



# Stingray

## F-033



- Versatile VGA camera
- Advanced feature set
- Many variants
- Excellent image quality

## Description

High-quality (mid-priced) industrial VGA camera with image pre-processing

The Stingray F-033B/C is a high-quality VGA camera. It is equipped with a sensitive Sony CCD ICX414 sensor and includes many image pre-processing functions. At full resolution, it runs at 84 fps. Higher frame rates can be reached by a smaller AOI, binning (b/w) or sub-sampling.

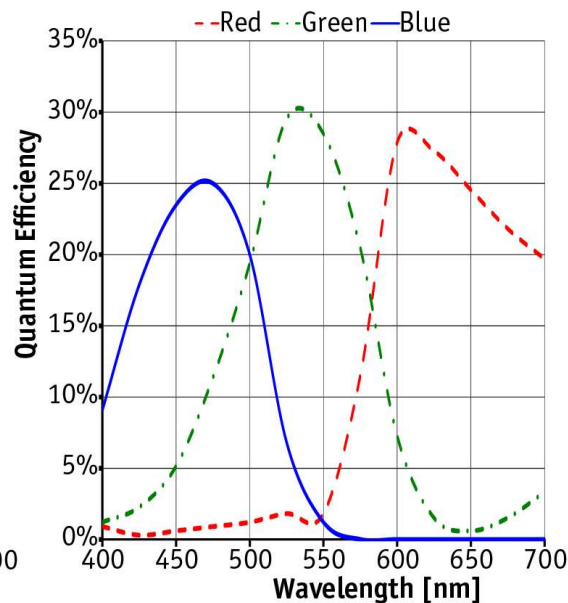
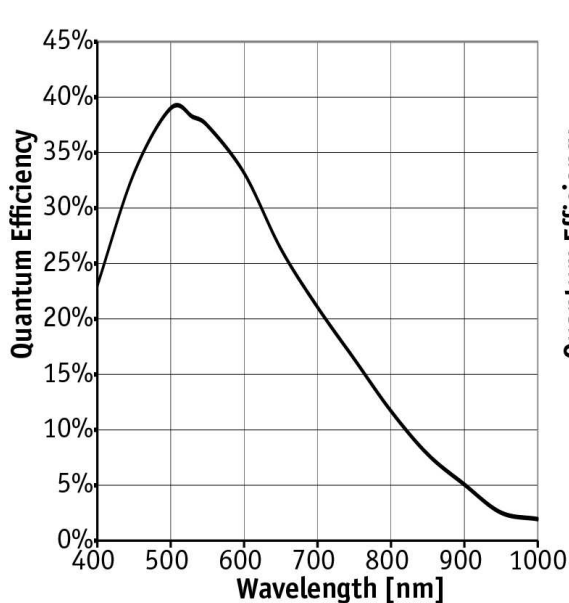
### Options

- 1394b connectors: 2 x copper (daisy chain) or 1 x GOF, 1 x copper, Hirose power: out
- Various IR cut/pass filters, various lens mounts
- Angled head, compact housing version, board level version, white medical housing

## Specifications

Stingray	F-033
Interface	IEEE 1394b - 800 Mb/s, 2 ports, daisy chain, fiber optic (GOF) optional
Resolution	656 × 492
Sensor	Sony ICX414
Sensor type	CCD Progressive
Sensor size	Type 1/2
Cell size	9.9 μm
Lens mount	C
Max frame rate at full resolution	84 fps
ADC	14 bit
On-board FIFO	32 Mbyte
	<b>Output</b>
Bit depth	8-14 bit

Stingray	F-033
Mono modes	Mono8, Mono12, Mono16
Color modes RGB	RGB8
Raw modes	Raw8, Raw12, Raw16
<b>General purpose inputs/outputs (GPIOs)</b>	
Opto-isolated I/Os	2 inputs, 4 outputs
RS-232	1
<b>Operating conditions/dimensions</b>	
Power requirements (DC)	8 V - 36 V
Power consumption (@12 V)	<4 W
Mass	92 g
Body dimensions (L × W × H in mm)	72.9 × 44 × 29 mm including connectors, w/o tripod and lens
Regulations	CE, FCC Class B, RoHS



## Features

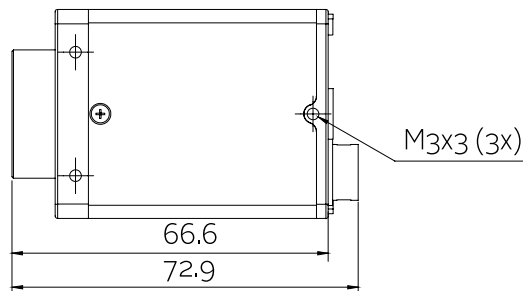
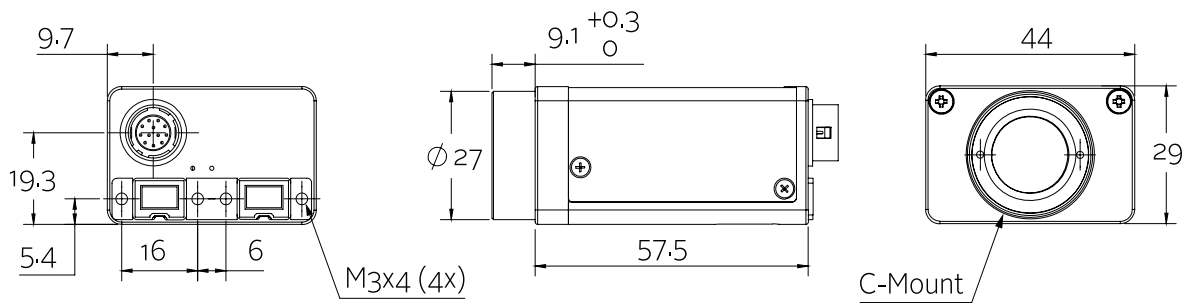
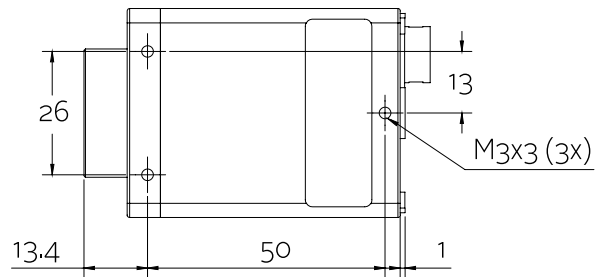
- High SNR mode (up to 24 dB better signal-to-noise ratio)
- Low-noise binning mode
- Shading correction
- Defect pixel correction
- ROI, separate ROI for auto features
- Binning
- Decimation



- Auto gain (manual gain control: 0 to 24.4 dB)
- Auto exposure (31  $\mu$ s to 67 s)
- Auto white balance
- LUT (look-up table)
- Hue, saturation
- Color correction
- Local color anti-aliasing
- Reverse X/Y
- Deferred image transport
- Trigger programmable, level, single, bulk, programmable delay
- Sequence mode (changes the camera settings on the fly)
- SIS (secure image signature, time stamp for trigger, frame count etc.)
- Storable user sets

## Technical drawing

### 2 x 1394b copper



## Applications

The Stingray F-033B/C is a high-quality industrial VGA camera with many image pre-processing functions. It offers several opportunities for customization. This mid-priced camera fits for all sorts of applications with high demands, for example:

- Industrial inspection and automation
- Semiconductor inspection
- Logistics
- Science and research
- Healthcare and medical (light gray housing available)
- Ophthalmology
- Multimedia, entertainment and sports
- ITS (Intelligent traffic solutions)

Additionally, it is ideally suited for:

- Demanding OEM camera applications (board level versions with separate sensor board available on request)
- Daisy chaining (two copper connectors)
- Long cables - 400 meters and more without additional repeaters (GOF version Stingray F-033B/C fiber)