Allied Vision

Marlin
F-046

- IEEE 1394a camera
- Modular design
- Robust housing
- Machine vision camera

Description

Compact, flexible, modular IEEE 1394a Wide VGA C-Mount camera

The Marlin F-046B/F-046C is equipped with a very sensitive Sony ICX415 CCD sensor. It runs at 52.71 frames per second at full resolution and Format_7. Higher frame rates can be reached by using a smaller area of interest (AOI) and binning.

Specifications

Marlin	F-046
Interface	IEEE 1394a - 400 Mb/s, 1 port
Resolution	780 (H) × 582 (V)
Sensor	Sony ICX415
Sensor type	CCD Progressive
Sensor size	Type 1/2
Pixel size	8.3 µm × 8.3 µm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	52 fps
ADC	12 bit
Image buffer (RAM)	8 MByte
Output	
Bit depth	8-10 bit
Monochrome pixel formats	Mono8, Mono16
RGB color pixel formats	RGB8
Raw pixel formats	Raw8
General purpose inputs/outputs (GPIOs)	
Opto-isolated I/Os	2 inputs, 2 outputs

Marlin	F-046
RS232	1
Operating conditions/dimensions	
Operating temperature	+5 °C to +45 °C
Power requirements (DC)	8 V to 36 V
Power consumption	<3 W (@ 12 VDC)
Mass	<120 g
Body dimensions (L × W × H in mm)	72 × 44x 29 (including connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU (RoHS); FCC Class B
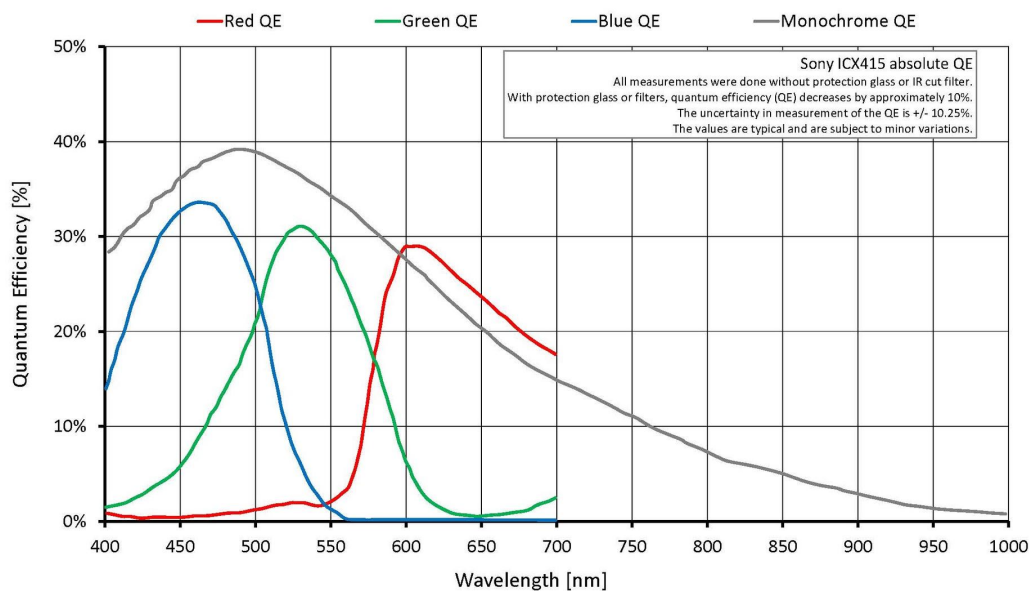
Features

Marlin cameras are equipped with many useful real-time image pre-processing functions. They are performed by the FPGA inside the camera – with no additional CPU load on the host, so that an inexpensive system is sufficient.

- Programmable look-up table (LUT), white balance, hue, saturation
- Debayering
- Gain
  - Auto/manual
  - Manual gain control: 0 to 24 dB
- Exposure
  - Auto/manual

- Exposure time: 32 µs to 67 s
- Color correction
- Shading correction
- Sub-sampling, 2x binning (b/w)
- Area of interest (AOI) with speed increase
- Sequence mode - changes the image settings on the fly
- Image mirror
- Deferred image transport
- SIS (secure image signature, time stamp for trigger, frame count)
- Storable user settings

Technical drawing

13 $^{+0.1}_{-0.1}$

26

50

M3x3 (4x)

12.5

18

16.3

13

⌀ 27.5

57.5 $^{+0.5}_{0}$

44 $^{+0.5}_{0}$

29 $^{+0.5}_{0}$

C-Mount

50

M3x3 (3x)

26

65.5

72

Applications

With its modular and flexible design and the real-time pre-processing functions, this Marlin camera fits for many applications:

- Machine vision
- Quality control
- Semiconductor inspection
- Industrial inspection