

产 品 规 格 书

PRODUCT SPECIFICATION



产品系列:

Series

Q - 软模组系列

Q - Flexible Module Series

产品名称:

Description

Q2.5(32s)户内全彩模组

Q2.5(32s) Indoor Full Color Module

产品型号:

Model

Q2.5-I(32s)

文件编号:

Spec NO.

HJ-03-RD-G-033

版本编号:

Version

A0

发行日期:

Date

2024.11.20

生产厂商:

Manufacturer

山西高科华杰光电科技股份有限公司

Shanxi Hi-Tech Huajie Optoelectronic Technology Co., Ltd.

文件修订履历表 Document revision resume

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产品介绍 Description

本产品主要用于户内 LED 显示，外形尺寸 320*160 (mm)，像素间距 2.5mm，采用 SMD1515 灯珠、阻燃 V-0 级柔性 PCB、硅胶套件、HUB75 接口。

This product is primarily used for indoor LED display, with external dimensions of 320*160 (mm), pixel pitch of 2.5mm, featuring SMD1515 LED lamp beads, flame-retardant V-0 grade flexible PCB, silicone housing, and HUB75 interface.

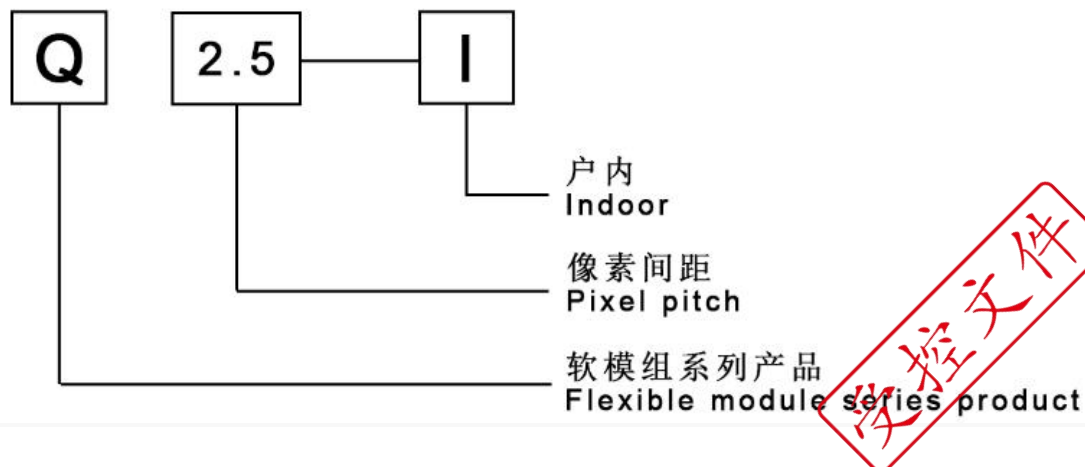
产品质量稳定可靠，具备高清晰度、高对比度、超强弯折、超宽视角等性能优势，柔性设计，造型百变，适用于各种曲面或不规则形状的室内安装场景，完美贴合波浪形、柱形等多种创意形态屏体。

The product offers stable and reliable quality, with performance advantages such as high clarity, high contrast, superior flexibility, and ultra-wide viewing angle. Its flexible design allows for versatile shaping, making it suitable for various curved or irregular indoor installation scenarios, perfectly fitting wave-shaped, columnar, and other creative screen forms.

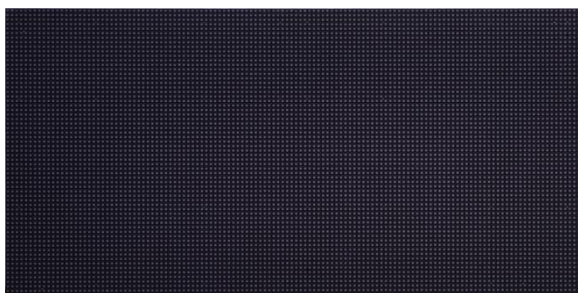
注：请不要在高温、高湿、高盐碱环境下使用本产品。

Note: Please do not use this product in high temperature, high humidity, high salinity or alkali environment.

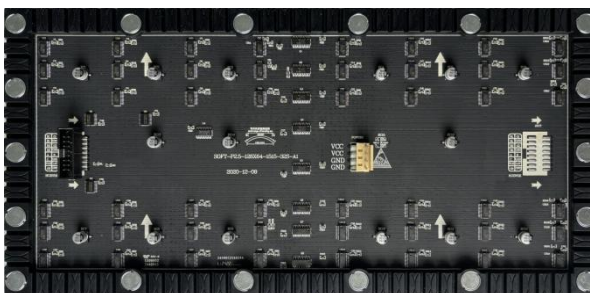
产品型号 Model



产品外观 Appearance



正面(Front)



背面(Back)

接口定义 Interface definition

R1	1	2	G1
B1	3	4	GND
R2	5	6	G2
B2	7	8	E
A	9	10	B
C	11	12	D
CLK	13	14	LAT
OE	15	16	GND

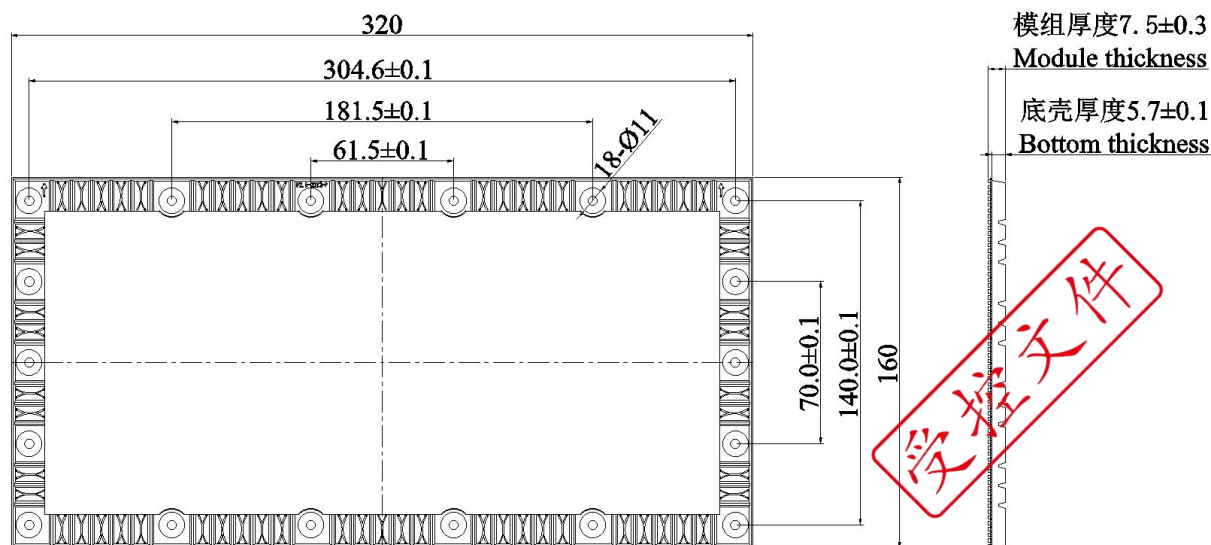
引脚 I/O	信号 Signal	功能 Function
1、2、3	R1、G1、B1	第一组红色、绿色、蓝色数据 Red, Green, Blue data of group 1
4、16	GND	信号地 Signal Ground
5、6、7	R2、G2、B2	第二组红色、绿色、蓝色数据 Red, Green, Blue data of group 2
8、9、10、11、12	E、A、B、C、D	行控制 Line Control
13	CLK	时钟信号 Clock Signal
14	LAT	锁存信号 Latch Signal
15	OE	使能信号 Enable Signal

技术参数 Technical parameters

类别 Category	项目 Item	参数及指标 Parameters and standards
规格尺寸 Specifications and size	产品尺寸 Outline dimension	L320mm×W160mm×D7.5mm
	产品重量 Weight	240±10g
	像素间距 Pixel pitch	2.5mm
	分辨率 Resolution	模组 Module 128×64 整屏 Screen 160000pixels/m ²
	像素组成 Pixel composition	SMD1515 RGB 全彩灯珠 SMD1515 RGB full-color LED lamp
	信号接口 Signal interface	HUB75×1pcs
	电源接口 Power interface	VH4P×1pcs
光学参数 Optical parameters	白平衡亮度 Luminance of white balance	≥500cd/m ²
	对比度 Contrast ratio	5000:1
	色温 Color temperature	3000~21000K
	可视角度 View angle	H≥160°, V≥140°
	亮度均匀性 Luminance uniformity	≥97%
	色度均匀性 Color uniformity	≤ ±0.003 Cx, Cy
电气参数 Electrical parameters	工作电压 Supply voltage	高刷 High refresh: 4.5~5V 普刷 Middle refresh: 5V
	最大电流 Maximum current	4.5A
	平均功率 Average power	模组 Module 7.5W/pcs@5V 整屏 Screen 162W/m ²
	最大功率 Maximum power	模组 Module 22.5W/pcs@5V 整屏 Screen 488W/m ²
	供电方式 Power supply method	AC100-240V, 50/60Hz

类别 Category	项目 Item	参数及指标 Parameters and standards
	对地漏电流 Earth leakage current	≤3.5mA/m ²
处理性能 Processing performance	刷新率 Refresh ratio	高刷 High refresh: ≥3840Hz 普刷 Middle refresh: ≥1920Hz
	换帧频率 Refresh frame frequency	50~60Hz
	扫描方式 Scanning mode	1/32 S
	灰度等级 Gray scale	14bit
环境要求 Environmental requirements	存储环境温度 Storage temperature	-20℃~+60℃
	存储环境湿度 Storage humidity	10%~60%RH 无结露 No knot dew
	工作环境温度 Operating temperature	-20℃~+40℃
	工作环境湿度 Operating humidity	10%~60%RH 无结露 No knot dew
其他性能及 使用方法 Other properties and usage	防护等级 IP Grade	N/A
	PCB 阻燃等级 PCB Flame-rating	UL94 V-0
	平均失效间隔工作时间 Mean time between failure	MTBF(m ₁)≥5000h
	整屏像素失控率 Full screen pixel out of control rate	P _Z ≤1/10000
	区域像素失控率 Area Pixel Defect Rate	P _Q ≤3/10000
	维护方式 Maintenance mode	前维护 Front maintenance
	带载数量 Load quantity	MAX7pcs@5V 40A MAX14pcs@5V 80A
参考标准 Reference standard	SJT 11141-2017、SJT 11281-2017、GB/T4943.1-2022、GB17625.1-2022	

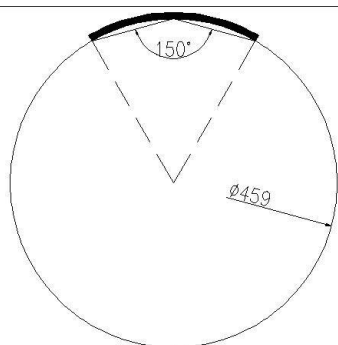
产品尺寸孔位图 Outline dimension (mm)



产品使用注意事项 Cautions

软模组折弯角范围为 150° ~ 180° ，禁止暴力反复弯折或在镀锌方通管上暴力拉扯。产品存储、安装、使用、维护等过程须参照《产品使用说明书》。

The flexible module has a bending angle range of 150° to 180° . Violent and repeated bending of the module, as well as forcefully pulling it on galvanized square steel tubes, is strictly prohibited. The processes of product storage, installation, usage, and maintenance must refer to the "Product Instruction Manual".



折弯角示意图

Schematic diagram of bending angle

FILE#: 711743242506

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