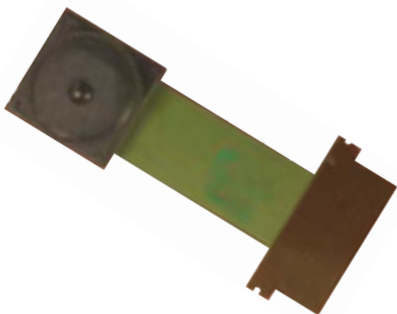


ISC-XVM300

VGA Digital Video Camera Module

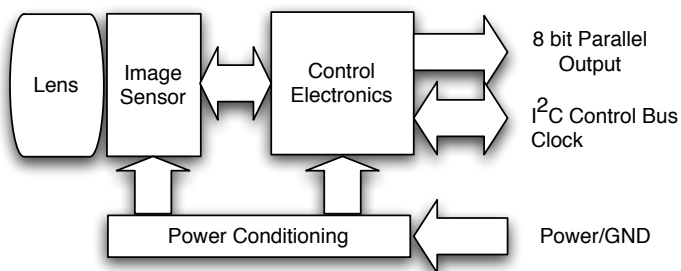


The XVM300 represents state of the art image processing and optics coupled with ultra miniature packaging technology from the experts at Irvine Sensors. The flexible circuit assembly provides users with the ultimate flexibility in mounting to facilitate system integration. A low cost socket is available from third party vendors further simplifying assembly and mounting.

The camera features excellent sensitivity and extreme dynamic range, making it usable in even the most difficult lighting environments. The spectral range makes it usable in conjunction with whatever lighting strategy best fits the application.

Camera operation is fully automatic and output video data is streamed via the 8 bit parallel data bus. The output pixel clock (PCLK) is used to latch data, frame valid (FV) and line valid (LV) signals indicate active video information on the data bus (DOUTn). Internal registers are accessed via the I²C communication bus. A low power sleep mode is enabled by asserting the STDBY pin and disabling the clock.

BLOCK DIAGRAM:



APPLICATIONS:

- Handheld instruments (PDA, cell phone)
- Security & Surveillance
- Toys

FEATURES:

- Full resolution VGA at 30 fps
- Best in class low light performance
- Auto Exposure, Auto White Balance and Auto Black
- Auto Sharpening, Gamma, Lens shading correction
- Auto color saturation and flicker avoidance
- Fully automatic Xenon and LED flash support
- CCIR656 (YCrCb), 565RGB, 555RGB or 444RGB
- I²C two wire serial programming interface
- Raw and Processed Bayer formats

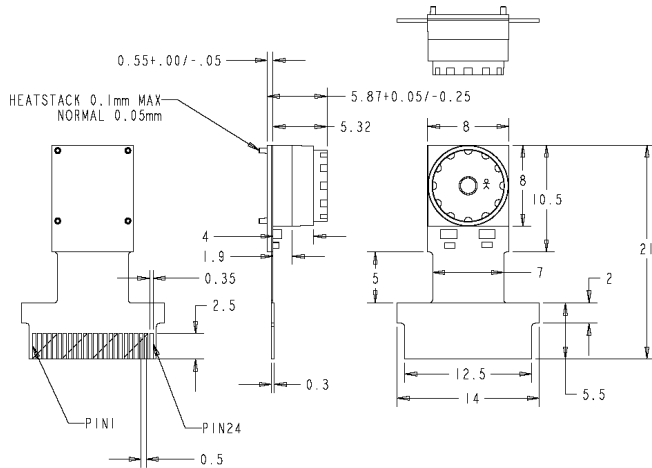
SPECIFICATIONS

Sensor	Micron MT9V111	
Pixels	640 x 480	
Pixel Size	5.6um x 5.6um	
Shutter	Electronic Rolling Shutter	
ADC Resolution	10 bit, dual on-chip	
Max Output Rate	27 MHz	
S/N ratio	45 dB	
Dynamic Range	60 dB	
Supply Voltage	2.8V ±0.25V	
Power Consumption	MCLK=12 MHz	80 mW
	MCLK=27 MHz	98 mW
Operating Temperature	-20°C to +60°C	
Weight		
Shock	70 G	
Random Vibration	7 gms @10 to 2K Hz (w/o lens)	
Lens	¼" format, F2.8, fixed focus, 3.8mm, FOV 64° diagonal	

ISC-XVM300

VGA Digital Video Camera Module

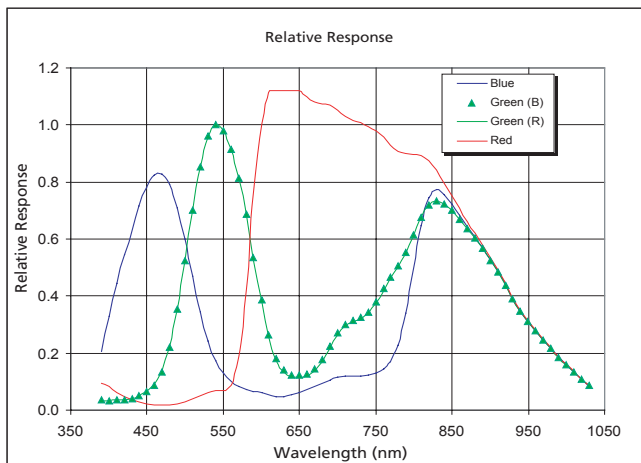
MECHANICAL DIMENSIONS (mm):



MATING CONNECTORS:

Bottom Contact	AVX: 00 6238 024 000 800 Tyco: 2-440340-4 Molex: 52437-2491
Top Contact	AVX: 00 6292 024 000 800
Dual Contact	Omron: XF2H-2415-1

SPECTRAL RESPONSE:



NOTES:

1. All specifications subject to change without notice.
2. Reference Micron sensor data sheet for specific timing and programming information.

PIN DEFINITIONS:

Pin	Pin Name	Description
1	VAAPIX	Supply Voltage pixel array
2	AVcc	Analog Supply Voltage
3	AGND	Analog Ground
4	NC	No Connection
5	DGND	Digital Ground
6	DVcc	Digital Supply Voltage
7	/Reset	Async Reset (active low)
8	STANDBY	Standby mode (active high)
9	/OEN	Output Enable (active low)
10	DOUT7	Data Out bit(n) MSB
11	DOUT6	Data Out bit(n)
12	DOUT5	Data Out bit(n)
13	DOUT4	Data Out bit(n)
14	DOUT3	Data Out bit(n)
15	DOUT2	Data Out bit(n)
16	DOUT1	Data Out bit(n)
17	DOUT0	Data Out bit(n) LSB
18	SCLK	Serial Clock In (I2C)
19	SDATA	Serial Data (I2C)
20	MCLK	Master Clock In (54MHz default)
21	FLASH	Flash strobe (output)
22	PCLK	Pixel Clock Out (27MHz default)
23	FV	Frame Valid
24	LV	Line Valid