                       | TFT-H028A16QVIST5N10                                        |
| 产品描述<br>Product Description                                                                                                                                                                                               | TFT LCD Module<br>240 x 3RGB x 320 Dots<br>2.8 Inch TFT LCD |
| 客 户 确 认 签 章:<br>Signature by customer:                                                                                                                                                                                    |                                                             |
| <div><input type="checkbox"/>小批量试产 Trial Production    <input type="checkbox"/>大批量生产 Mass Production</div> <div>请返回一份带有您的签名和评论的确认副本</div> <div>Please return one copy confirmation with signature and your comments</div> |                                                             |

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## 一、基本特征 General Feature:

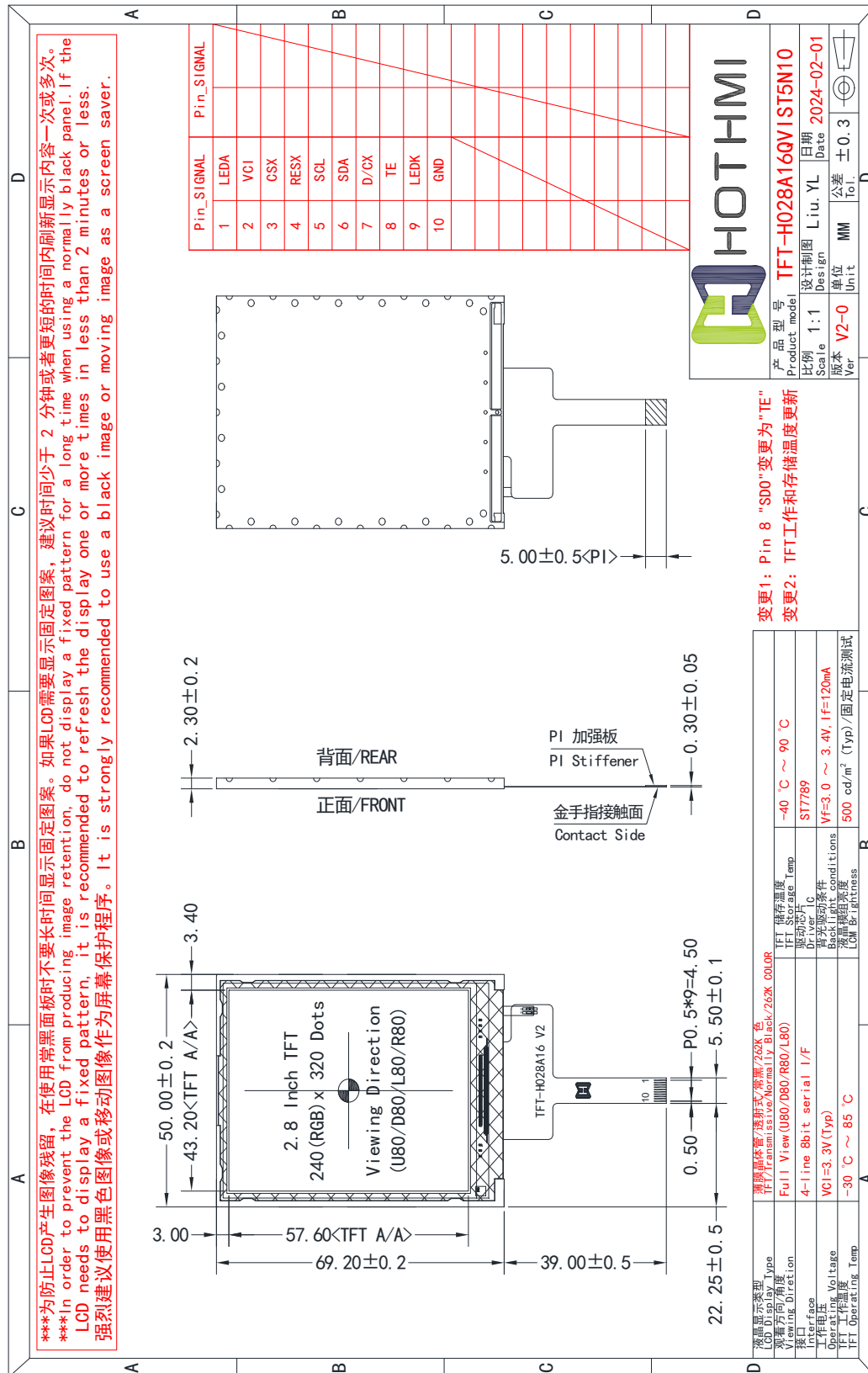
| 项目<br>Item                        | 标准值<br>Standard Value                                        |                                             |                                             | 单位<br>Unit |
|-----------------------------------|--------------------------------------------------------------|---------------------------------------------|---------------------------------------------|------------|
| 显示尺寸<br>Display Size              | 2.8                                                          |                                             |                                             | 英寸<br>Inch |
| 分辨率<br>Number of Pixels           | 240 (H) x 3 (RGB) x 320 (V)                                  |                                             |                                             | 点<br>dots  |
| 显示区域<br>Active Area               | 43.20 (H) x 57.60 (V)                                        |                                             |                                             | 毫米<br>mm   |
| 外形尺寸<br>Outline Dimension         | 50.00 (H) x 69.20 (V) x 2.30 (D)                             |                                             |                                             | 毫米<br>mm   |
| 观看方向<br>Viewing Direction         | 全 视角 (上 80/下 80/左 80/右 80)<br>FULL 0'clock (U80/D80/L80/R80) |                                             |                                             | —          |
| 端口<br>Interface                   | 支持 4 线串行接口<br>Supports 4-Line Serial interface               |                                             |                                             | —          |
| 驱动芯片<br>Driver IC                 | ST7789V                                                      |                                             |                                             | —          |
| 驱动电压<br>Driver Condition          | IOVCC=VCI=2.8V ~ 3.3V                                        |                                             |                                             | 伏<br>V     |
| 背光驱动条件<br>Backlight conditions    | 电压= 3.0 ~ 3.4V/电流= 120 mA<br>Vf=3.0 ~ 3.4V, If=120mA         |                                             |                                             | —          |
| 触摸屏<br>Touch Panel                | <input checked="" type="checkbox"/> 不带触摸屏<br>Without TP      | <input type="checkbox"/> 带电阻触摸屏<br>With RTP | <input type="checkbox"/> 带电容触摸屏<br>With CTP | —          |
| 电容触摸屏驱动芯片<br>CTP Driver IC        | — — —                                                        |                                             |                                             | —          |
| 电容触摸屏驱动电压<br>CTP Driver Condition | VDD=3.3V                                                     |                                             |                                             | 伏<br>V     |
| TFT 工作环境温度<br>TFT Operation AT    | -30 ~ +85                                                    |                                             |                                             | 摄氏度<br>℃   |
| TFT 储存环境温度<br>TFT Storage AT      | -40 ~ +90                                                    |                                             |                                             | 摄氏度<br>℃   |

### 注释 Note:

1、建议 TFT 模组不要长时间在最高环境温度或最高亮度状态下工作，否则会影响 TFT 模组的使用寿命和性能

It is recommended that TFT modules do not work at maximum ambient temperature or maximum luminance for long periods of time, which would otherwise affect the useful life and performance of TFT modules

## 二、外形尺寸 Outline Dimensions



### 三、引脚说明 Pin Description

#### 3.1 模组引脚说明 TFT Pin Description

| 引脚编号<br>Pin NO.   | 标号<br>Symbol | 详细描述<br>Description                                                                                                                                                   |
|-------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                 | LEDA         | LED阳极<br>LED anode                                                                                                                                                    |
| 2                 | VCI          | 电源<br>Power supply                                                                                                                                                    |
| 3                 | CSX          | 芯片选择引脚，低电平使能。<br>Chip selection pin.Low enable.                                                                                                                       |
| 4                 | RESX         | 重置信号。信号为低电平有效<br>Reset signal. Signal is active low                                                                                                                   |
| 5                 | SCL          | 该引脚用于串行接口的时钟。<br>This pin is used to be serial interface clock.                                                                                                       |
| 6                 | SDI          | SPI接口输入引脚。数据在SCL信号的上升沿被锁住<br>SPI interface input pin.<br>The data is latched on the rising edge of the SCL signal.                                                    |
| 7                 | D/CX         | 在4行串行接口中显示数据/命令选择引脚。<br>Display data/command selection pin in 4-line serial interface.                                                                                |
| 8                 | TE           | -Tearing效应信号用于同步MCU对帧存储器的写入。<br>-Tearing effect signal is used to synchronize MCU to frame memory writing.<br>-如果不使用，不连接这个引脚<br>-If not used, do not connect this pin |
| 9                 | LEDK         | LED阴极<br>LED cathode                                                                                                                                                  |
| 10                | GND          | 电源地<br>Power supply ground                                                                                                                                            |
| - 结束 -<br>- END - |              |                                                                                                                                                                       |

注释 Note: