



## Oscar F-810

### Description

#### High-end 8 Megapixel 1394 camera for still imaging

The Oscar F-810C is an excellent camera for sophisticated still imaging. It includes a frame readout Sony CCD sensor.

- ICX456
- B/W signal out of luma interpolation ( $Y = 0.3R + 0.6G + 0.1B$ )
- B/W signal out of R, G or B channel information

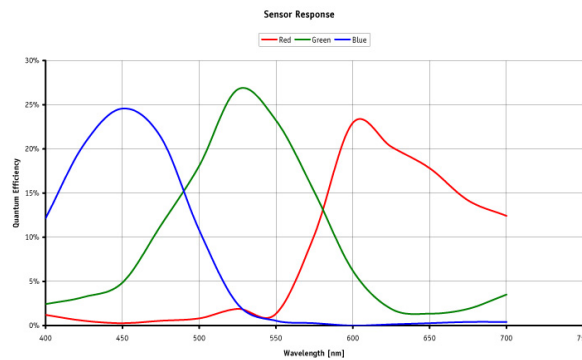
Benefits of the b/w output interpolation modes:

- In some applications, such as ophthalmology with contrast input, only one color is needed for evaluation.
- For applications with monochromatic lighting, noise can be reduced by using only the respective color channel instead of the fully interpolated luma signal.
- The Oscar can use the three primary colors (R, G and B) separately and output them in a reduced data monochrome mode.

## Specifications

<b>Oscar</b>		<b>F-810</b>	
<b>Interface</b>	IEEE 1394a - 400 Mb/s, 1 port		
<b>Resolution</b>	3272 x 2469		
<b>Sensor</b>	Sony ICX456		
<b>Type</b>	CCD Progressive		
<b>Sensor Size</b>	Type 2/3		
<b>Cell size</b>	2.7 $\mu$ m		
<b>Lens mount</b>	C		
<b>Max frame rate at full resolution</b>	3 fps		
<b>A/D</b>	12 bit		
<b>On-board FIFO</b>	32 MB		
<b>Output</b>			
<b>Bit depth</b>	12 bit		
<b>Mono modes</b>	Mono8		
<b>Color modes YUV</b>	YUV411, YUV422, Y8-green, Y8-red, Y8-blue		
<b>Color modes RGB</b>	RGB8		
<b>Raw modes</b>	Raw8, Raw16		
<b>General purpose inputs/outputs (GPIOs)</b>			
<b>TTL I/Os</b>	0		
<b>Opto-coupled I/Os</b>	2 inputs, 2 outputs		
<b>RS-232</b>	1		
<b>Power/Mass/Dimensions/Regulations</b>			
<b>Power requirements (DC)</b>	8 V - 36 V		
<b>Power consumption (12 V)</b>	<4 W		
<b>Mass</b>	<170 g		
<b>Body Dimensions (L x W x H in mm)</b>	72.5 x 44 x 44 mm including connectors, w/o tripod and lens		
<b>Regulations</b>	CE, FCC Class B, RoHS		

[Download Oscar technical drawing \(click here\)](#)



## Smart features

Oscar cameras include several image pre-processing functions (all real-time). The below mentioned functions are performed by the camera's FPGA - with no additional load on the CPU.

- Auto/one push white balance
- Auto gain
- Auto shutter
- LUT, gamma
- Color correction
- Hue, saturation
- Sharpness
- Shading correction
- High SNR mode (up to 24 dB better signal to noise ratio)
- Image mirror
- Sub-sampling

## Applications

The Oscar F-810C comes with outstanding benefits for microscopy and ophthalmology applications. Besides that, it is particularly suited for applications that require a very detailed image and excellent color reproduction, even in low light situations. Its fast preview mode makes optimal object positioning and illumination easy.

- Microscopy
- Ophthalmology
- Science and Research
- Life Science
- Still imaging with high demands for excellent color reproduction
- Imaging applications which require separate R, G or B output (full pane)