



图源顺智能（深圳）有限公司

Tuyuan Shun intelligent (Shenzhen) Co., LTD

Users are requested to use this product within the scope permitted by national laws. Please do not use this product for illegal purposes. Our company is not responsible for any disputes caused by the use of this product. Declare Users to use this product in the country within the scope of the law, please do not use this product for the legitimate purposes, the company does not responsible for any dispute caused by the use of this product.

模组承认书

Camera Module Approval Sheet

Customer Name: Customer Name

Product Specification: Product Specification 2M HDR USB camera module

Product number: Product No. TYS-PX100W-H-V2

Day Issue: Date 2024-01-05

Supplier confirmation countersign column Supplier sign:

Tu Yuanshun Tuyuan Shun	UnitDept.	MakePrepared	ReviewCheck	ApprovedApproved
	SignatureSignature	Diao Jiyong	Zeng Qiqiang Zhao Liuyi	

Customer acknowledgment countersign column Customer sign:

CustomerCustomer	UnitDept.	EngineeringENG	QualityQA	ApprovedApproved
	SignatureSignature			



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一、主要规格 Key Specifications

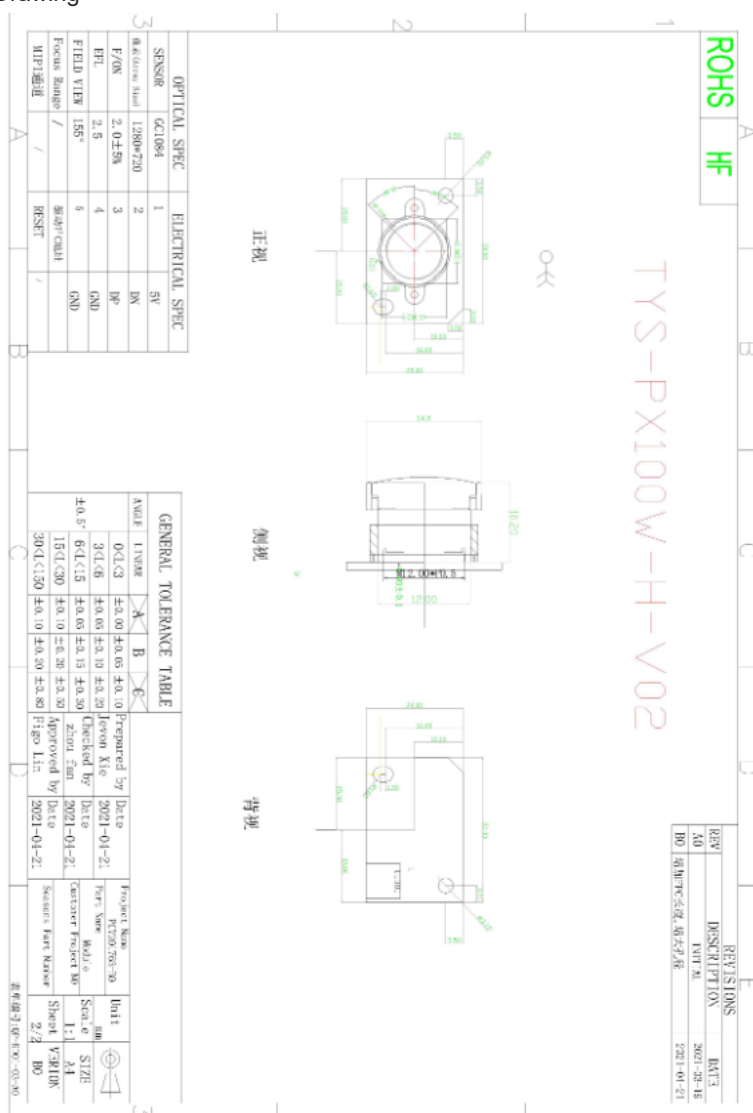
Module model	Module No	TYS-PX100W-H-V2	
resolution	Resolution	1Mega	
sensor type	Sensor Type		1/4.5" CMOS
Highest effective pixel	Max Active Pixel Array		1280 * 720
Pixel size	Pixel Size		2.72μm * 2.72μm
Highest dynamic range	Max Dynamic range		83 dB (HDR)
Highest signal-to-noise ratio	SNRMax		39 dB
output method	Output Data Format	MJPEG/YUY2	
Resolution & Max Frame Rate Resolution & Max Frame Rate		MJPEG: 1280*720 30 fps 800*600 30 fps 640*480 30 fps	
Interface Type	Connect Type		USB2.0 5Pin-1mm
Focus type	Focusing Type	FF	
Supply voltage	Power Supply Voltage	USB5V±5%	
Maximum working current	Max Working Current		Max 300mA
lens Lens	model	Model	/ (Customers assemble the lens themselves)
	type	Lens Type	/ (Customers assemble the lens themselves)
	structure	Lens Construction	/ (Customers assemble the lens themselves)
	aperture	FNo.	/ (Customers assemble the lens themselves)
	distortion	TV Distortion	/ (Customers assemble the lens themselves)
	field of view	Field of View	/ (Customers assemble the lens themselves)
	filter	IR Filter	/ (Customers assemble the lens themselves)
PCB size	PCB Size	38*38*26mm	
Module size	Module Size	Depends on the lens installed by the customer	
Operating temperature	Operating Temperature	-10 ~ 70°C	
Stable output temperature	Stable Temperature	-10 ~ 50°C	
Storage temperature	Storage Temperature	-30 ~ 75°C	
operating system	Operating System Request	WindowsXP/7/8/10/vista/Server/Linux(include UVC)/Android	



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two, **结构图** Module Mechanical Drawing



三、主要元器件 Bill of Key Materials

Serial numberNo.	Product Name	Specification	UnitUnit	Quantity QTY
1	PCB Board 4 Layers	1.6mm Thick FR4 PCS 1		
2	Sensor 5M 1/2.5"	PCS 1		
3	DSP USB 2.0	PC CAMERA CONTROLLER WITH 5MEGA PIXELIMAGE SIGNAL PROCESSING AND MJPEG ENCODER	PCS1	
4	Connector PH2.0-4P	plug directly into PCS 1		
5	LENS / (Customer	assembles the lens himself) PCS 1		






四、外观规格 Appearance Specification

No.	Item	Item Standard	Standard Inspection Method	Class
1	Module Appearance	The module surface is free of dirt and scratches visible to the naked eye.	Visual inspection	A
2	lens	1. There is no obvious dirt, color difference, oily bright spots, or plastic molding impurities within 1/2 the width of the plastic ring in the diameter direction. 2. Outside the range of 1/2 the width of the plastic ring in the diameter direction, No scratching mark.	Visual inspection	A
3		The thread adhesive is symmetrically distributed on the thread circle, and other requirements are subject to not affecting the customer's assembly.	Visual inspection	A
4		The sealant must be evenly distributed between the base and the PCB, and there should be no exposed gaps or uneven thickness.	Visual inspection	A
5	PCB	1. There should be no obvious dirt, scratches, etc. on the surface. 2. Protruding burrs on the edges and remnants of delaminated boards shall be subject to not affecting the appearance tolerance.	Visual inspection	A
6		The connector must not have foreign matter attached, stains, discoloration, plastic deformation, poor welding, damaged converter, etc. There must be no broken lines or poor bridging.	Visual inspection	A
外形尺寸				
No.	Item	Item Standard	Standard Check method	Check method Class
1	The height	meets the drawing requirements	digital caliper	A
2	The length	complies with the drawing requirements.	Digital caliper	A
3	The width	complies with the drawing requirements.	Digital caliper	A

Remark:  
1.Definition of Appearance Importance Level

- A: Defects can be found in the finished product, or have obvious visual differences from good products, such as cracks, defects and dust, or influence Image quality, or as specified by customer. We will highlight these items and review all products. B: Defects can be found in the finished product and are visually different from good products, but they do not affect the customer's aesthetic judgment. Or the defect cannot be found in the finished product and will not create a functional problem, but will slightly affect the sequential manufacturing process or conditions. We will oversee these items during the manufacturing process and optionally inspect products.
- C: Check method: distance 30CM, vertical of 5° reflective line of sight direction.
2. Reference sampling standard GB/T 2828.1-2012/ISO 2859-1:1999 and ANSI/ASQC.4-1993 II

五、图像规格 Image Specification

Serial numberNo.	ItemItem	StandardStandard	Check methodCheck method	Class
1	resolution	Center≥1200LW/PH 0.7 field of view 2000H  注：仅供参考，具体依客户所装镜头定	D65 light source ISO12233 chart Distance: 26CM (varies depending on the lens, specific Depends on the lens installed by the customer, subject to the exact 4:3 drawing)	A
2	Function	No blurry or black screens are allowed (no function) Wait for bad 	Test software/visual inspection	A
3	stain	full screen, Spot size ≤0.6mm Number of stains ≤ 3 F 	Test software/visual inspection	A
4	Dead pixels and clustered dead pixels	No more than 5 pixels 	Test software/visual inspection	A
5	Vignetting	There are no obvious dark corners in the four corners. (except fisheye lens outside)  Note: For reference only, it depends on the lens installed by the customer.	Test software/visual inspection	A



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6	The imaging direction complies with the drawing requirements. Test software/visual inspection A
7	The field of view is determined by the lens installed by the customer. Test software/visual inspection A

Level definition:

- A) Severely unqualified: The batch is judged to be unqualified by inspection, Or cause large economic losses, directly affect product quality, mainly Unqualified functions, performance technical indicators, etc. are represented by the letter A;
- B) General unqualified: General unqualified refers to unqualified products that can meet the following conditions at the same time, Represented by the letter B.
- I) Does not affect the appearance quality of the final product;
  - II) Does not affect the technical performance of the final product;
  - III) Raw materials or final products do not affect the processing or assembly of the next process.

六、可靠性测试 Reliability Test

Test project	Test item	Test condition	Test condition Judgment
high temperature storage		Temperature:85°C Time: 72H	After the test, place it at room temperature (25±5°C) for 2 hours and then test its function.  1. Function:  1.1 Resolution: After the test, the resolution variation is <20% and meets the shipping standards.  1.2 Shading: Meet the shipping standards after testing.  2. Appearance: There should be no defects caused by the test after the test.
Low temperature storage		Temperature:-40°C Time: 72H	
High temperature operation		Temperature: 60°C Time: 72H	
Low temperature operation		Temperature:-10°C Time: 24H	
High temperature and high humidity operation		Temperature: 40°C Humidity: 93% RH Time: 48H	
Static electricity test		Air discharge: ±4KV Contact discharge: ±2KV Cycle: 10s/time 10cycle	
Vibration test		Frequency : 10Hz ~ 55Hz ~ 10Hz Amplitude : 1.5 ~ 2mm(p-p) Sweep time : 30 min/direction Direction : X,Y,Z	

七、包装 Packing

Packaging should avoid damage to components during transportation. Individual camera modules should be delivered in reusable pallets. A trust

Just put multiple camera modules on the disk. Each camera should be spaced in front of it. Example:





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八、保存条件和保质期 Storage condition and expiring time

Warehouse storage temperature and humidity	Temperature: 22°C±5°C Humidity: 40~75%RH
shelf life	1 year

九、使用注意事项 Application notes

In order to avoid the occurrence of adverse accidents and damage to product performance, please observe the following warnings and prohibitions.

储存注意事项

When storing products, the temperature must be 22°C±5°C , Humidity 40%~75% is required to be placed. Be careful not to be exposed to direct sunlight or heavy objects.

操作过程注意事项

- 1) Do not rub this product with sharp blades or other sharp objects.
- 2) Please do not pull or bend this product arbitrarily.
- 3) Do not stack products to avoid scratches on the surface and poor appearance.
- 4) Please avoid placing this product close to or exposing it to organic solvents. Use and store in acidic gas environment.
- 5) Please do not peel or tear this product at will.
- 6) Do not touch the product directly with your hands, so please wear clean finger cots, gloves and a mask before touching the product to avoid contamination of the light hole of the product, and please hold the surrounding sides of the product when holding it
- 7) To maintain the best photo taking effect of the product, do not press the surface of the lens
- 8) Please use ESD For protection, those who come into contact with the camera must wear an electrostatic ring

十、有限责任 Limited Warranty

Unless otherwise agreed between Tuyuanshun Intelligence and the customer, Within one year from the date of production, according to Tuyuanshun Intelligent's camera production product quality standards, We will exchange or rework camera modules with functional defects. Products with appearance/visual defects must be After shipment within 90 days Return the picture to Yuanshun Intelligence. The date marked on the product shall prevail. Tuyuanshun Intelligent Warranty liability is limited to the pair Goods that meet the above requirements will be reworked or Exchange. Tuyuan Shun Intelligent will not bear any responsibility for any situation that occurs thereafter.

十一、提前商议事项 Prior Consult Matter

- 1. For Tuyuanshun Intelligent's standard products, we reserve the right to change raw materials and processing methods in order to improve product performance without notifying customers.
- 2. For OEM If any changes need to be made to the product that will affect the performance of the product, we will discuss it with the customer in advance.
- 3. If you have special requirements for reliability conditions, please inform us before testing samples.

十二、To 客户 To Customer

Sincere customers:

In order to better guarantee the quality of the products you ordered and further facilitate our company's follow-up operations, please give us a reply within 7 working days after receiving this "Specification" from our company, regardless of whether it is confirmed or not. If you have special requirements for our products of this specification, please indicate them as well. If you do not receive relevant information from your company within 7 working days (Including specifications, sample return slips and other relevant confirmation information), our company will consider that your company has accepted the confirmation of this sample delivery.