

开发板说明书

Development Board Instructions

☒初定规格 Preliminary specification

☐正式规格 Official specifications

项目编号 Project No.	ESP32-C3-DEMO-SPI03_V0
产品描述 Product Description	Development Board
客 户 确 认 签 章: Signature by customer:	
☒小批量试产 Trial Production ☐大批量生产 Mass Production 请返回一份带有您的签名和评论的确认副本 Please return one copy confirmation with signature and your comments	

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一、产品介绍 Product Introduction

ESP32-C3-DEMO-SPI03-V0 是一款支持 2.4GHz Wi-Fi 和蓝牙 BLE5 的 MCU 旋钮屏开发板，板载 1.3 英寸 LCD 显示屏、WS2812 三色 RGB 灯和 EC35 旋转编码器，可流畅运行 LVGL 等 GUI 界面程序。结合多种外设，可快速开发基于 ESP32-C3 的低功耗智能家电产品。

- 搭载 RISC-V 32 位单核处理器的低功耗 Soc，主频达到 160MHz
- 芯片内置 400KB SRAM 和 384KB ROM，叠封 4MB Nor Flash
- 板载 1.3 英寸 LCD 显示屏，分辨率 240x240，SPI 显示接口，IPS 全视角，背光亮度达 500cd/m²
- 板载 EC35 中空旋转编码器，15 脉冲 30 位，作为外部控制设备

The ESP32-C3-DEMO-SPI03-V0 is an MCU rotary knob screen development board that supports 2.4GHz Wi-Fi and Bluetooth BLE5. It is equipped with a 1.3-inch LCD display, WS2812 tri-color RGB lights, and an EC35 rotary encoder. It can run GUI interface programs such as LVGL smoothly. Combined with various peripherals, it can quickly develop low-power smart home appliances based on ESP32-C3.

- A low-power Soc equipped with a RISC-V 32-bit single-core processor, with a main frequency reaching 160MHz
- The chip is equipped with 400KB SRAM and 384KB ROM, and encapsulates 4MB Nor Flash
- It is equipped with a 1.3-inch on-board LCD display with a resolution of 240x240, SPI display interface, IPS full viewing Angle, and backlight brightness up to 500cd/m²
- The on-board EC35 hollow rotary encoder, with 15 pulses and 30 bits, serves as an external control device

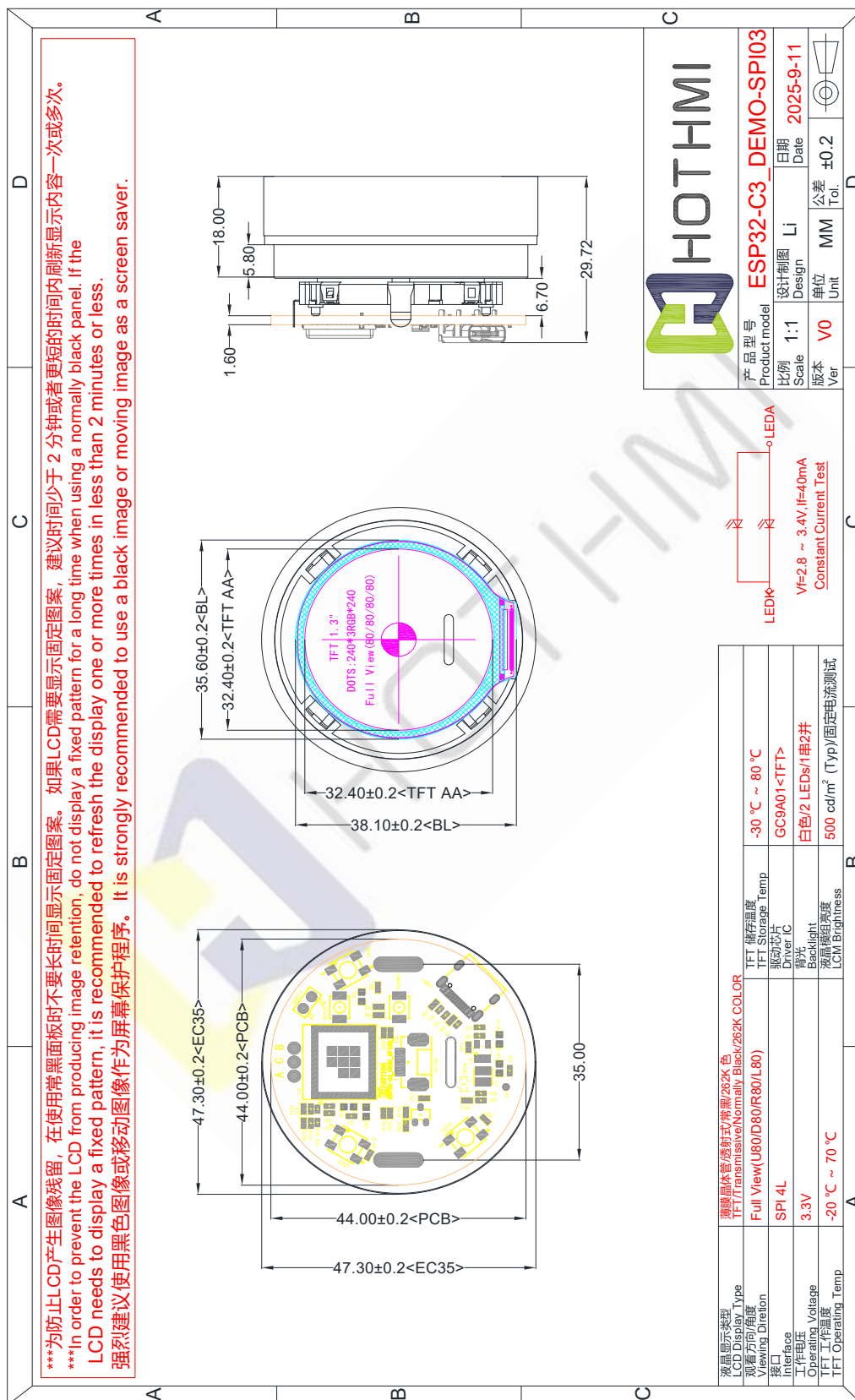


二、主要参数 Main Parameters:

项目 Item	标准值 Standard Value			单位 Unit
主控芯片 Main Control Chip	ESP32-C3FH4			-
编程平台 Programming Platform	ESP-IDF			-
固件下载方式 Firmware Download Method	USB Serial			-
存储器类型/大小 Flash type/size	Nor-Flash/4Mbit			-
外形尺寸 Outside Dimensions	47.3 x 47.3 x 29.72			毫米 mm
供电方式 Power Supply	USB-5V			伏特 V
支持显示屏接口 Support Display Interface	SPI 3/4Line			-
工作温度 Operating Temperature	-20.0 ~ 85.0			摄氏度 ℃
最小工作电流 Minimum operating current	50			毫安 mA
支持存储设备 Support Storage Device	☒ 不支持 Not Supported	☐ SD 卡 SD Card	☐ U 盘 U Disk	-

说明 Description:

三、外形尺寸 Outline Dimensions



文档修订记录 Document revision history :

版本 Version	日期 DATE	修改说明 Modify description	编著 Editorial
0-0	2025-09-17	初次编制 First compilation.	Li

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