

Specification

Product Name: 1/4" CMOS Camera Module

Product Model: JDMG139-D VER:100

Customer P/N: _____

Date: _____

USER			MANUFACTURER		
Quality by	Engineer by	Authorized by	Prepared by	Checked by	Approval by

Catalogue

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Version content

Date	Version	Content
2015-12-3	A0	The engineering sample

1.Profile

JDMG139-D CMOS camera module is comprised by 1/4" CMOS Image sensor. It applies to difference electric equipment that need capture video signal. The main functions include intelligent exposure system, intelligent backlight compensation and auto avoid 50Hz light flicker etc.

2. Characters

- Video output YUV422,640X480 resolution,50fps
- Intelligent backlight compensation

3. Application Area

- Office electronic device
- Equipment & Instrument and measuring tools
- Machine equipment
- Supervising equipment (Car Monitor & Portable video capture and remote monitoring)
- Home supplies (Video door phone & video phone)

4. Electronic specification

NO	Items	Parameter instruction		Remarks
1	Image sensor	1/4inch CMOS		
2	Image system	YUV422,640X480 resolution,50fps		
3	Effective pixel	720*576		
4	Sync. Mode	external synchronization , independent line sync signal		
5	Horizontal Resolution	640TVL		
6	Pixel size	5.6um*5.6um		
7	S/N ratio	46dB		
8	Min. LUX	0.1LUX(F:2.0)		
9	Exposure system	Intelligent exposure &Intelligent backlight compensation auto avoid 50Hz light flicker		
10	Electric shutter	1/50(1/60)-1/10000S		
11	Gamma adjust	>0.45		
12	FPS	50fps		
13	Staring time	<500ms		
14	Input voltage	DC3.3V ±25%		
15	Consumption	DC3.3V: Current:38mA±4mA		
16	Working Temp.	-20℃ ~ 70℃		
17	Storage Temp.	-40℃ ~85℃		
18	Humidity	5~95% RH		
19	Image display direction	Capture upright image when the board on that direction		
20	Product size	38 (L) ×38 (W) ×24.5 (H)		
21	Normal lens parameters	Focal length	3.6mm	
		Diagonal angle of view	68±3°	
		Horizontal view angle	54±3°	

		Vertical angle of view	40±3°	
		Relative distortion	<-8.3%	
		Focusing distance	40cm(close);1.5M(far)	
		Spectral character	650nm without IR	

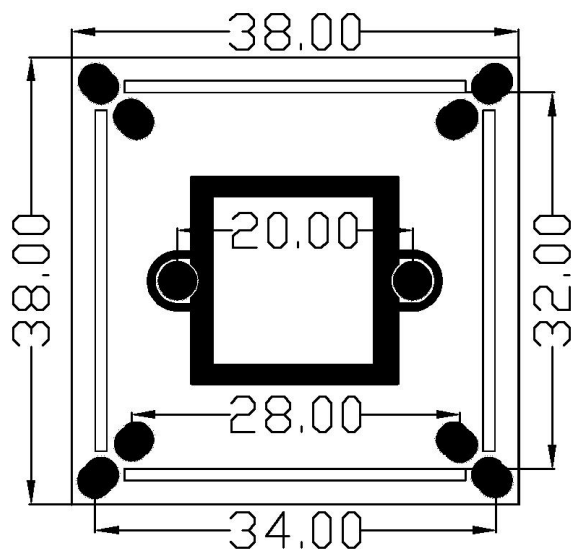
5. Reasonable test

NO	Test items	Testing conditions	Judgment
1	High Temp. function test	+12V, high temp.70℃; 8H aging test	Test is ok after 8H
2	Low Temp. function test	+12V, low temp. -20℃; 8H aging test	Test is ok after 8H
3	Temp.& Humidity test	Temp.:70℃; Humidity 93%; 32H aging test	Test is ok after 32H
4	High Temp. storage test	Temp.:85℃; 8H	Product will be ok after normal temp.
5	Low Temp storage test	Temp.: -40℃; 8H	Product will be ok after normal temp.
6	Life test	12V DC; Continuous on/off; 48H	The product will be ok after 48H shocked testing.
7	Discontinuous power supply test	Input 9V\12V\15V,turn on/off in every 5s,test 4H for each voltage	Every Voltage is normal after shock
8	ESD test	Contact discharge: 6.0KV Air discharge: 8.0KV Horizontal/Vertical discharge: 8.0KV	Function and appearance are all ok
9	Vibration test	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	The camera structure &function is normal after vibration, all accessories& blister are ok.

10	Drop test	<p>1. Drop standard:</p> <p>(1). Floor: concrete floor steel plate</p> <p>(2). Direction: corner、three sides、six surface</p> <p>(3). Drop way: free falling</p> <p>(4). Height: according to the product's weight as follows:</p> <table><tr><th>Weight</th><th>Height</th></tr><tr><td>0kg<W≤4.5kg</td><td>91cm</td></tr><tr><td>4.5kg<W≤11.8kg</td><td>76cm</td></tr><tr><td>11.8kg<W≤23.1kg</td><td>61cm</td></tr><tr><td>23.1kg<W≤45.4kg</td><td>46cm</td></tr></table>	Weight	Height	0kg<W≤4.5kg	91cm	4.5kg<W≤11.8kg	76cm	11.8kg<W≤23.1kg	61cm	23.1kg<W≤45.4kg	46cm	The camera structure and function is normal after dropped, all of accessories& blister are well.
Weight	Height												
0kg<W≤4.5kg	91cm												
4.5kg<W≤11.8kg	76cm												
11.8kg<W≤23.1kg	61cm												
23.1kg<W≤45.4kg	46cm												

6. Structural drawing

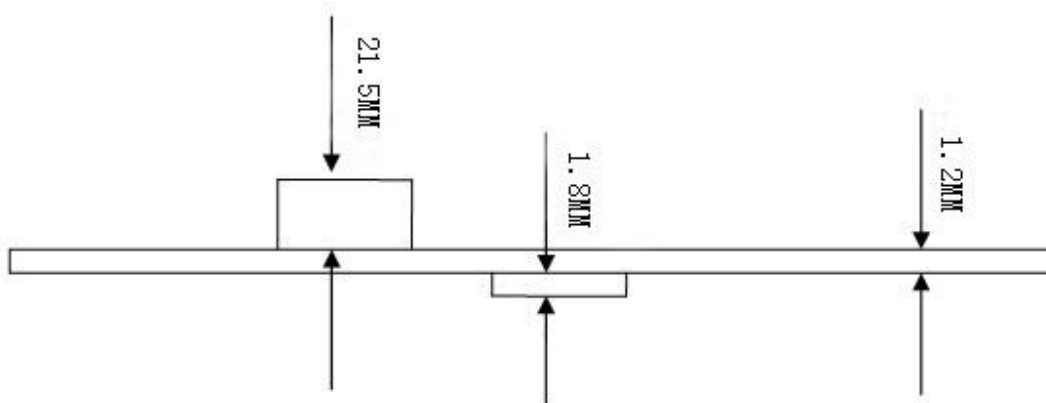
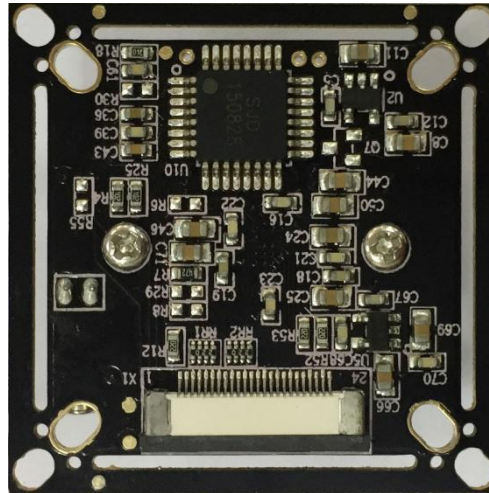
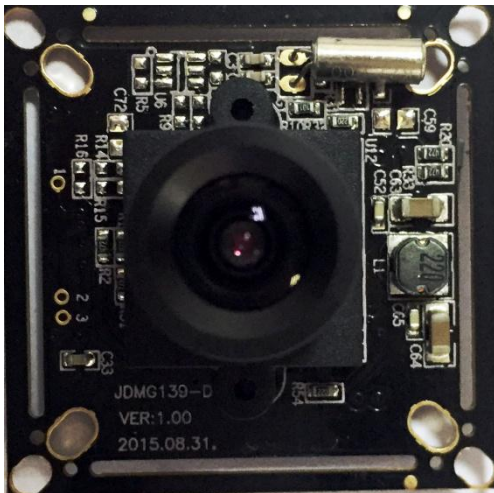
Following size units are: mm, tolerance ± 0.2 mm (exclude marked)



Diagram

Front

Back



7. Connector definition

NO.	Connector definition	Instructions
1	NC	
2	NC	
3	D2	
4	D1	
5	D3	

6	D0	
7	D4	
8	PCLK	Camera output clock
9	D5	
10	DGND	
11	D6	
12	MCLK	NC Camera input clock, mainboard reserved (use camera with crystal oscillator)
13	D7	
14	DOVDD	3.3V voltage (mainboard supply and mainboard is Compatible with 2.8V)
15	DVDD	NC (reserved 1.5V)
16	HSYNC	
17	PWDN	NC (Enable feet, mainboard reserved)
18	VSYNC	
19	RESET	NC (Reset feet, Use cameras with reset chip, choose one of External reset and internal reset)
20	SCL	
21	AVDD	3.3V voltage (mainboard supply and mainboard is Compatible with 2.8V)
22	SDA	
23	AGND	
24	LED	Add image to control the LED feet, camera output, High electric lights went out at ordinary times, light is on when low electric level. The signal is used for mainboard to control power of Led)