

产品规格书

Specification

产品名称 (Product) USB 摄像头模组 (USB Camera Module)摄像头 (Camera Module): JD2MOV10HF版本号 (Version): VER:1.00镜头 (Lens): 3.6mm (650nm)

客户名称 (Customer): _____

客户型号 (Cust.P/N): _____

日期 (Date): _____

客户 CUSTOMER			承制方 MANUFACTURER		
品质	工程	审批	审核	批准	销售
Quality	Engineer	Approved	Checked	Approved	Sales

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版本更改 Version

日期/Date	版本/Ver.	修改版本/Modification
2017-12-6	VER:1.00	第一版 (The First Version)

1. 概况 Profile:

JD2MOV10HF CMOS 彩色摄像模组，采用 1/2.7" CMOS 影像传感器。适用于需要摄取视频信号的各种电子设备中，制成品摄像模块具有体积小，帧率高，色彩还原度准确、图像清晰、低功耗电量、可靠性高之特点。

JD2MOV10HF CMOS color camera module, using 1/2.7" CMOS image sensor. It is suitable for all kinds of electronic equipments which need to take video signals. The product camera module has the characteristics of small volume, high frame rate, accurate color reduction, clear image, low power consumption and high reliability.

2. 可选镜头 Lens

默认 3.6mm 镜头，可选其他客户指定的镜头。

Default 3.6mm lens, option other lens which be specified.

3. 产品特性 Features

1. 高帧率：MJPG 格式下 720P 60FPS/1080P 30FPS

High frame rate: 720P 60FPS/1080P 30FPS in MJPG format

2. USB1.1/2.0 接口，免装驱动

USB1.1/2.0 interface, free drive

3. 良好的图像效果

Good image effect

4. 应用范围 Application

- 办公室电子设备 Office electronic device
- 仪器、仪表和测量用具 Equipment & Instrument and measuring tools
- 机器设备 Machine equipment
- 监视设备（车用监视器、便携视频采集、远程监视）Supervising equipment (Car Monitor & Portable video capture and remote monitoring)
- 家居用品（可视门铃、可视电话）Home supplies (Video door phone & video phone)

5.电气规格 Specifications

NO	项目/Item	参数说明/Specification	备注/Remark
1	图像传感器/Image sensor	1/2.7" CMOS	
2	有效像素/ Effective image	1920(H) ×1080(v)	
3	输出图像格式/ Image Output Format	MIPEG/YUY2(YUYV)	
4	支持的分辨率及帧率/ Supported resolution and frame rate	1920X1080 MJPEG@ 30fps YUY2@5fps/ 1280X720MJPEG@60fps YUY2@10fps 800X600 MJPEG@60fps YUY2@20fps/ 640X480 MJPEG@ 60fps YUY2@ 30fps 320X240 MJPEG@60fps YUY2@30fps	
5	像素大小/Pixel size	3um*3um	
6	信噪比/S/N radio	39dB	
7	动态范围/ Dynamic Range	69dB	
8	灵敏度/Sensitivity	3300mV/Lux-sec	
9	最低照度/ Minimum illumination	0.01lux	
10	快门类型/ shutter type	Electronic Rolling Shutter / Frame Exposure	
11	接口类型/ Interface type	USB2.0 High Speed	
12	支持免驱协议/ Support free drive	USB Video Class(UVC)	
13	自动曝光控制/ Automatic exposure	支持/ Support	
14	自动白平衡/ Automatic white	支持/ Support	
15	自动增益控制/automatic gain control	支持/ Support	
16	可调节参数/ Adjustable parameter	亮度 对比度 色饱和度 色调 清晰度 伽马 白平衡 逆光对比 曝光度 Brightness Contrast ratio Color saturation Tone Definition Gamma White balance Negative contrast Exposure degree	
17	供电方式/ Power supply mode	USB BUS POWER 5P 1.0MM 插座	
18	工作电压/ Power Voltage	DC5V	
19	工作电流/ Current consumption	160mA~180mA	
20	工作温度/ Working temperature	-20℃~70℃	
21	存储温度/ Storage temperature	-20℃~75℃	

NO	项目/Item	参数说明/Specification		备注/Remark
22	产品尺寸/Dimension	54mm (L) × 38 mm (W)、兼容/Compatibility 38mm × 38mm、32mm × 32mm		
23	镜头参数/Lens Parameter	焦距 Focus	3.6mm	
		对角线视角 Diagonal view angle	70° ± 3°	
		水平视角 Horizontal view angle	60° ± 3°	
		垂直视角 Vertical view angle	35° ± 3°	
		对焦距离 Focus Distance	40CM (近焦 Near) 1.5M (远焦 Far)	
		相对畸变 Distortion	<-6%	
		光谱特性 Spectrum	650nm 不感红外型 Non-inductive infrared type	

6. 可靠性测试 Reliability Testing

NO	试验项目 Testing Item	试验条件 Testing Conditions	判定标准 Judgment Standard
1	高温功能试验 High Temp. Test	+5V 通电, 高温 70°C; 8H 通电 +5V, high temp. 70°C; 8H aging test	在 8H 测试中工作正常 Proper Functioning in 8H
2	低温功能试验 Low Temp. Test	+5V 通电, 低温 -20°C; 8H 通电 +5V, low temp. -20°C; 8H aging test	在 8H 测试中工作正常 Proper Functioning in 8H
3	温湿度测试 Temp. & Humidity test	温度 60°C; 湿度 93%; 32H 通电 Temp.: 60°C; Humidity 93%; 32H aging	在 32H 测试中工作正常 Proper Functioning in 32H
4	高温贮存试验 High Temp. storage test	温度 75°C; 8H Temp.: 75°C; 8H	恢复常温后产品正常 Proper Functioning after test
5	低温贮存试验 Low Temp. storage test	温度 -20°C; 8H Temp.: -20°C; 8H	恢复常温后产品正常 Proper Functioning after test
6	寿命试验 Aging Test	5V 通电; 连续开关机; 48H 5V DC; Continuous on/off; 48H	在 48H 测试冲击中工作正常 Proper Functioning after 48H
7	静电放电试验 ESD test	接触放电 Contact discharge: 6.0KV 空气放电 Air discharge: 8.0KV 水平/垂直接触放电: 8.0KV Horizontal/Vertical discharge: 8.0KV	产品功能和外观无问题 Function and appearance are all ok

NO	试验项目 Testing Item	试验条件 Testing Conditions	判定标准 Judgment Standard
8	振动试验 Vibration test	1.振动标准: (1).振动方向: Y 方向 (2).振动幅度: 2mm (3).振动频率: 10HZ to 50HZ (4).振动表面: 紧靠一角的三个面 (5).振动时间: 30 分钟/每个面 1. Vibration standard: (1).Direction: Y direction (2).Range:2mm (3).Frequency:10HZ to 50HZ (4).Surface:1surface fixed when testing another 3 surface (5). Time: 30mins./every surface	振动后,摄像机结构及功能应正常,所有配套附件及吸塑不出现异常现象 The camera structure &function working good after vibration, all accessories& blister have no change.
9	跌落试验 Drop test	跌落高度:30~150cm Distance height:30~150cm	跌落后,摄像机结构及功能应正常,所有配套附件及吸塑不出现异常现象 The camera structure and function is normal after dropped, all of accessories& blister are well.

7. 结构图 Structure Diagram

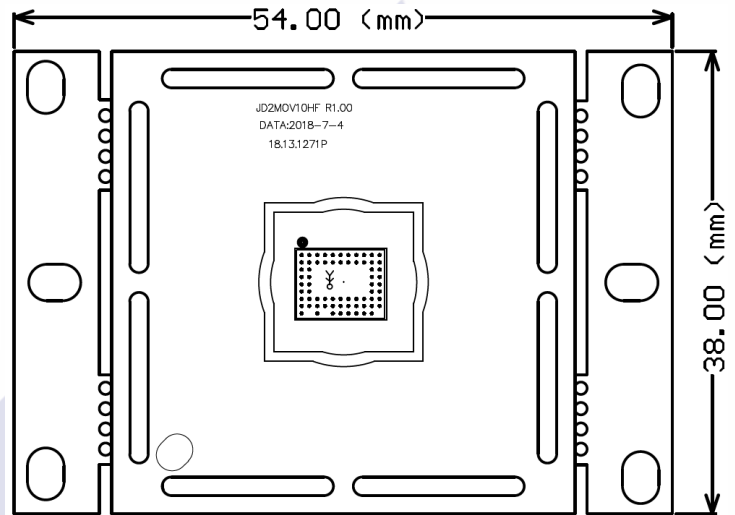
以下标注尺寸单位为: mm, 公差为±0.2mm(已标注公差除外)

Following size units are: mm, tolerance ±0.2mm(exclude marked)

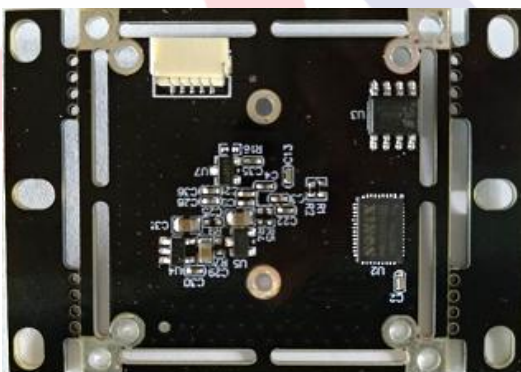
正面实物图(Front):



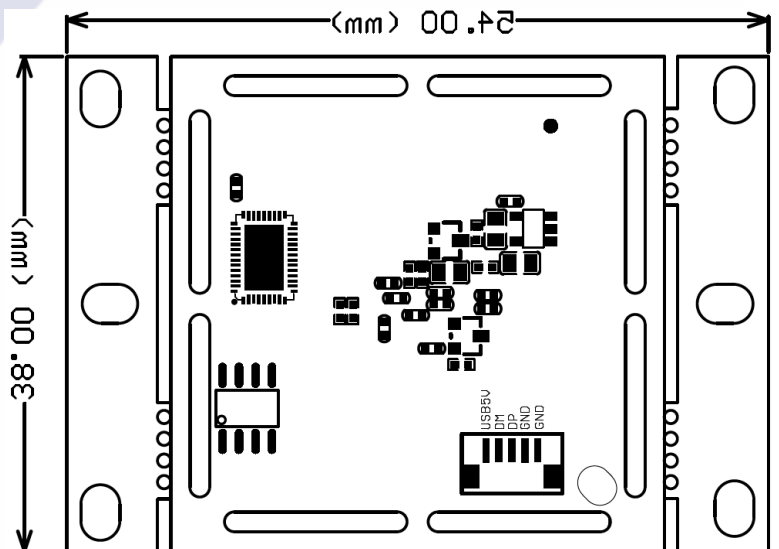
俯视图(Planform):



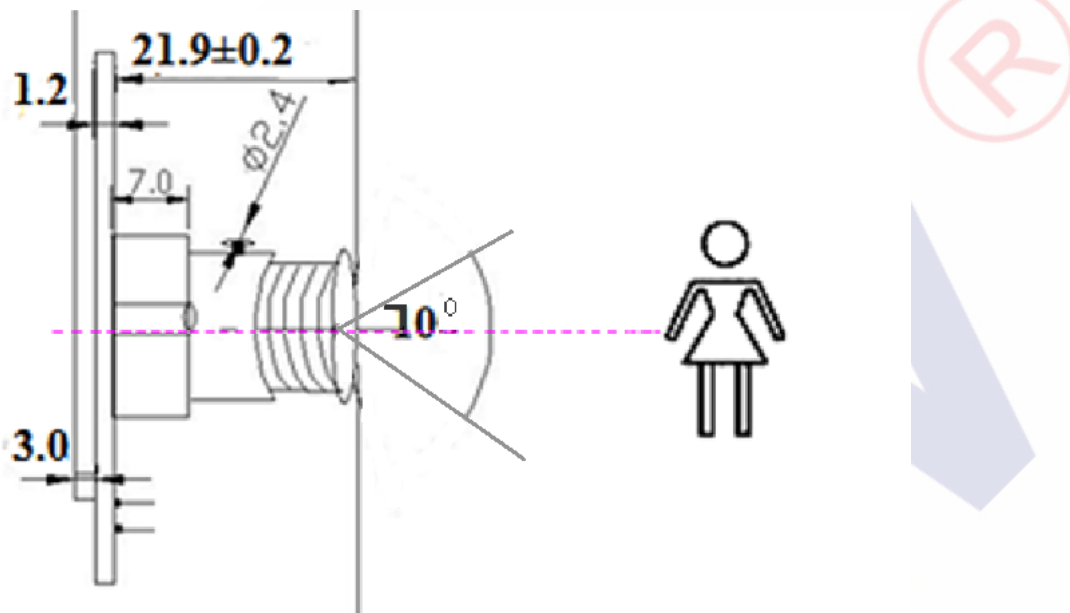
背面实物图(Back):



后视图(Rear view):



侧视图/ Side view



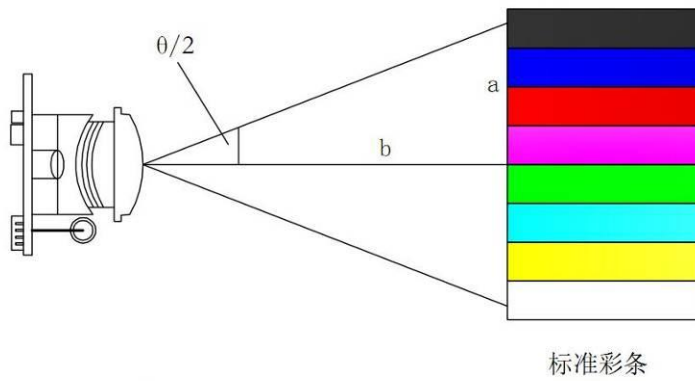
接口定义 Connector Definition:

序号/ NO.	接口定 /Interface Definitions	I/O/P	定义说明/ Description	备注/ Remarks
1	USBGND	I	地/GND	
2	USBGND	O	地/GND	
3	USBD +	O	USB 数据线+/USB data line +	
4	USBD-	I	USB 数据线-/USB data line -	
5	USB+5V	I	+5V 电源/+5V power supply	

8. 视场角 View Angle

标注尺寸单位为：mm，公差为±0.2mm

Size units are: mm, tolerance±0.2mm



$$\text{tg}(\theta/2) = a/b \Rightarrow \theta = 2\text{arctg}(a/b)$$

测量全景时镜头到彩条板距离
离b，可以约算出视角

注：测量全景时镜头到彩条板距离 b，可以约算出视角

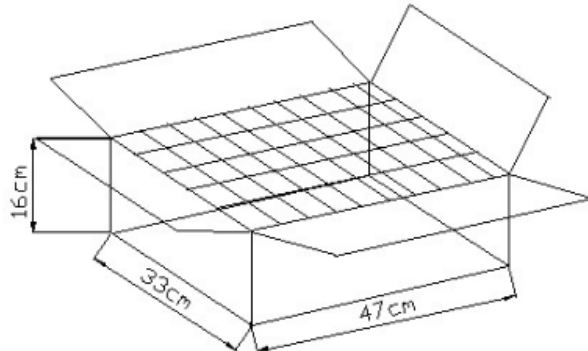
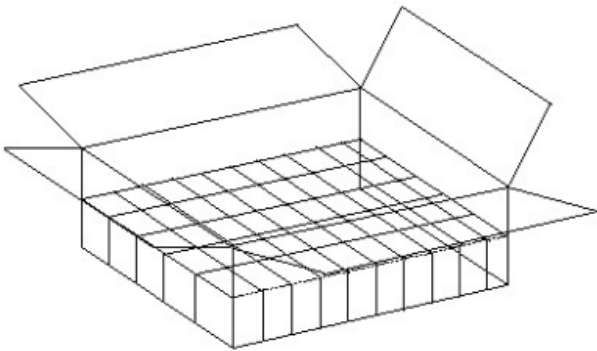
Note: The view angle could be calculated though measure b distance between lens to testing board.

9. 包装 Packing



步骤 1：将摄像模块放入吸塑盒中，用封口机封好

Step1: Put the camera module into the electrostatic bag and seal it with the sealing machine.

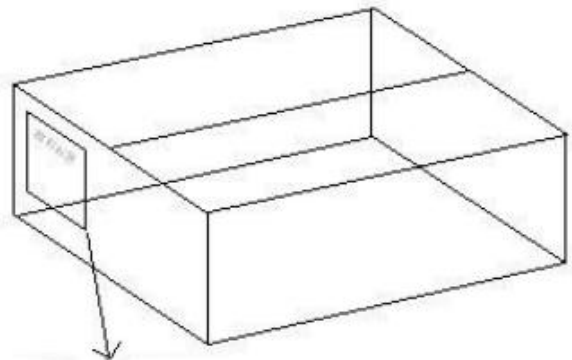
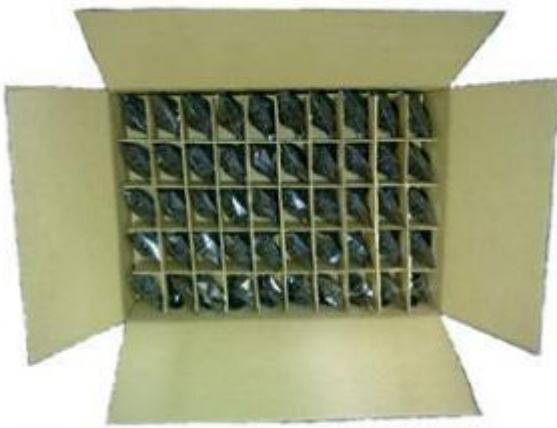


步骤 2：将用静电袋装好的摄像头模块逐个放入纸箱的第一层中。

Step2: The electrostatic bag camera module is put into the first layer of the carton one by one.

步骤 3：纸箱的第一层放满后，继续放纸箱的纸箱的第二层，直到放满为止。

step3: When the first layer of the carton is full, continue second layers until it is full



步骤 4：检验员检验合格后放入合格证。

Step4 : After the inspector has passed the

步骤 5：贴好物品标签并用胶纸包好纸箱。

step5 : Label the goods and wrap

10. 外箱标签 Carton Mark

外箱标签的内容如下 The carton box mark include below information:

厂家码 Vendor Number :

订单号 Order Number :

物料规格 Part Specifications :

原料编号 Part Number :

生产日期 Production Date :

交货数量 Delivery Qty :

保障期限 Delivery Date :

备注 Remark :

11. 注意事项 Notes

- 1、输入电压请勿超过规格书上规定值以免损坏模组。

The input voltage don't exceed the value stated on the specification , in order to avoid damage to the module.

- 2、接口连接线不能接反，接反容易烧坏板子，对产品的使用造成影响。

The connector can't be reversed , reverse burn the board and affect the use of the product.

- 3、此驱动板为电子产品,所以加工、组装、操作时需注意防静电措施，以免影响产品性能。

This is a electronic product, so processing, assembly , operation need to take anti -static measures to avoid affecting product performance.

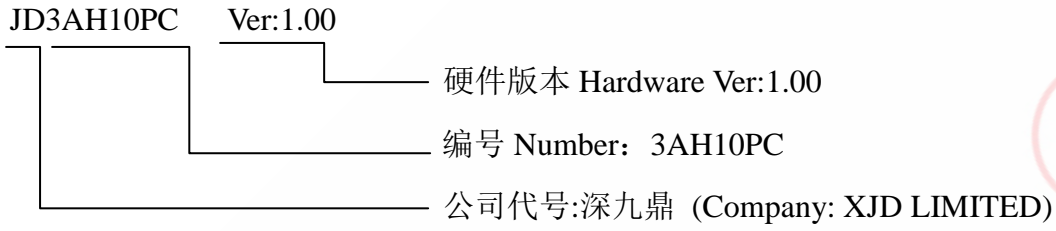
- 4、镜头是玻璃制品小心拿放，以免破裂。

Lens is glass product, place carefully to avoid breakage.

- 5、镜头是玻璃制品注意防尘、防损，以免影响图像较果。

Lens is glass-made product, please take anti-dust, loss prevention measures to prevent the image quality.

12. 命名规则 Naming Rule



13. 配线 Accessory Cable

无配线

No Accessory