

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.	HTM-H215-DEMO-A01_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

HTM-H215-DEMO-A01 是一款基于 Artinchip D215 的高性能工业开发板，集成了国产自主高性能 MCU，支持丰富的人机交互接口，高度集成 USB2.0，板上包含 MIPI-DSI、LVDS、RGB24Bit 等显示屏接口，具有强大的 2D 图形加速引擎，此外支持 SPI、I2C、PWM、RMT、CAN、UART、RS485/232 等常用外设及通讯协议，可以满足各类交互设计场景和多媒体互动体验。板上芯片支持数字签名安全启动方式，确保数据和操作的安全性。HTM-H215-DEMO-A01 专为高性能和高安全应用设计，满足嵌入式系统在人机交互、边缘计算、IO 扩展等方面的需求，可广泛应用于便携扩展屏、电脑机箱副屏、键盘屏等产品。

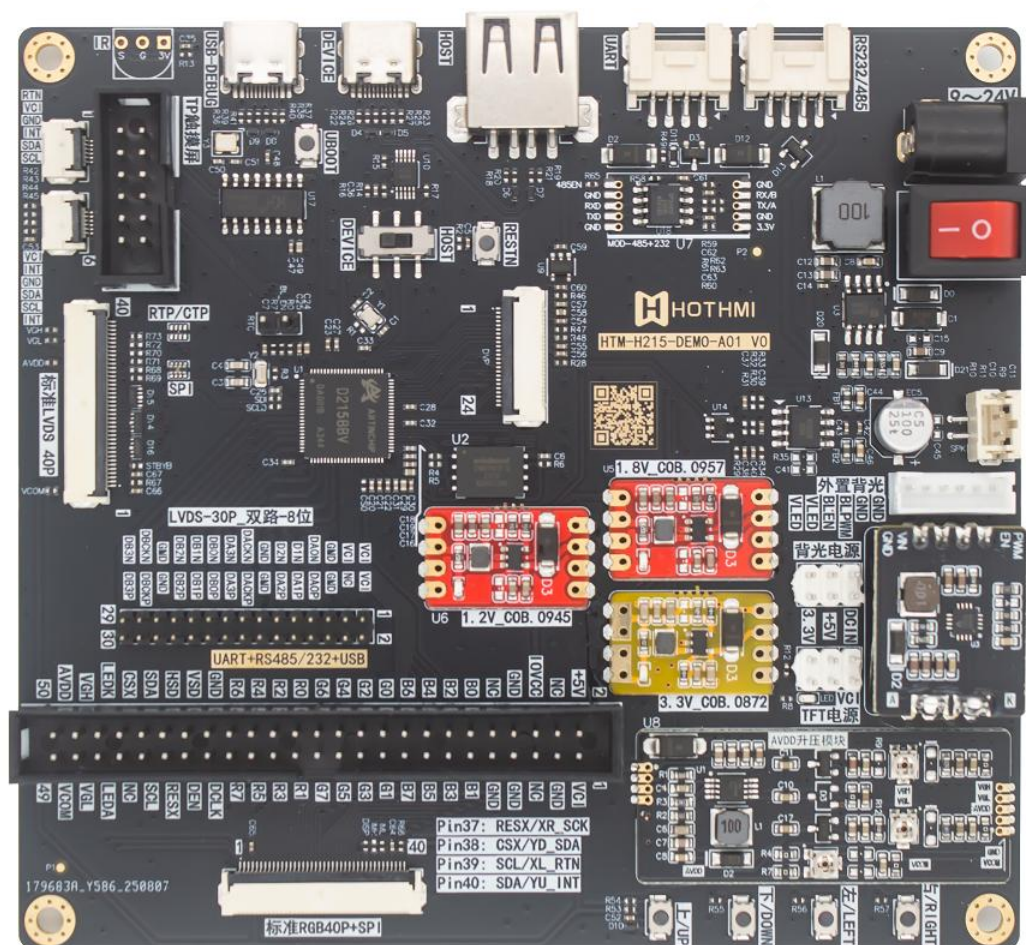
- 搭载国产 64 位单核 RISC-V 高性能 MCU，主频可达 600MHz
- 可用存储 32KB BROM、96KB SRAM、512MB DDR2 和 1Gbit Nand Flash
- 强大的 2D 图像处理能力，全高清 JPEG/H.264 解码引擎，配备丰富的显示接口
- 板上集成 RGB、LVDS、MIPI 等显示屏接口和电容触摸功能，最高性能 1080P@60fps
- 板上集成背光驱动模块，最大输出 25V/200mA，可驱动高亮显示屏背光
- 板上引出 SPI、I2C、USB、UART、RS485/232 等外设接口，实现多种通讯协议
- 支持 USB MSC，可通过 U 盘进行 FLASH 固件升级
- 支持 USB Display，可作为电脑主副屏，兼容 Windows、Linux、Mac 等平台

The HTM-H215-DEMO-A01 is a high-performance industrial development board based on Artinchip D215, integrating a domestically developed high-performance MCU. It supports a variety of human-machine interaction interfaces and is highly integrated with USB2.0. The board includes MIPI-DSI, LVDS, RGB24Bit and other display interfaces, and features a powerful 2D graphics acceleration engine. Additionally, it supports common peripherals and communication protocols such as SPI, I2C, PWM, RMT, CAN, UART, RS485/232, etc., which can meet the requirements of various interactive design scenarios and multimedia interactive experiences. The chip on the board supports secure boot with digital signature, ensuring the security of data and operations. The HTM-H215-DEMO-A01 is specifically designed for high-performance and high-security applications, meeting the needs of embedded systems in human-machine interaction, edge computing, IO expansion, and other aspects. It can be widely applied in portable expansion screens, secondary screens for computer cases, keyboard screens, and other products.

- Equipped with a domestic 64-bit single-core RISC-V high-performance MCU, with a main frequency up to 600MHz
- Available storage includes 32KB BROM, 96KB SRAM, 512MB DDR2 and 1Gbit Nand Flash
- Strong 2D image processing capability, full HD JPEG/H.264 decoding engine, equipped with rich display interfaces
- Integrated RGB, LVDS, MIPI and other display interfaces and capacitive touch function on board, with the highest performance of 1080P@60fps
- Integrated backlight driver module on board, with a maximum output of 25V/200mA, capable

of driving high-brightness display backlights

- SPI, I2C, USB, UART, RS485/232 and other peripheral interfaces are led out on board to achieve multiple communication protocols
- Supports USB MSC, allowing for FLASH firmware upgrade via USB flash drive
- Supports USB Display, can be used as a main or secondary screen for a computer, compatible with Windows, Linux, Mac and other platforms

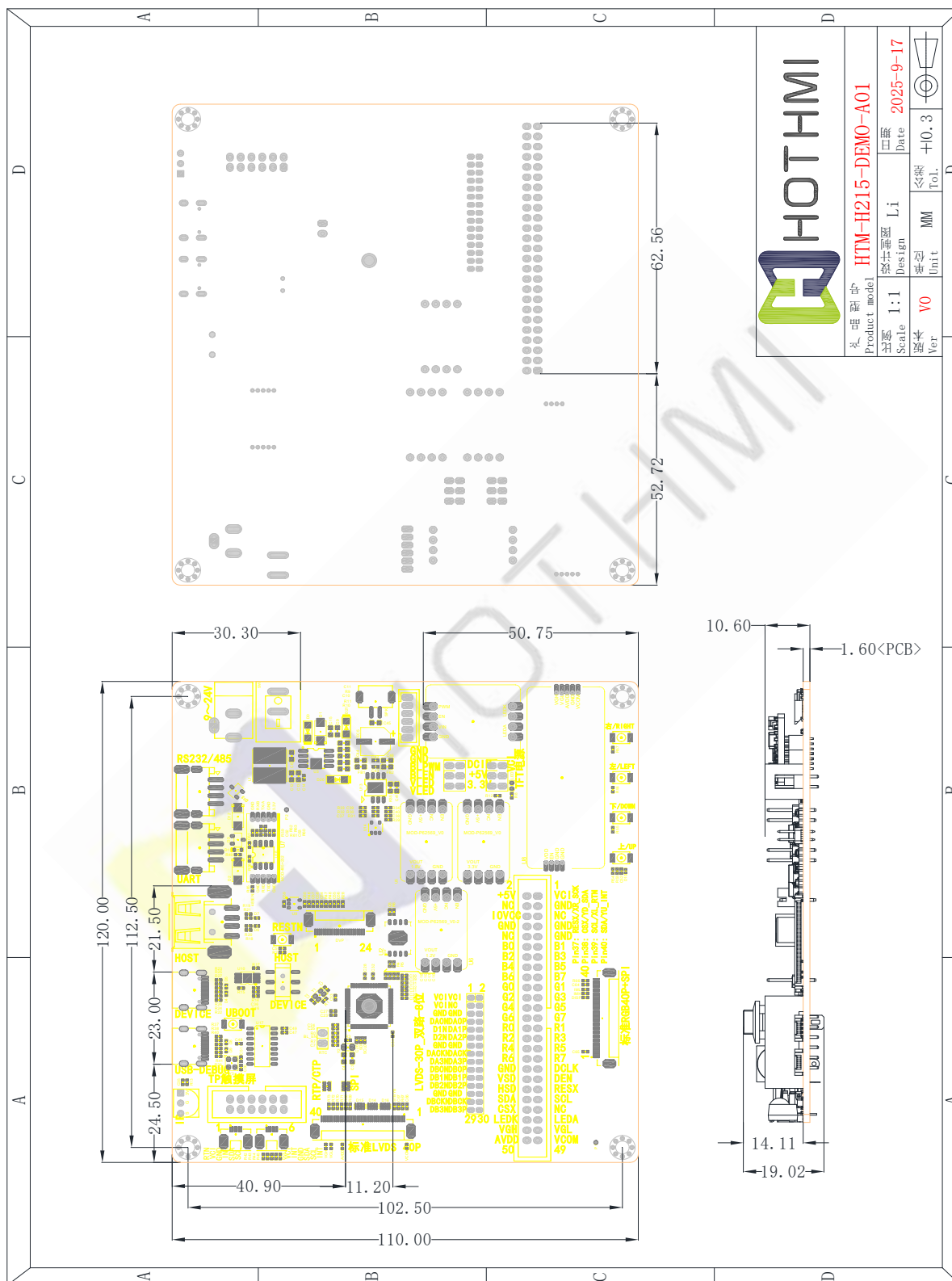


二、主要参数 Main Parameters:

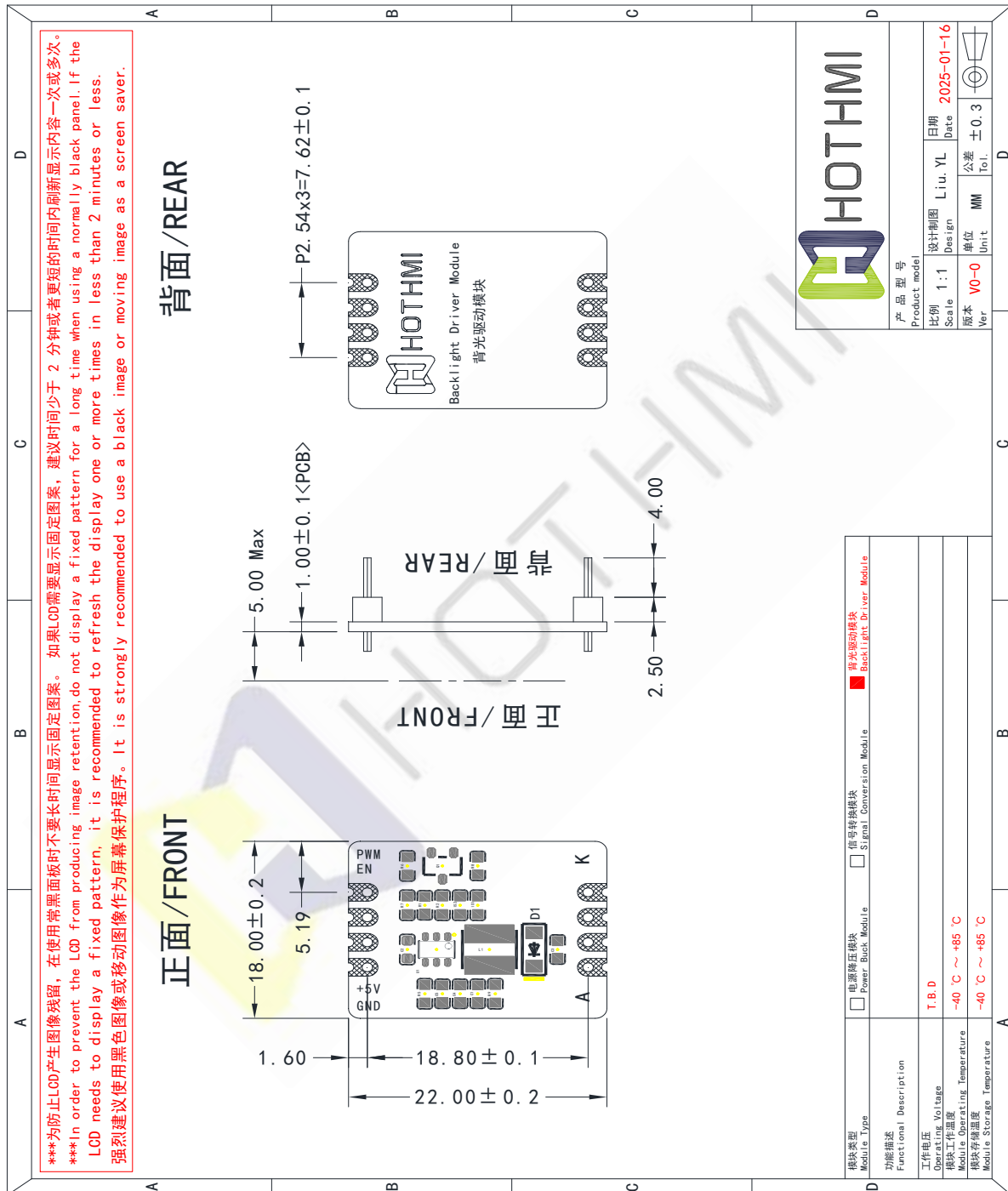
项目 Item	标准值 Standard Value			单位 Unit
主控芯片 Main Control Chip	Artinchip D215			-
编程平台 Programming Platform	Luban (Linux) Luban-lite (Windows)			-
固件下载方式 Firmware Download Method	USB Flash			-
存储器类型/大小 Flash type/size	Nand-Flash/1Gbit			-
外形尺寸 Outside Dimensions	120.0 x 110.0 x 19.02			毫米 mm
供电方式 Power Supply	USB-5 DC-9~24			伏特 V
支持显示屏接口 Support Display Interface	RGB 24Bit Interface LVDS Interface MIPI Display Serial Interface (4 LANE)			-
工作温度 Operating Temperature	-20.0 ~ 85.0			摄氏度 ℃
最小工作电流 Minimum operating current	100			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:

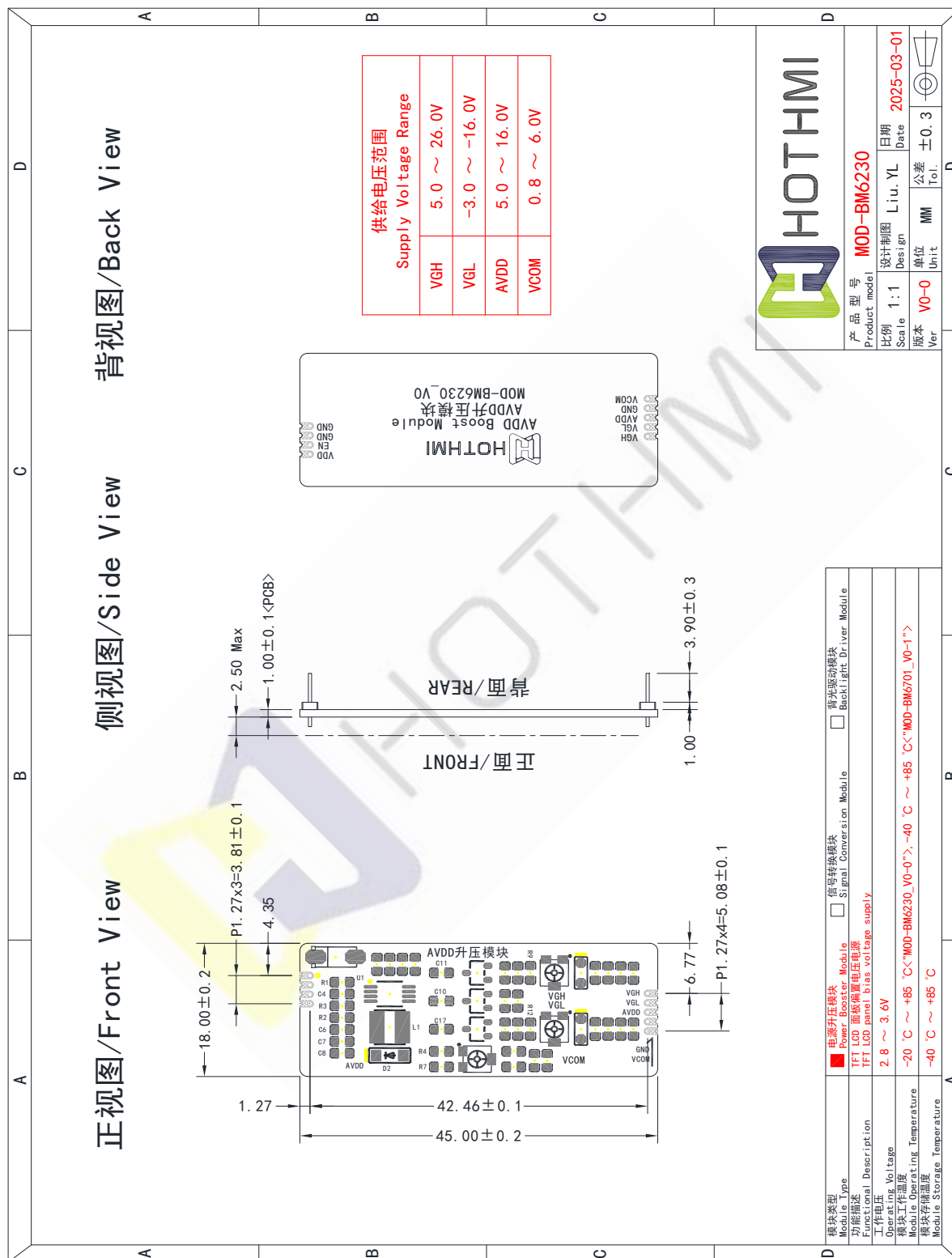
三、外形尺寸 Outline Dimensions



四、外部模块 Extern Module



Note 1: All of our backlight modules have the same length and width dimensions and the same pin definition. Modules used are subject to physical.



AVDD 升压模块尺寸

AVDD Boost Module Dimensions

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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

— — 结束 — —
— — END — —